PRE-REMEDIAL DESIGN INVESTIGATION DATA REPORT
WHATCOM WATERWAY SITE CLEANUP

Prepared for

Port of Bellingham
1801 Roeder Avenue
Bellingham, Washington 98225

Prepared by

Anchor QEA, LLC
1423 Third Avenue, Suite 300
Seattle, Washington 98101

In Association with

KPFF Consulting Engineers | Coast & Harbor Engineering | Wilson Engineering
Blumen Consulting Group | BST & Associates

August 2010

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WHATCOM WATERWAY PRE-REMEDIAL DESIGN INVESTIGATION PRDI DATA REPORT

The material and data in this report were prepared under the supervision and direction of the undersigned.

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LIST OF ACRONYMS AND ABBREVIATIONS

Abbreviation	Definition
ADCP	Acoustic Doppler Current Profiler
ARI	Analytical Resources Inc.
ASB	Aerated Stabilization Basin
ASTM	American Society for Testing and Materials
AWAC	Acoustic Wave and Current Profiler
BSL	Bioaccumulation screening level
BST	Bellingham Shipping Terminal
CAP	Cleanup Action Plan
cm	centimeter
cm/s	centimeters per second
CSL	Cleanup Screening Levels
CSM	Conceptual Site Model
DMMP	Dredged Material Management Program
DRET	Dredge Elutriate Test
Ecology	Washington State Department of Ecology
EDR	Engineering Design Report
EPA	U.S. Environmental Protection Agency
FSEIS	Final Supplemental Environmental Impact Statement
GP	Georgia Pacific
JARPA	Joint Aquatic Resource Permit Application
LCS	laboratory control sample
LCSD	laboratory control sample duplicate
LDC	Laboratory Data Consultants, Inc.
m/s	meters per second
MET	Modified Elutriate Test
mg/kg	milligrams per kilogram
MLLW	mean lower low water
MNR	Monitored Natural Recovery
MS	matrix spike
MSD	matrix spike duplicate

Abbreviation	Definition
MTCA	Model Toxics Control Act
NAD	North American Datum
ng/kg	nanograms per kilogram
NOS	National Ocean Survey
NPDES	National Pollutant Discharge Elimination System
PDCR	Preliminary Design Concept Report
Port	Port of Bellingham
PRDE	Pre-remedial Design Evaluation
PRDI	Pre-remedial Design Investigation
PSEP	Puget Sound Estuary Protocols
QAPP	Quality Assurance Project Plan
QA/QC	quality assurance/quality control
RCW	Revised Code of Washington
RI/FS	Remedial Investigation/Feasibility Study
RPD	relative percent difference
SAP	Sampling and Analysis Plan
SAPA	Sampling and Analysis Plan Appendix
Site	Whatcom Waterway Site
SMARM	Sediment Management Annual Review Meeting
SMS	Sediment Management Standards
SQS	Sediment Quality Standards
SPLP	Synthetic Precipitation Leaching Procedure
SRM	standard reference material
SVOC	semivolatile organic carbon
TBT	tributyl tin
TCLP	Toxicity Characteristic Leaching Procedure
TEQ	toxicity equivalents
TOC	total organic carbon
vibracore	vibratory core sampler
VOC	volatile organic carbon
VST	vane shear testing
WAC	Washington Administrative Code

Abbreviation	Definition
µg/kg	micrograms per kilogram

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1 INTRODUCTION

This Pre-remedial Design Investigation (PRDI) Data Report describes the findings of testing performed in support of the engineering design and permitting for the cleanup of the Whatcom Waterway Site (Site) in Bellingham. Figure 1 presents the site vicinity and location features. Cleanup of the Site is to be performed by the Port of Bellingham (Port) and other cooperating potentially liable persons (PLPs) under Washington State Department of Ecology (Ecology) oversight, in accordance with Consent Decree No. 07-2-02257-7. The cleanup will satisfy the cleanup requirements of the Model Toxics Control Act (MTCA), Chapter 70.105D in the Revised Code of Washington (RCW), as administered by Ecology under the MTCA Cleanup Regulation, Chapter 173-340 of the Washington Administrative Code (WAC).

The testing described in this report was performed in accordance with the Ecology-approved PRDI Work Plan (Anchor 2008a). The PRDI Work Plan focused on filling pre-design data gaps to allow design and permitting activities to proceed. Additional information regarding the site setting, environmental conditions, and planned cleanup action is available in studies previously conducted under Ecology oversight. These previous studies include the final *Supplemental Remedial Investigation/Feasibility Study for the Whatcom Waterway Site* (RI/FS; RETEC 2006), the *Final Supplemental Environmental Impact Statement: Bellingham Bay Comprehensive Strategy, Whatcom Waterway Cleanup Site* (FSEIS; Ecology 2007a) and Exhibit B to the Consent Decree, *Cleanup Action Plan for the Whatcom Waterway Site* (CAP; Ecology 2007b).

1.1 Purpose of Report

The main state law that governs the cleanup of contaminated sites is MTCA. MTCA regulations define the process for the investigation and cleanup of contaminated sites. When contaminated sediments are involved, the cleanup standards and other procedures are also regulated by the Sediment Management Standards (SMS), Chapter 173-204 WAC. MTCA regulations specify criteria for the evaluation and conduct of a cleanup action, while SMS regulations dictate the standards for cleanup. Under both, the cleanup must protect human health and the environment, meet state environmental standards and standards in other laws that apply, and provide for monitoring to confirm compliance with site cleanup standards.

In 2007, after public notice and opportunity to comment, a Consent Decree (including a Cleanup Action Plan (CAP)) was signed by the cooperating PLPs and Ecology, and entered into the records of Whatcom County Superior Court. The CAP describes Ecology's selected cleanup action for the site, consistent with MTCA and SMS requirements. The CAP includes the following information:

- Summary of project background and current environmental conditions.
- Cleanup requirements applicable to the site, including cleanup standards and other federal, state, and local laws applicable to the cleanup action.
- Summary description of the remedial alternatives evaluated in the RI/FS.
- Rationale for selection of the proposed cleanup alternative.
- A description of the cleanup action selected by Ecology, consistent with MTCA requirements, including a description of the types, levels, and amounts of hazardous substances that will remain on site as part of the cleanup, and the measures that will be used to prevent migration and contact with those substances. Compliance monitoring and contingency action requirements, as well as institutional controls, are also described. Figure 4-6 from the CAP presents the site cleanup action and is included as Figure 2 in this PRDI Data Report.
- Description of the schedule for implementation of the cleanup action.

This PRDI Data Report presents the supplemental information collected as described in the PRDI Work Plan (Anchor 2008a) that is necessary to design the cleanup action defined in the CAP.

Under the Consent Decree requirements, the Port and the other cooperating PLPs will next develop a Preliminary Design Concept Report (PDCR) for Ecology review and approval, incorporating the findings of the PRDI. Following Ecology approval of the PDCR, a draft Engineering Design Report (EDR) will be completed and issued for public review. This PRDI Data Report presents the information collected to fill data gaps necessary to complete the PDCR and EDR.

1.2 Site Description and Background

The site includes lands that have been impacted by contaminants historically released from industrial waterfront activities, including mercury discharges from the former Georgia

Pacific's (GP) chlor-alkali plant, wood waste and degradation products from historic log rafting activities, and phenolic compounds from pulp mill wastewater discharges, as well as other industrial releases. Surface sediment contamination from other historic industrial activities, which comprise part of separate cleanup sites (the Central Waterfront Site, I&J Waterway Site, Cornwall Avenue Landfill Site, and R.G. Haley Site shown on Figure 1), overlays subsurface contamination from this site in four areas of the Waterfront.

The chlor-alkali plant discharged mercury-containing wastewater into the Whatcom Waterway during the late 1960s and 1970s. Initial environmental investigations of the site identified mercury in sediment at concentrations that exceed applicable standards, as well other contaminants from industrial releases.

The RI/FS process for the Whatcom Waterway site began in 1996 and has included two supplements to reflect new cleanup approaches necessitated by changed land use plans for portions of the Site. The most recent 2006 Supplemental RI/FS report was finalized in 2007 following public review. This document and well as a complimentary Final EIS were used by Ecology to preliminarily select a remedial alternative for the Site which was described in a CAP as an exhibit to the Consent Decree.

Under the terms of the Consent Decree, the Port and the other cooperating PLPs developed a PRDI Work Plan for Ecology review focused on filling pre-design data gaps to allow remedial design and permitting activities to move forward. Following Ecology approval of the PRDI Work Plan in June 2008, investigation activities commenced in July 2008 and were completed in May 2009.

A Conceptual Site Model (CSM) developed in the RI/FS is summarized in Section 2 of the PRDI Work Plan. The CSM reflects current site conditions and includes contaminants and sources, nature and extent of impacts, contaminant fate and transport processes, and exposure pathways and receptors. Graphical illustrations of the CSM are included on Figures 3 and 4.

1.3 Sediment Site Units

In the RI/FS, the different portions of the site were divided into different areas or "Sediment Site Units" (RETEC 2006). The sediment site units were developed based on differences in the following parameters:

- Physical Factors, including bathymetry, sediment particle size and texture, wood material distribution, wind and wave energies, and the characteristics of adjacent shorelines
- Land Use and Navigation, including upland zoning, shoreline infrastructure, navigation uses, natural resources, ongoing waterfront revitalization activities, and potential interrelationships between cleanup considerations and these factors
- Natural Resources, including the types of existing aquatic habitats within the site unit
- Contaminant distribution, including patterns of surface and subsurface contamination and relative contaminant concentrations.

Figure 1 shows the Whatcom Waterway Sediment Site Units. The site units were developed in the RI/FS and in the CAP (Ecology 2007b), and were described in the PRDI Work Plan (Anchor 2008a). Changes were anticipated for Unit 9 from the boundaries defined in the CAP. The boundary of Unit 9 was estimated at the time of the CAP based on existing data, with the intent to refine the boundary based on sampling to be conducted as part of the PRDI.

Technologies used as part of the cleanup include removal with upland disposal, treatment, reuse, containment (capping), monitored natural recovery (MNR), and institutional controls. The application of these technologies to different site units as part of the cleanup was described in the CAP.

1.4 Document Organization

This PRDI Data Report was prepared consistent with the requirements of the PRDI Work Plan (Anchor 2008a). The PRDI Data Report document is organized as follows:

- Section 1 provides the context for the current report, including a summary of the site background and history.
- Section 2 provides an overview of the PRDI components, including any deviations from the PRDI Work Plan (Anchor 2008a) and accompanying Sampling and Analysis Plan (SAP) and Quality Assurance Plan (QAPP; Anchor 2008b).

- Section 3 presents a summary of the PRDI data quality objectives and the results of data validation.
- Section 4 presents the PRDI site survey information results.
- Section 5 presents the PRDI oceanographic data collection results.
- Section 6 presents the PRDI surface sediment chemical, physical, and biological testing results.
- Section 7 presents the PRDI subsurface sediment chemical and physical testing results.
- Section 8 presents the PRDI geotechnical testing results.
- Section 9 provides a summary of next steps in the design and permitting process.
- Section 10 lists references cited in the PRDI Data Report document.
- Appendices to the report contain the sampling data and associated backup information.

2 PRE-REMEDIAL DESIGN INVESTIGATION OVERVIEW

This section provides an overview of the PRDI testing methods used. The PRDI components described below were performed to fulfill data gaps identified in Section 3 of the PRDI Work Plan and provide the necessary data to perform the remedial design.

This section summarizes the PRDI sampling design including the number and type of samples collected and a brief elaboration of the types of analyses that were conducted. Tables 1 to 6 present a summary of the PRDI components associated with each data collection method and sediment site unit. Figures 5 through 10 present the PRDI surface sediment and subsurface exploration locations. A summary of the PRDI site surveys is presented on Figure 11 and oceanographic sampling stations are shown on Figure 12.

Details of the sampling methodology are provided in Appendix A. Deviations from the PRDI Work Plan are provided in each methodology section below. Quality control measures implemented during the data collection efforts are summarized in Section 3 and also described in Appendix A. Field sample collection logs are presented in Appendix B.

2.1 Surface Sediment Sampling

Surface sediment samples were collected using Van Veen methodology. Detailed sampling procedures are described in Appendix A. Surface sediment sampling was performed at multiple locations in support of the following objectives:

- Outer Site Areas: Refine the horizontal nature and extent of contamination for two outer site areas (Units 5 and 6).
- Inner Waterway Areas: Verify continued compliance with site cleanup levels in two natural recovery areas (Units 3A and 5C) located within and adjacent to the inner waterway.
- Source Control Verification Samples: Assess current conditions adjacent to existing municipal stormwater outfall discharges at C-street and Laurel Street within the Inner Waterway.
- Cap Design Parameters: Assess surface sediment total mercury and methyl mercury composition in planned cap areas and in other site areas designated for dredging and natural recovery (see Section 2.5 for a discussion of this work).
- Supplemental Testing in Dredging Areas: Additional surface sampling was performed

in planned dredging areas of the Outer Waterway (Unit 1). These data were developed to address the following two objectives:

  - First, these data were developed to supplement data developed by others documenting current regional surface concentrations of dioxin/furans conditions throughout Bellingham Bay (SAIC, 2008; Ecology and Hart Crowser, 2009).
  - Second, these data were developed in order to document current surface concentrations of dioxin/furans within Unit 1 as necessary to provide a basis for evaluating compliance with Ecology's anti-degradation policies during dredging and residuals management during the cleanup action.

- Reference Locations: Two reference samples were collected from clean, off-site reference locations within Samish Bay for use in bioassay testing and methyl mercury testing.

Consistent with the PRDI Work Plan, no additional surface sampling was conducted in other Inner Waterway areas or in the Log Pond, as sufficient information is available to define the required capping limits in these areas. Also, no additional surface sampling was performed in Unit 7 or Unit 9, because these areas are designated for MNR, and no design/permitting data gaps were present with respect to surface sediment quality in these areas.

A total of 26 surface sediment sampling stations were collected during August 2008 from on-site areas. Additional testing was performed at off-site reference locations. Surface sediment samples collected for chemical, biological, and physical testing were collected from the site-specific 0- to 12-centimeter (cm) biologically active zone at locations presented on Figure 5. Table 1 presents a summary of the surface sediment locations and sampling scheme details including a summary of chemical, biological, and physical testing. Surface testing results are discussed in Section 6.

In addition to the above-described work, some surface samples were also collected using Van Veen sampling methodology as part of physical testing, geotechnical testing and dewatering testing. This additional work is described in Sections 2.2 and 2.4 below.

2.2 Subsurface Vibracore Sediment Sampling

Subsurface sediment sampling was performed using a vibratory core sampler (vibracore) to collect chemical and geotechnical data to fill data gaps and facilitate remedial design. Vibracore sampling was conducted during July 2008 and August 2008. Vibracore locations were selectively placed throughout the study area to supplement previous subsurface testing results and address specific objectives for each sediment site unit. Tables 2a and 2b present the sample identification, coordinates, and testing conducted on vibracore samples for the ASB and waterway areas. Figures 6 and 7 show the subsurface vibracore sampling locations.

- **ASB Bottom Samples (Unit 8):** Vibracore sampling was performed throughout the bottom of the ASB to verify the depth of contaminated sludge/sediment in these areas. Sampling of the ASB bottom was performed along five transects, with a total of 25 vibracore stations. These stations included nine "primary" stations (8-01-VC to 8-09-VC) at which both Tier 1 and Tier 2 chemical testing was performed. At a total of 16 "secondary" stations (8-10-VC to 8-25-VC), Tier 1 testing and selective Tier 2 testing was performed. Chemical sampling was focused on the sediments located at discrete intervals beneath the ASB sludges. Sampling intervals are indicated in Table 2a and are measured from the "hard bottom" contact as measured by sediment probing during vibracoring, and as measured during logging of the vibracore samples.

- **ASB Berm Samples (Unit 8):** Vibracore sampling was performed at a total of 24 vibracore stations located along the interior sloping sides of the ASB berms. Sampling stations are shown on Figure 6 and included 12 stations (8-101B-VC to 8-112B-VC) identified as "B" stations (approximately at +14 feet mean lower low water [MLLW]) and 12 stations (8-101C-VC to 8-112C-VC) identified as "C" stations (approximately at 0 feet MLLW). As with the ASB bottom samples, chemical testing was targeted to discrete sampling intervals located beneath the ASB sludges. Sampling intervals are indicated in Table 2a and are measured from the "hard bottom" contact as measured by sediment probing during vibracoring and as measured during logging of the vibracore samples. The PRDI Work Plan proposed using both hollow-stem auger and vibracore methodology along the ASB slope berm. However, due to field conditions that prohibited installation of some of the hollow-stem auger sampling locations, vibracore methodology was used to collect all of the discrete sediment samples along the ASB berms for chemical testing.

- **ASB Deep-Sand Composites (Unit 8):** Additional sampling in the ASB consisted of

native sand composite sampling beneath the sloping berms. These samples were collected to verify the quality of the materials for on-site reuse. The native sand composite samples were collected from the "B" and "C" stations. Compositing from multiple cores was performed as appropriate to provide samples representative of specific berm materials. The final compositing scheme differed slightly from that identified in the PRDI Work Plan, and is listed in Table 2a.

- **ASB Sludge Testing (Unit 8):** ASB sludge samples were collected from both sediment vibracores within the ASB and from Van Veen grab samples. These sludge samples were composited to provide test samples for use in dewatering tests, and for use in elutriate testing. Elutriate testing was performed using both the Modified Elutriate Test (MET) and the Dredge Elutriate Test (DRET) methods. ASB site water was collected for use in both the dewatering pilot study and elutriate testing. The sample composite and analyses are listed in Table 2a.

- **Inner Waterway Testing (Units 2, 3, and 5C):** Vibracore sampling was performed within the Inner Waterway, including testing within sediment site units 2B, 2C, 3A, 3B, and 5C. Consistent with the PRDI Work Plan, no additional sampling was required in Unit 2A. Vibracore sampling was performed at 12 test stations within these site units to supplement previous chemical and physical testing data to facilitate remedial design in each site sediment unit. Consistent with the PRDI Work Plan, the core samples located in Units 3B and Unit 2C were tested for geotechnical parameters to assist with dredging and cap design. Samples from the cores located in planned natural recovery areas (Units 3A and 5C) were tested for physical and chemical parameters at multiple depth intervals in order to assist with sediment stability evaluations. Sampling intervals are indicated in Table 2b. Sampling intervals are indicated based on depths below the mudline.

- **Outer Waterway Testing (Units 1A and 1B):** Subsurface sediment vibracores were collected in Units 1A and 1B located in the outer Whatcom Waterway channel areas. A total of 16 subsurface sediment stations were collected in Units 1A and 1B, and used to form four composite test samples for chemical testing (Table 2b). Test locations, sample depths (0 to 4 feet below mudline), and sample compositing were performed consistent with previous testing performed as part of the Pre-remedial Design Evaluation (PRDE) investigations (Anchor 2003). The supplemental testing was performed to provide testing data for those chemicals not previously tested that are

now required by Dredged Material Management Program (DMMP) protocols for open-water disposal, and to provide information useful for evaluating alternative beneficial reuse and material management options. Composite samples from Units 1A and 1B were also collected for use in bench-scale solidification testing.

- **Outer Waterway Testing (Unit 1C):** Testing was performed at eight vibracore locations within Unit 1C in order to assist with dredge prism design and material profiling for dredge material disposal and reuse evaluations. Chemical testing was performed on discrete sediment sampling intervals collected below the approximate historic waterway dredge depths in order to evaluate the dredge prism required for material removal. The chemical testing for the lower sampling intervals consisted of "Tier 1" testing and selective "Tier 2" testing (see Table 2b). The list of Tier 2 parameters was expanded from that in the PRDI Work Plan to include dioxin/furan compounds. Chemical testing was also performed in each of the eight cores for intervals above the known deepest historic dredge depth in order to collect geotechnical data for evaluating dredging properties, and to provide chemical characterization data for material disposal/reuse evaluations. One composite sample consisting of Unit 1C sediments was also developed and used for MET and DRET testing. Test protocols were the same as described for the ASB solids except that Whatcom Waterway water was used in place of ASB water.

- **Unit 5 and 6 Testing:** Subsurface sediment vibracore sampling was performed in other site areas to supplement sediment stability and cap design evaluations in Units 5 and 6. Two vibracores were sampled in Unit 5 and tested for chemical and physical parameters at depth to assist in dredge and cap design in this area; one additional vibracore was sampled for physical parameters only. Four vibracores were sampled in Unit 6 and tested for physical and geotechnical parameters to support sediment stability evaluations in this area. Supplemental chemistry sampling was performed at four locations by diver core after surface data was reviewed. This additional sampling occurred to measure chemical parameters in the shallow subsurface (to 3 feet below mudline) in order assess potential impacts from scouring, propeller wash, and anchoring. Table 2b lists the sampling scheme for these site areas.

- **Outer Site Boundary Definition:** Six vibracores were sampled along two transects as shown on Figure 7. These cores were placed to evaluate the outer extent of site-associated mercury in shallow subsurface sediments (0 to 4 feet below mudline), and

thus, define the limits of Unit 9. These cores are labeled in this report as "Unit 9 cores" though most of the cores were placed beyond the updated boundary of Unit 9 as defined by the subsurface data. Chemical and physical testing in the Unit 9 cores were performed on composite samples collected from a depth interval of 0 to 4 feet from each core.

Consistent with the PRDI Work Plan, no subsurface testing was performed in Unit 7. As discussed in Section 4, the updated bathymetric survey data for this area showed that the side-slopes in the former disposal mound area were flatter than indicated in previous surveys performed at lower survey resolution.

2.3 Subsurface Hollow-Stem Auger Sampling

Subsurface sediment was collected by hollow-stem auger at selected locations to obtain geotechnical data. Hollow-stem auger sampling was also performed at other locations for collection of chemical testing data, where vibracore methods were not practical due to logistical considerations (e.g., deep samples beneath ASB berms). Mud rotary sampling was performed where hollow-stem auger sampling was not feasible (i.e., collection of subsurface samples from under-pier areas at the Bellingham Shipping Terminal [BST]). Geotechnical information was required in order to evaluate the stability of slope, cap, and shoreline areas and to support the assessment of dredgeability and materials handling properties of sediments to be removed. Selected hollow-stem auger and mud rotary samples were also submitted for chemical testing as described below.

Hollow-stem auger geotechnical borings conducted over-water by barge were performed consistent with requirements of the site-specific sampling Joint Aquatic Resource Permit Application (JARPA). The JARPA is included in Appendix C.

Locations of hollow-stem auger and mud rotary borings are shown on Figure 8. The sampling coordinates, intervals, methods, and test parameters for borings along the ASB berm and in the waterway areas are identified in Tables 3a and 3b, respectively. Key objectives for each area are described below:

- **ASB Berm Borings (Unit 8):** Supplemental geotechnical information was required along the ASB Berms to support remedial design. Twenty hollow-stem auger borings

were advanced through the ASB berm at multiple locations in order to provide a representative characterization of the range of materials expected to be encountered during berm excavation, to help identify the inside berm profile, and to assess the expected surface condition on the inner berm face after excavation has been completed. Twelve hollow-stem auger borings were placed at the top of the berm using an upland drilling rig. The depths of these twelve borings were sufficient so that the borings penetrated through the berm material and the native sandy sediments to the top of the underlying glacial-marine drift layer. Eight additional borings were placed along the lower portions of the berm slope from a barge-mounted drilling rig. The depths of these other eight borings were sufficient to penetrate at least 25 feet below the anticipated ASB marina bottom elevation. As described in Section 2.2 above, vibracore sampling was used in place of hollow-stem auger sampling for some berm sampling locations to collect samples for chemical testing.

- **Inner Waterway (Units 2 and 3):** Geotechnical testing locations along the Inner Waterway included three upland geotechnical borings within the Central Waterfront Area, four upland locations within the former GP Mill Site, and eight in-water locations within Site Units 2A, 2C, and 3B. In-water subsurface sampling was performed using a barge-mounted hollow-stem auger. Both upland and in-water sampling was completed to depths that reached the underlying native material in order to characterize the stratigraphy of the inner waterway.

- **Outer Waterway BST Wharf Areas (Unit 1C):** To support waterway dredging and geotechnical evaluations, additional physical and chemical testing data were required for the area of Unit 1C located beneath the BST wharf. Testing was performed at a total of eleven sampling locations along four transects. Sampling methods were modified slightly from the PRDI Work Plan based on field conditions. Sampling was initially proposed using hollow-stem auger and sonic drilling methods for all locations. Final sampling at most locations was performed using mud rotary drilling. A diver-assisted piston core was used for two sampling locations where sample recovery was poor using the mud rotary method. One sample location, 1C-102B-HSA, was not collected by either method because of refusal due to riprap under the current dock structure.

- **Log Pond (Unit 4):** One hollow-stem auger station was completed in the northwest

corner of the Log Pond adjacent to the current dock structure. This station was collected using a barge-mounted drilling rig to evaluate slope and structure stability in this area.

- **Barge Dock (Unit 6):** Two barge-mounted hollow-stem auger borings were placed within Unit 6 as part of parallel geotechnical investigations. Archived sediment samples collected from the upper three sampling intervals from these borings were submitted for chemical analysis (total solids, total organic carbon [TOC], mercury, semivolatile organic compounds [SVOCs]) to assess subsurface sediment quality in this area.

Consistent with the PRDI Work Plan, no hollow-stem auger borings were placed in other site areas where existing information or the data collected by other methods (survey data, surface sampling, vibracore sampling or vane shear testing) were sufficient to complete the design/permitting activities.

2.4 Vane Shear Testing

Vane shear testing (VST) was conducted in three site areas (Units 4, 5 and 6) to supplement other data collected by other methods and to provide additional information on the in situ strength of the sediments for evaluation of sediment capping and sediment stability. Consistent with the PRDI Work Plan, vane shear data were not collected in other site areas.

Collected sediment strength data will be compared to geotechnical index parameters and this information will be used to evaluate acceptable lift thicknesses for sediment capping, and to evaluate sediment stability. Locations of vane shear measurements and co-located surface grabs are shown on Figure 9. The sample locations, coordinates, methods and test parameters are listed in Table 4.

- **Site Units 5 and 6:** In situ sediment strength was measured in Units 5 and 6 in shallow water (less than 10 feet deep) using the VST. Where the VST was performed, co-located sediment grab samples were collected to characterize the material and to properly standardize the field VST results using laboratory tests.

- **Log Pond (Unit 4):** VST measurements were conducted at several locations and at

several depths for each location in selected areas of the Log Pond where contingency actions have been planned to address cap erosion. These data supplement vibracore and hollow-stem auger information available for the Log Pond area. In addition to the VST measurements, co-located sediment grab samples were collected to physically characterize the material type to facilitate standardization of the field VST measurements.

2.5 Porewater Sampling

Sediment porewater was collected within the Inner portion of the Whatcom Waterway, and within Units 5 and 6. The porewater data were collected to evaluate groundwater/surface water interactions and to provide information for use in evaluating the impacts of cap placement and consolidation on contaminant transport. Two sampling stations were sampled in each of the above-listed site units. The sampling design is presented in Table 5 and porewater sampling locations are presented on Figure 10.

2.6 Surface Sediment Mercury Speciation

Surface sediment mercury speciation data were collected within multiple site areas (Units 1B, 1C, 2C, 5C, and 6B) and at a Samish Bay reference location to assist in cap engineering design. Objectives of the testing were defined in the PRDI Work Plan. The testing was performed to assess the site-specific ranges in patterns of mercury speciation/methylation. Mercury speciation sampling locations are listed on Figure 5. These locations were selected in coordination with Ecology during preparation of the PRDI Work Plan to provide a range of site conditions. Sampling stations included the potential cap areas within the Inner Waterway and Outer Waterway area, and additional stations were provided for comparison of site-specific speciation trends within other areas of the site. Table 1 presents the surface sediment mercury speciation sampling IDs and coordinates, the sample depth, and testing parameters.

At each selected on-site and off-site test location, surface sediment samples were collected and analyzed for total mercury and methyl mercury. These data were to be used in conjunction with geotechnical data, wind/wave modeling information, porewater sampling data, and other design parameters to assess cap design requirements.

2.7 Site Surveys

Site survey work was performed to support project remedial design activities. The work included development of horizontal and vertical controls, and updated surveys for bathymetry, topography, utilities, docks/structures, and eelgrass. The specific site survey tasks performed during the PRDI are described below.

- **Survey Control Network:** Primary horizontal and vertical control was verified, and a secondary control network was established in the field and for mapping purposes. The project datums are North American Datum (NAD) 83/98 Washington State North Zone (horizontal) and MLLW based on National Ocean Survey (NOS) Tide Station 9449211 at Bellingham, WA (tidal epoch 1983-2001).

- **Bathymetric Surveys:** Updated bathymetric surveys were conducted within the project area by Wilson Engineering, a licensed surveyor. Survey methods included both multi-beam survey methods (used for the ASB interior, portions of the Inner Waterway and Outer Waterway and the area around Site Unit 6 and Starr Rock) and single-beam survey methods (used in Units 1A/1B, portions of Site Unit 5 and Unit 9, and in the area of Whatcom Waterway upstream of the Roeder Avenue Bridge). These new survey data were compiled along with older survey information available for the areas within I&J Waterway and offshore areas of Unit 9. Figure 11 shows the sources of new and existing bathymetric survey data as used for development of the project area bathymetric map.

- **Topographic Surveys:** New topographic surveys for the project were limited to the work necessary to tie the bathymetry into the shoreline upland areas. A full topographic survey of the ASB berm was conducted to facilitate planning for berm modifications, because existing data were limited for this area. Existing upland surveys for the Central Waterfront and former GP Mill site areas were reviewed and were considered sufficient for remedial design activities in these areas. Figure 11 summarizes the sources of existing topographic survey information used for the project base map.

- **Under-Dock Surveys:** Wilson Engineering performed under-dock surveys along the southern shoreline of the Whatcom Waterway, in areas beneath the former GP Mill dock and beneath the BST wharf. The surveys were performed to evaluate the top

and toe of bank, locations and elevations of bulkheads, and the nature and extent of slope armoring (including where applicable the presence and thickness of sediment overlying armor stone). The surveys above the water line were performed by a field survey crew using standard survey methods. Diver surveys were used to evaluate the nature and extent of slope armoring beneath the water line.

- **Side Scan Sonar Debris Survey:** Side scan sonar surveys were conducted by Wilson Engineering in areas of possible capping and dredging to assess potential debris or underwater structures that could impact capping or dredging. These surveys were conducted within the Whatcom Waterway, the Log Pond, and in the vicinity of Starr Rock. Sub-bottom profiling was also performed in the area of the buried wastewater lines extending from the former GP Mill Site to the ASB, though this survey method was found to be generally ineffective at identifying the buried line locations.

- **ASB Probing and "Hard Bottom" Surveys:** Multiple survey methods were used to evaluate the ASB sludge consolidation and stratification, and to verify the "hard bottom" contact located between the ASB sludges and the underlying native sands. These survey methods were used along with vibracore testing data (refer to Section 2.2) to refine the dredge prism for ASB remediation. The ASB mudline was determined using multi-beam bathymetry methods described above. Two types of lead-line measurements (standard method and plate-pole method – refer to Appendix A) were collected to supplement the multi-beam data and assess the potential thickness of unconsolidated ASB solids above/below the measured mudline. The ASB "hard bottom" was then defined using manual probing at approximately 125 grid-based test locations. The locations were established using a rectangular grid with parallel grid lines spaced approximately 100 feet apart. At each test location, a hollow-tipped pole was manually inserted into the sludge layer until a hard contact was encountered. The depth at which the pole could not be inserted further without mechanical assist was measured and used to calculate a "hard bottom" elevation for that location. Sediment recovered in the hollow-tip of the sediment probe was visually inspected to ensure that full penetration to the native sand layer was achieved.

- **Eelgrass Survey:** Intertidal and subtidal eelgrass surveys were conducted to determine the geographic extent and associated shoot densities of eelgrass beds in the project area. All areas within the project area with depths of -15 feet MLLW or shallower

were surveyed for eelgrass beds. The surveys were conducted using a combination of direct visual assessment of the intertidal areas coupled with a towed camera survey of shallow subtidal areas. Follow-up dive surveys were performed to determine eelgrass shoot densities in areas where the visual assessment and towed camera surveys show the existence of eelgrass beds. Eelgrass and macroalgae distributions were classified using categories ranging from "no eelgrass" to "dense bed" (areas with greater than 50 percent coverage).

2.8 Oceanographic Data Collection

Oceanographic data were collected at both near-field and far-field portions of Bellingham Bay for use in calibration and verification of wave and current models to be used for remedial design. The data collection effort consisted of deploying moored instruments and obtaining time series data of wave height, period, and direction, and vertical profiles of current speed and direction. Evans-Hamilton, Inc. was subcontracted to perform the data collection and to conduct limited post-processing of the data.

Monitoring equipment was deployed at four stations within Bellingham Bay for a period of approximately 6 weeks. Station locations are illustrated on Figure 12, and a description of each station is provided below.

- **Station 1:** Station 1 was located in the Inner Waterway at coordinates 48 45.0822 N, 122 29.1668 W. The bottom elevation at the mooring location was -15 feet MLLW. Directional wave data were collected using a combined current meter, water level meter, and wave sensor. The instrument consisted of an Acoustic Doppler Wave and Current Profiler (AWAC) instrument mounted on a Trawl Resistant frame weighted to the bay bottom. The mount was fitted with an acoustic release recovery and location system.

- **Station 2:** Station 2 was located within the project area seaward of the ASB at coordinates 48 44.843 N, 122 29.977 W. The bottom elevation at the mooring location was -15 feet MLLW. Directional wave data were collected using a combined current meter, water level meter, and wave sensor. The instrument consisted of an AWAC instrument mounted on a Trawl Resistant frame weighted to the bay bottom. The mount was fitted with acoustic release recovery and location system.

- **Station 3:** Station 3 was located near the entrance to Outer Squalicum Harbor at

coordinates 48 45.453 N, 122 30.709 W. The bottom elevation at the mooring location was -10 feet MLLW. Only current and water level data were collected at this location. The instrument consisted of a Nortek Aquadopp current profiler mounted on an open-sided frame rigged to a piling.

- **Station 4:** Station 4 was located in approximately 90 feet of water in outer Bellingham Bay to the south of Portage Island at 48 41.971 N, 122 35.239 W. A 500 kHz profiling current meter with internal pressure sensor was mounted on a Trawl Resistant frame weighted to the bay bottom. The mount was fitted with acoustic release recovery and location system.

The four instruments were deployed between March 30 and May 1, 2008 with a total deployment time of 43 days.

3 CHEMICAL AND PHYSICAL DATA QUALITY

This section provides a concise summary of project quality assurance objectives for chemical, physical, and biological testing data, and provides the concise findings of data validation activities.

3.1 Testing Labs and Methods

Chemical, physical, and biological testing was performed by Ecology-approved laboratories as presented in the PRDI Work Plan (Anchor 2008a). These included the following:

- Analytical Resources Inc. (ARI) is the Ecology-certified laboratory located in Tukwila, Washington, that conducted a majority of the chemical testing and all physical and geotechnical testing.
- Brooks Rand Labs, LLC is the Ecology-certified laboratory located in Seattle, Washington, that performed the pore-water chemical testing and the sediment methyl mercury testing.
- Analytical Perspectives LLC is located in Wilmington, North Carolina, and conducted the dioxin/furan testing for the project.
- NewFields, LLC is located in Port Gamble, Washington, and performed all of the biological testing for surface sediments.

All analyses conformed to procedures described in the approved Work Plan/SAP (Anchor 2008a), and in the referenced QAPP (Anchor 2008b). Appendix D provides the supporting quality control information and data validation reports.

Chemical, physical, and biological testing adhered to the most recent Puget Sound Estuary Protocols (PSEP) quality assurance/quality control (QA/QC) procedures (PSEP 1997b) and PSEP analysis protocols. Metals and organic compounds were analyzed according to the guidelines provided in PSEP (1997c) and PSEP (1997d), respectively. TOC was analyzed by Plumb (1981). Atterberg limits, specific gravity, consolidation, effective porosity, and shear strength were analyzed according to American Society for Testing and Materials (ASTM) methods. Grain size was analyzed according to the ASTM method with the exception of nine sediment samples analyzed by the PSEP method (1C-102A-HSA-S12, 1C-102A-HSA-S18, 1C-102A-HSA-S3, 1C-102A-HSA-S6, 1C-102A-HSA-S9, 1A-01-VC-C1, 1A-01-VC-C2, 1B-01-VC-C1, and 1B-01-VC-C2). The PSEP grain size method was used for these limited

sediment samples due to laboratory error and sufficient archive sample was not available for ASTM reanalysis. The project database retains the classifications and sieve sizes provided by the laboratory which differ slightly between the two methods. Sediment biological testing was conducted in accordance with Washington SMS and PSEP guidelines (1995).

3.2 Data Quality Objectives

The project QAPP was written to ensure that data of sufficiently high quality were generated to support the design and permitting of the site cleanup action defined in the CAP (Ecology 2007). The quality of the laboratory data is assessed by precision, accuracy, representativeness, comparability, and completeness. Applicable quantitative goals for these data quality parameters are listed in Table 6. Each parameter is discussed below.

- **Precision:** Laboratory precision was measured with laboratory control sample (LCS)/ laboratory control sample duplicate (LCSD) analyses; matrix spike (MS)/ matrix spike duplicate (MSD) analyses; and replicate analyses. Generally precision goals were met and in cases where they were not, data were qualified as estimated per U.S. Environmental Protection Agency (EPA) National Functional Guidelines (EPA 1999, 2004). Field precision was evaluated by the collection of blind field duplicates. Precision goals were generally met. Data were not qualified based solely on field precision results.

- **Accuracy and Bias:** Accuracy was measured with LCSs, MS samples, and standard reference materials (SRMs). Generally accuracy goals were met and in cases where they weren't, data were qualified as estimated per National Functional Guidelines (EPA 1999, 2004). In these instances, the usability of the data was determined by the extent of the exceedance. The validation reports submitted in Appendix D specify the specific outliers and whether the bias was high or low.

- **Representativeness:** The list of analytes has been identified to provide a comprehensive assessment of the known and potential contaminants at the site.

- **Comparability:** The laboratory used common traceable calibration standards, spiking standards, and reference materials. Specific information can be found in the laboratory data packages (Appendix G).

- **Completeness:** The completeness goal of 90 percent was met.

3.3 Quality Assurance/ Quality Control Findings

The overall data QA/QC program for the PRDI evaluation followed procedures presented in detail in the PRDI Work Plan (Anchor 2008a). Measures taken to ensure data quality employed current EPA, Ecology, and ASTM protocols. Specific actions are described below.

3.3.1 Field QA/QC

Field QA/QC samples were used to evaluate the efficiency of field decontamination procedures. Table D-1 in Appendix D provides a summary of the equipment blanks, testing performed on each blank sample, and lists the detected constituents. Equipment rinse blanks were collected for each sampling method (i.e., surface and subsurface sediments) and were analyzed for the parameters specific to the type of sampling being conducted. There were no target analytes detected in any equipment rinse blanks with the exception of low levels of ammonia and low level copper in one equipment blank. These detections did not impact the data quality. The equipment blank testing results are provided in Appendix G.

Laboratory grade sand from Fischer Scientific (blank sand) was submitted for dioxin/furan testing. This sand blank was identified as 8-50-VC. Low levels of two target analytes (1,2,3,4,6,7,8-HpCDD and OCDD) were detected in this sample. The presence of these analytes was determined to be insignificant due to the relative concentrations present in field samples. The results of this analysis can be found in Appendix G.

Field duplicates were used to evaluate homogenization accuracy. A summary table of field duplicates can be found in Table D-1 in Appendix D. Relative percent differences (RPDs) were screened against 50 percent. There were a few grain size percentage retained RPD values that exceeded 50 percent, however these values were close to the reporting limit where the percent error is increased. One Atterberg limits plasticity index and one TOC result exceeded 50 percent. Overall, the field duplicate quality objectives were met.

3.3.2 Chain of Custody

Chain-of-custody forms and seals were used to track sample custody and document the proper handling and integrity of the samples. All containerized samples were shipped to the analytical laboratory after preparation according to appropriate sample handling procedures (i.e., transported at 4 degrees centigrade). All samples were transported to Analytical Resources, Inc (ARI), Brooks Rand, and NewFields by Anchor QEA personnel and relinquished under signature by both Anchor QEA and laboratory receiving staff. Most of these samples arrived within the recommended temperature of 4 ± 2°C; however, those that did not were received by the laboratory within 12 hours of collection and were determined to have not been affected by the temperature exceedance. Samples transported to Analytical Perspectives were transported by FedEx according to appropriate sample shipping procedures. All shipped samples arrived within the recommended temperature of 4 ± 2°C. Chain of custody documentation is included with the associated laboratory reports in Appendix G.

3.3.3 Laboratory QA/QC

The individual analytical methods prescribe specific quality control criteria for initial calibrations, continuing calibration verifications, internal standard area counts, and relative retention times. The laboratories followed the associated method criteria to evaluate their data and flagged any data that was outside of these control limits. These exceedances were also qualified in the validation process.

For sediment tests, PSEP action limits were used to assess the precision and accuracy of method blanks, laboratory control samples, matrix spikes, standard reference materials, and replicate samples. The control limits (data quality objectives) and frequencies of these quality control samples are listed in Table 6. Any quality control results that exceeded these criteria were qualified in the validation process.

For bioassay tests, standard QA/QC procedures were in place to ensure validity of test results and were evaluated based on SMS and PSEP (1997a) performance criteria as described previously in the PRDI Work Plan (Anchor 2008a). Standard QA/QC procedures included the use of negative controls, reference sediment samples, replication, measurement of water quality during testing, and reference toxicant tests.

3.3.4 Data Validation

All chemical and physical data submitted in this report were validated by Laboratory Data Consultants, Inc. (LDC) of Carlsbad, California. Data validations were performed at 90 percent level 3 and 10 percent level 4. LDC performed a level 4 data validation by randomly selecting 1 out every 10 sample results within an analytical method. Data validation reports are provided in Appendix D. Samples are listed with their corresponding laboratory data package and validation report number in Appendix G, Table G-1. The data validation was performed under EPA guidelines, as described in the project QAPP and the National Functional Guidelines for Data Review (EPA 1999, 2004).

Data validation verified the accuracy and precision of chemical and physical determinations performed during this investigation. Data qualifiers assigned as a result of the data validation and their definitions are shown on each of the respective analytical results tables. Data may have been qualified as biased or estimated for a particular analysis based on method or technical criteria. Data qualified with a "J" indicates that the associated numerical value is the approximate concentration of the analyte. Data qualified with a "UJ" indicates the approximate reporting limit below which the analyte was not detected. Consequently, these data qualifications are not expected to impact the data quality objectives.

All PRDI data were determined to be useable as reported from the laboratory or as qualified in this PRDI Data Report for the purposes of forthcoming remedial design, with some minor exceptions. Benzyl alcohol results were rejected in four samples from Unit 8, 2B, and non-remedial design stations due to low or no recoveries in the LCS and/or MS/MSD analyses in both the full scan and SIM SVOC analyses.

Biological test conditions and methods were in compliance with PSEP (1995), Ecology's Sampling and Analysis Plan Appendix (SAPA; Ecology 2008), and the various updates presented during the Sediment Management Annual Review Meeting (SMARM). Details of the biological testing methods and results are presented in Section 6.2.

4 SITE SURVEY INFORMATION

This section summarizes the results of site survey work performed during the PRDI activities. Site survey information throughout the project area was collected between May 2008 and February 2009. This information included bathymetric and topographic surveys, under-dock surveys, a side scan sonar survey, ASB mudline and "hard bottom" probing, and an eelgrass survey.

A summary of the type and extent of bathymetric and topographic survey information collected or utilized for the project is provided on Figure 11. The findings of the site survey work are presented in Appendix E with the exception of the eelgrass survey which is presented on Figure 13.

4.1 Bathymetry and Topography

Vertical and Horizontal control points were set on site and referenced to Washington State Plane North, NAD 83 (feet) and MLLW (feet), which are defined as project datum. Feet as used in this report are U.S. Survey Feet, defined as 1200/3937 of an International System of Units (SI) meter. Bathymetry within Whatcom Waterway, the ASB basin, and adjacent areas of Bellingham Bay was collected in May 2008. Topography of the ASB berm and top of banks along the Whatcom Waterway was also collected in May of 2008. These data are provided in Appendix E in the "Bathymetry & Topography" folder in Adobe PDF format.

The new site bathymetry was generally consistent with previous survey data collected in 1996.

- **Comparison to Older Data:** Mudline measurements were generally within approximately 1 foot of previous measurements, though differences in survey methodology prevent a direct comparison of bathymetric changes.
- **Unit 1A/1B Mudline Elevations:** The bathymetric results in Units 1A and 1B were consistent with previous survey results. Results confirmed that the current mudline elevation is well below the federally-authorized project depth (-30 feet MLLW) within these two site units.
- **Starr Rock Disposal Mound:** The bathymetric data for Starr Rock (Unit 7) identified the limits of the oblong "disposal mound" created as part of the late 1960s waterway dredging conducted by the U.S. Army Corps of Engineers and the Port. The survey

resolution was more detailed than previous surveys and demonstrated that the side-slopes of the disposal mound are flatter than previous estimates. The steepest side-slopes were flatter than 3H:1V (horizontal:vertical), and most side-slopes were flatter than 4H:1V.

The topographic survey for the ASB berm identified an average crest elevation of 22.5 feet above MLLW. This elevation is slightly lower than previous estimates.

New upland survey information were not collected for either the Central Waterfront Site or for the former GP Mill Site as part of the PRDI surveys. Existing information for most of these areas was determined to be adequate for completion of remedial design and permitting. Existing survey data for these upland areas were used to develop an integrated site basemap for the project. The upland surveys used for the basemap included a ground topographic survey completed by David Evans and Associates in February 2008 of the Central Waterfront area and a September 2004 aerial photogrammetry survey completed by Walker and Associates for the Port. These surveys were completed in Washington State Plane North, NAD 83 (feet) and North American Vertical Datum (NAVD) 88 (feet) and were converted to MLLW (feet) for incorporation into the project basemap. The conversion from NAVD 88 (feet) to MLLW (feet) used for the project is +0.48 feet and was taken from NOAA Benchmark No. 9449211 (Bellingham, Washington). The draft project basemap is provided in Appendix E in the "Project Basemap" folder in AutoCAD format.

4.2 Under Dock Surveys

An under-dock survey was conducted for the areas beneath the BST and GP docks. The survey was conducted in two phases and was completed in February 2009. This survey effort included measurements of the mudline elevations along the waterway slopes, including locations and elevations of bulkheads or other breaks in shoreline topography/bathymetry. The extent of slope armoring and engineered fill (e.g., riprap) was surveyed by diver inspection along evenly spaced transects located under the docks and perpendicular to the dock face. The extent of sediments overlying armor stone or engineered fill was estimated using diver jet probes. The under-dock survey information was used to update the bathymetry surface for the waterway and provide a "toe-of-slope line" to show the extent of

engineered fill under the docks. This survey is provided in Appendix E in the folder "Under Pier Survey" in AutoCAD format.

4.3 Side Scan Sonar

Side scan sonar imagery was collected for the project area, including Whatcom Waterway, the Log Pond area (Site Unit 4), the outside perimeter of the ASB (portions of Site Unit 5), the navigation channel (Site Units 1C, 2 and 3), the barge dock area (Site Unit 6), and the area around the Starr Rock formations (Site Unit 7). A GeoTiff image, geo-referenced to the project datum, was produced combining all of the separate side scan sonar images into one image representing the entire project area. This image is provided in Appendix E in the "Side Scan Sonar" folder.

In addition, a contact report was produced which provides the imagery, geographic position, estimated geometry, and classification for 74 contacts within the project area. This information will be used in the remedial design and construction of dredging and capping works for the project. This contact report does not identify every item that was visible in the imagery; however it provides information for contacts anticipated to be significant for dredging design and construction.

4.4 ASB Mudline and Bottom Probing

Probing measurements were performed within the ASB to identify the elevations of the "hard bottom" located beneath the ASB sludge layer. Results of vibracore sampling and probing measurements confirm that the "hard bottom" consists of the top of the native sand layer. The "hard bottom" is overlain by a thin layer of loose sand, the ASB bentonite lining, and the ASB sludges.

The elevation of the "hard bottom" was found to be generally consistent with previous measurements performed by RETEC on behalf of the Port during 2004 (RETEC 2006). The "hard bottom" measurements generally were between -14 and -16 feet MLLW, though they ranged between extremes of approximately -11 feet MLLW and -19 feet MLLW. The ASB depth probing data will be used in conjunction with ASB chemical sampling data to develop

dredge prisms for remediation of the ASB. These will be presented in the Preliminary Design Concept Report and in the Engineering Design Report.

The mudline within the ASB was found to be relatively consistent using three different test methods. These included a multi-beam bathymetric survey, a standard lead-line measurement and a plate-pole lead-line measurement. Differences between these methods were generally less than 1 foot and indicated that the top of the ASB solids had generally formed a consolidated, though soft, sludge surface. Among the three mudline measurements, the shallowest mudline elevations were measured using the multi-beam survey method, and the deepest elevations were measured using the standard lead-line. The mudline contours shown on Figure 11 are based on the multi-beam survey data.

4.5 Eelgrass Survey

Figure 13 summarizes the findings of the eelgrass survey performed for the project area. Significant areas of eelgrass were noted in the following locations:

- Head of the Inner Waterway (Site Unit 3): Two localized areas of eelgrass were noted at the head of the Whatcom Waterway, adjacent to the Roeder Avenue bridge. These two areas are located within a planned monitored natural recovery area.
- Log Pond (Site Unit 4): Numerous patches of eelgrass were identified within the Log Pond. These patches ranged from sparse to patchy.
- Areas Adjacent to the ASB (Site Unit 5): Localized areas of eelgrass were identified in shallow-water areas south and west of the ASB. The density of eelgrass varied from none to dense in these areas as indicated on Figure 13.
- Barge Dock Area (Site Unit 6): Areas of eelgrass were noted south of the barge dock along the western shoreline of the BST. These beds ranged in density from sparse to dense. No eelgrass was noted adjacent to the main BST wharf.

5 OCEANOGRAPHIC DATA

Oceanographic data (waves, water levels, and currents) were collected at four stations within Bellingham Bay between March 20, 2008 and May 1, 2008. The station locations and instruments used for the data collection are described in Section 2.8 and Figure 12.

Current and water level data were collected at all four stations as 2-minute averages every 2 minutes (for a total of thirty 2-minute averages per hour). Wave time series data were collected at a sampling frequency of 2Hz at Stations 1 and 2 only. The data from each instrument were downloaded from the internal data loggers in each instrument in ASCII format. Raw data files are provided for current and water level data in Appendix F.

The wave data files were post-processed to provide hourly averages of wave parameters at Stations 1 and 2 over the deployment period. These post-processed wave data are also provided in Appendix F. A list of these data files is provided below:

- Station 1 Current/Water Level Data
  Bellingham Bay Station
  1_Mar2008_May2008_CurrentData.txt
- Station 1 Wave Time Series Data
  Bellingham_Bay_ST1_AWAC1000_Waves.xls
- Station 2 Current/Water Level Data
  Bellingham Bay Station
  2_Mar2008_May2008_CurrentData.txt
- Station 2 Wave Time Series Data
  Bellingham_Bay_ST2_AWAC600_Waves.xls
- Station 3 Current/Water Level Data
  Bellingham Bay Station
  3_Mar2008_May2008_CurrentData.txt
- Station 4 Current/Water Level Data
  Bellingham Bay Station
  4_Mar2008_May2008_CurrentData.txt

Current and water level data files consist of header information, which provides the location of the instrument and start and end time of data recording for the deployment, and 13

columns of data recorded by the instrument for each 2-minute average. Descriptions and formats for these columnar data are provided below:

- Month (MM)
- Day (DD)
- Year (YYYY)
- Hour (hh (UTC))
- Minute (mm)
- Second (ss)
- Bin Range (m) (Distance from Acoustic Doppler Current Profiler [ADCP] to center of bin)
- Current Speed (centimeters per second [cm/s])
- Current Direction Toward (Degrees True N)
- Magnitude East (cm/s)
- Magnitude West (cm/s)
- Temperature (Degrees C)
- Pressure (meter of water)

Post-processed wave data files consist of 30 columns of data which represent hourly averages of wave parameters for the 43 day deployment period for a total of 1,004 samples. Descriptions and formats for these columnar data are provided below:

- Month (MM)
- Day (DD)
- Year (YYYY)
- Hour (hh (UTC))
- Minute (mm)
- Second (ss)
- Significant wave height (m)
- Significant wave height (ft)
- Mean 1/3 wave height (m)
- Mean 1/3 wave height (ft)
- Mean 1/10 wave height (m)
- Mean 1/10 wave height (ft)
- Max wave height (m)
- Max wave height (ft)
- Mean period (s)
- Peak period (s)

- Mean zero crossing period (s)
- Peak Direction (deg from true north)
- Directional Spread (deg)
- Mean direction (deg)
- Unidirectivity index
- Mean pressure (dbar)
- Mean pressure (psi)
- Water level over instrument (m)
- Water level over instrument (ft)
- No Detects
- Bad Detects
- Current speed (wave cell) (meters per second [m/s])
- Current speed (wave cell) (deg)

Circulation data were collected throughout the monitoring period. During the test period, there were three significant storm events which were useful for calibration and verification of the wind/wave model. These storms occurred in 2008 on March 24, April 6, and April 7. Wave data recorded during these three events will be used to calibrate the wave transformation model to be utilized in the remedial design efforts. A summary of wave and circulation modeling information will be provided as part of the Engineering Design Report.

6 SURFACE SEDIMENT TESTING

This section summarizes the results of surface sediment (0 to 12 cm) chemical and biological testing performed during the PRDI. Where applicable, results from the current testing are compared to the results of previous testing reported in the Supplemental RI/FS (RETEC 2006).

Surface sediment quality at the Whatcom Waterway Site was previously measured during sampling events in 1996 and 1998, and later in follow-up sampling performed in 2002. Previous surface sediment sampling has demonstrated declining surface sediment chemical concentrations, and corresponding decreases in measurable biological effects as measured by bioassay testing. Results for previous surface sediment quality from the first two sampling events (1996 and 1998) and sediment quality data collected in 2002 are presented in the Supplemental RI/FS (RETEC 2006).

6.1 Surface Sediment Chemical and Physical Testing

Table 7 summarizes the results of surface sediment chemical and physical testing. Results include 26 on-site samples, and 2 off-site reference area samples. Sampling locations are identified on Figure 5.

6.1.1 Comparisons to Sediment Quality Standards Chemical Criteria

Chart 1 below summarizes the total mercury concentrations measured in the tested surface sediment samples (0 to 12 cm) and results of confirmational biological testing (see Section 6.2).

Chart 1
Surface Sediment Mercury and Biological Testing Results

Station ID	Total Mercury[3] (mg/kg dry weight)	SQS/CSL Biological Criteria (Pass/Fail)[1]
Inner Waterway		
2C-01-SS	0.30	Not Tested
2C-02-SS	0.40	Not Tested
2C-03-SS	0.60 (> CSL)[3]	Not Tested[3]
3A-01-SS	0.20	Pass
3A-02-SS	0.13	Pass
3A-03-SS	0.09	Pass
3A-04-SS	0.40	Pass
3A-05-SS	0.40	Pass
5C-01-SS	0.12	Pass
5C-02-SS	0.31	Pass
Outer Waterway		
1B-01-SS	0.20	Not Tested
1C-01-SS	0.30	Not Tested
Unit 5		
5B-01-SS	0.76 (> CSL)[3]	Pass[2,3]
5B-02-SS	1.1 (> CSL)[3]	Pass[3]
5B-03-SS	0.50 (>SQS)[3]	Pass[3]
5B-04-SS	0.61 (> CSL)[3]	Pass[3]
5B-05-SS	0.71 (> CSL)[3]	Pass[3]
5B-06-SS	2.64(> BSL)[3]	Not Tested[3]
5B-07-SS	0.22	Pass
Unit 6B/6C		
6B-01-SS	0.29	Pass
6B-02-SS	0.30	Pass
6B-03-SS	0.30	Pass
6B-04-SS	0.31	Pass
6B-05-SS	0.30	Pass
6C-01-SS	0.30	Pass
6C-02-SS	0.40	Pass
Reference Area		
REF-01-SS	0.1 U	Pass

Notes:
SQS – Sediment Quality Standards (0.41 mg/kg for mercury)
CSL – Cleanup Screening Levels (0.59 mg/kg for mercury)
BSL - Bioaccumulation Screening Level (1.2 mg/kg for mercury)

mg/kg – milligrams per kilogram
1 – Bioassays conducted included *E. estuarius*, *D. Excentricus*, and *N. arenaceodentata*.
2 – MIGT / MIGC = 69 percent when compared to the control. Sample 5B-01-SS passes when compared to both references. See Section 6.2 for additional discussion.
3 – Chemistry results were compared to the mercury SQS (0.41 mg/kg), the CSL (0.59 mg/kg), and the BSL (1.2 mg/kg). Confirmational bioassay testing did not show any bioassay SQS or CSL exceedances for the tested samples. Samples exceeding the chemical SQS, CSL, or BSL that were not tested for confirmational bioassays are located within planned remediation areas.

Mercury was analyzed at all 26 on-site surface sediment stations and in one off-site reference sample. Mercury was detected in all of the on-site samples, with concentrations ranging from 0.12 milligrams per kilogram (mg/kg) to 2.64 mg/kg. Mercury in the reference sample was not detected (0.1 U mg/kg). SMS exceedances for mercury were detected in seven of the 26 on-site samples. Six of the mercury SMS chemical exceedances were located within Unit 5B, and one station was located in Unit 2C (2C-03-SS). The only sample that exceeded the site-specific bioaccumulation screening level (BSL; 1.2 mg/kg) was sample 5B-06-SS. That sample was located near sampling stations that also exceeded the BSL during the 2002 sampling event.

A summary of current mercury results and adjacent historic sampling stations is shown on Figure 14. Historic data from 1996 to 2002 showed a significant reduction in mercury values, except in the vicinity of Unit 5B. This unit has been identified as a high wave energy environment with lower rates of net of sedimentation and natural recovery as compared to other areas of the site where mercury concentration reductions have been consistently observed (RETEC 2006). The current mercury concentrations in Unit 5B, which ranged from 0.5 to 2.64 mg/kg, are generally consistent with historic sampling data from 2002, when measured concentrations of mercury ranged from 0.73 to 2.55 mg/kg in the vicinity of Unit 5B. Confirmational bioassays were conducted in all of the surface sampling areas, except the one sample that exceeded the BSL (5B-06-SS). Results of bioassay testing are summarized in Section 6.2.

Surface sediment mercury concentrations in Units 6B and 6C continued to show a reduction in concentration from previous investigations. The reduction in mercury concentration is consistent with previously observed sediment quality improvement in this area (RETEC 2006). Current mercury concentrations within Units 6B and 6C are all below the Sediment Quality Standards (SQS; 0.41 mg/kg). Confirmational bioassays were also conducted to verify SMS compliance. Results of bioassay testing in this area are discussed in Section 6.2.

In addition to mercury testing, other heavy metals and tributyl tin (TBT) were analyzed at stations at the head of the waterway and adjacent to Colony Wharf in Unit 3A. None of the heavy metals exceeded SMS criteria. TBT, a common boatyard contaminant, was detected at only one station (3A-03-SS) at a concentration of 34 micrograms per kilogram (µg/kg). There is no bulk TBT SQS or Cleanup Screening Levels (CSL); however, the Puget Sound Dredged Disposal Analysis (PSDDA) screening level of 73 µg/kg is frequently used as a conservative screening-level for potential biological effects. The measured TBT concentrations were below the PSDDA screening level. As described in Section 6.2, confirmational bioassay testing was performed at this location, and no exceedances of bioassay interpretive criteria were noted.

SVOCs were also analyzed in surface sediment samples from the Inner Waterway and Outer Waterway areas. All surface sediment SVOC results were below SQS criteria, except for one exceedance of the chemical SQS for butylbenzyl phthalate at station 3A-03-SS. As described in Section 6.2, confirmational bioassay testing was performed at this location, and no exceedances of bioassay interpretive criteria were noted.

6.1.2 Results of Dioxin/Furan Testing

The cleanup of the Whatcom Waterway site is focused on the remediation of mercury contamination associated with releases from the former GP chlor-alkali plant. As described in the RI/FS (RETEC 2006) and the Consent Decree (Ecology 2007), the mercury contamination overlaps with contaminants associated with other cleanup sites (e.g., refuse-related contamination at the Cornwall Avenue Landfill site and contamination associated with former wood treating activities at the RG Haley site). Ecology is ensuring that investigation and remediation efforts in these areas of overlap are coordinated.

Dioxin/furan compounds are present in water and sediments of Puget Sound from multiple sources including historical releases and ongoing contributions from spills, stormwater, combined sewer overflows, atmospheric deposition and other sources. Along with the efforts of other regulatory and resource agencies, Ecology is working to better understand the distribution of these compounds in the environment, to develop a comprehensive strategy to reduce ongoing inputs of these compounds to the environment, and to mitigate

past releases through cleanup and monitoring efforts. This work is being developed under various regulatory authorities and programs including Ecology's water quality program, the regional air pollution control programs, spill prevention and control programs, the Puget Sound Partnership, and Ecology's Toxics Cleanup Program.

There are currently no SMS numeric criteria for dioxin/furans in sediment or tissue. As part of its coordinated, multi-program strategy for control of these compounds, Ecology has stated that its long-term goal is to reduce environmental concentrations of dioxin/furans to natural background levels where possible (Ecology 2010a). For Puget Sound's urban bays, Ecology is developing a coordinated source control and remediation strategy in order to reduce ongoing contaminant inputs and to remediate and monitor existing sediment and tissue concentrations. Ecology is developing methods for defining natural background and regional background concentrations for sediments, and is pursuing development of additional background tissue data to estimate natural background concentrations and regional background concentrations of these compounds in the food chain.

Ecology's strategy for management of low-level bioaccumulatives such as dioxin/furans is expected to be implemented over the coming decades through updates to multiple state regulations. Updates to the MTCA/SMS regulations, potentially including updates to procedures for addressing low-level dioxin/furans in urban bays, are anticipated to be completed in 2011 (Ecology 2010a). The time-frame for updates to other regulatory programs varies.

Two separate studies (SAIC 2008; Ecology and Hart Crowser 2009) were recently performed to document current surface sediment concentrations of dioxins/furans within Bellingham Bay. Additional testing is in progress in coordination with the work of the Urban Waters Initiative (Ecology 2010b). Results of the two completed studies are presented on Figure 15, along with the results of PRDI testing samples analyzed as part of the current work. Locations of the Urban Waters Initiative sampling locations are shown on the figure, but analytical data from that testing event are not yet available. Results of the completed testing are similar to findings from other urban bays throughout Puget Sound, documenting higher regional background concentrations in urban bays, and lower concentrations in deep-water areas of the Puget Sound Main Basin (EPA 2008; Ecology 2010c).

Concentrations of dioxins/furans on Figure 15 are expressed as the 2,3,7,8-toxicity equivalents (TEQ) that were calculated using current mammalian toxicity equivalency factors (developed by the World Health Organization [WHO] in 2005 as published by WHO in 2006) and assuming that non-detected congeners are present at one-half of the method reporting limit. Concentrations are presented both on a dry weight basis, and on a carbon-normalized basis. Carbon normalization has been shown to be an important factor to consider when evaluating the bioaccumulation potential for dioxin/furan compounds and similar bioaccumulative compounds. Organic carbon influences bioavailability by affecting equilibrium partitioning between sediments and water, and by affecting the rates of ingestion-related contaminant uptake by benthic organisms (Burkhard 2005). In some cases where there are significant inputs of different types of organic carbon (e.g., soot-carbon along with other forms of bio-available organic carbon) carbon normalization alone does not resolve all differences in bioavailability (Weisbrod et al 2009).

Chart 2 compares the results of sampling within the Whatcom Waterway Site to results from other testing within Bellingham Bay. Dioxin/furan concentrations (expressed as TEQ) in surface sediment ranged from 1.11 ng/kg to 169 ng/kg dry weight (46 to 7,101 ng/kg TOC). The highest surface concentrations measured within the bay are those from the RG Haley site, a former pentachlorophenol wood treating operation and a known source of dioxin/furan contamination. Those concentrations are roughly ten times those measured in surface sediments within the Whatcom Waterway site. Ecology is overseeing remedial investigation and feasibility study work at the RG Haley site. The concentrations measured within Units 1 & 9 of the Whatcom Waterway site (3.21 to 14.8 ng/kg dry weight, or 140 to 628 ng/kg TOC) and those from the Boulevard Park nearshore areas (1.11 to 16.1 ng/kg dry weight, or 46 to 460 ng/kg TOC) are within the range of concentrations measured for the remainder of the urban portions of Bellingham Bay (1.5 to 21.97 ng/kg dry weight, or 65.2 to 1,022 ng/kg TOC).

Chart 2 also presents sediment data developed by EPA, Ecology and other resource agencies for the Puget Sound Main Basin and selected reference areas. Sediments from these offshore, deep-water areas and clean reference areas typically contain lower dioxin/furan concentrations than sediments from urban bays. These reference concentrations can be

expressed by the concentration ranges (0.062 to 11.3 ng/kg dry weight or 8.8 to 2,319 ng/kg TOC), or using statistical values such as estimates of the true 90th percentile concentration (3.66 to 4.07 ng/kg dry weight or 249 to 283 ng/kg TOC). These concentration ranges overlap with those detected within the Whatcom Waterway site and other portions of Bellingham Bay.

Chart 2

Summary of Recent Dioxin/Furan Testing Results – Bellingham Bay and Reference Sites

Sample Locations	Reported Concentrations (ng/kg as TEQ; ND = ½ RL)[1]		Number of Samples
	Minimum	Maximum	
Dioxin/Furan TEQ as ng/kg sediment dry weight (ng/kg)			
Whatcom Waterway Samples (Units 1 & 9)	3.21	14.8	N = 4 (additional subsurface data)
RG Haley Nearshore Samples	80.5	169	N = 3 (additional subsurface data)
Boulevard Park Nearshore Samples	1.11	16.1	N = 3 (additional subsurface data)
Other Bellingham Bay Samples	1.5	21.97	N = 15 (90th percentile concentration estimated 14.8 to17.3 ng/kg)[2]
Puget Sound Main Basin & Reference Site Samples	0.062	11.3	N = 97 (90th percentile concentration estimated 3.66 to 4.07 ng/kg)[3]
Dioxin/Furan TEQ as ng/kg organic carbon (ng/kg TOC)[3]			
Whatcom Waterway Samples (Units 1-9)	140	628	N = 4 (additional subsurface data)
RG Haley Nearshore Samples	1,949	7,101	N = 3 (additional subsurface data)
Boulevard Park Nearshore Samples	46	460	N = 3 (additional subsurface data)
Other Bellingham Bay Samples	65.2	1,022	N = 15 (90th percentile concentration estimated 669 to787 ng/kg)[2]
Puget Sound Main Basin & Reference Site Samples	8.8	2,319	N = 97 (90th percentile concentration estimated 249 to 283 ng/kg)[3]

Notes:

1. TEQs were calculated using the 2005 WHO toxicity equivalency factors developed for mammalian receptors.
2. 90th percentile concentrations for Bellingham Bay data were calculated using ProUCL software. The range reflects 90th percentile estimates calculated assuming a gamma distribution, and also using the 95% BCA Bootstrap upper tolerance limit with 90 percent coverage.
3. Organic carbon normalization was performed using available data. Where TOC data for Bellingham Bay samples were not available, the average Bellingham Bay surface sample TOC concentration (2.3 percent) was assumed. Where measured TOC concentrations were less than 0.5% (12 Puget Sound Main Basin & reference samples) a TOC concentration of 0.5% was used for TOC normalization. Where measured TOC concentrations were more than 3.5% (1 Boulevard Park sample and 1 Puget Sound Main Basin sample) a TOC concentration of 3.5% was used for TOC normalization.
4. 90th percentile concentrations for Bellingham Bay data were calculated using ProUCL software. The range reflects outputs of 90th percentile estimates calculated assuming a gamma distribution, and also using the 95% BCA Bootstrap upper tolerance limit with 90 percent coverage. Estimates were developed using both the ND=1/2 RL and K-M substituted results. The K-M estimates are slightly lower than those calculated using ND = ½ RL assumptions.

Consistent with the findings from other urban bays in Washington, the Bellingham Bay concentrations generally exceed those measured in the offshore portions of the Puget Sound Main Basin and selected reference site areas. Repeated testing of historical sampling locations performed by Ecology as part of the recent Bellingham Bay study demonstrated substantial concentration reductions over time, attributable to natural recovery processes (Ecology and Hart Crowser 2009). Ecology has proposed additional regional studies to improve the understanding of surface concentration distributions, facilitate statistical comparisons between Bellingham and other urban bays, and evaluate potential source control and natural recovery processes for these compounds in Bellingham Bay (Ecology 2010c).

In addition to testing of sediments, tissue testing has been performed within Bellingham Bay as described in the RI/FS (RETEC 2006) and in studies performed on behalf of the DMMP (SAIC 2008). These studies document that tissue dioxin/furan concentrations in commonly consumed seafood items are very low, similar to or less than in samples of tissue collected from clean reference sites. As documented in the RI/FS, crab testing data from the early 1990s (PTI, 1991) showed that crab muscle dioxin/furan concentrations were below those in clean reference areas. Follow-up testing was recently performed on behalf of the DMMP (SAIC 2008). That testing included measurement of crab muscle tissue concentrations. Concentrations of dioxins/furans in crab muscle (0.07 to 0.11 ng/kg) were within the low end

of the range (0.018 to 1.375 ng/kg) documented at clean reference sites in Washington and southern British Columbia (Chart 3).

Chart 3
Comparison of Recent Crab Tissue Testing Results from Bellingham Bay and Selected Non-Urban Sampling Locations

Sample Locations	Dungeness Crab Muscle (ng/kg wet weight as TEQ; ND = ½ RL)[1]		Number of Samples
	Minimum	Maximum	
Bellingham Bay (SAIC 2008)	0.07	0.11	N = 3
Samish Bay (Ecology 2000)	1.375	1.375	N = 1
Hat Island (Ecology 2000)	1.131	1.131	N = 1
Port Gamble (Hart Crowser 2010)	0.37	0.37	N = 1
Freshwater Bay (Malcolm Pirnie 2007)	0.018	0.044	N = 8
Dungeness Bay (Malcolm Pirnie 2007)	0.025	0.054	N = 7
Pedder Bay (SLR 2009)	0.21	0.48	N = 3

Notes:
TEQs were calculated using the 2005 WHO toxicity equivalency factors developed for mammalian receptors.

6.1.3 Mercury Speciation Data

Mercury speciation (methyl mercury) testing was conducted at selected surface sediment stations. Results of this testing are described below in section 6.3.2.

6.2 Surface Sediment Biological Testing

In order to refine the horizontal extent of capping areas at Units 5 and 6 and to evaluate current sediment quality conditions in certain other MNR areas identified by Ecology for further testing, biological testing was conducted at 20 of the on-site surface sediment stations listed in Chart 1. Consistent with the PRDI Work Plan, surface sediments (0-12 cm) for biological testing were collected between August 15 and September 15 (samples were collected on August 20, 21, and 22, 2008). Bioassay testing was performed using 22 test stations, including samples collected from Site Units 3A, 5B, 5C, 6B, and 6C, as well as samples collected from two reference stations in Samish Bay. The PRDI on-site bioassay

collection stations are shown on Figure 14 along with adjacent historic sampling locations from 1996/1998 and 2002.

Sediment samples submitted for bioassay testing were archived sample splits of the test samples submitted for chemical testing. Reference samples consisted of samples REF-01-SS and REF-02-SS, which contained 94 percent fines and 98 percent fines, respectively. These two reference sediment stations were sampled consistent with previous reference sample collection locations and a more sandy reference sample was not available at the time of sampling. Test samples were compared to both reference samples due to the similarity in grain size.

Marine bioassay testing species were selected in coordination with Ecology and based on grain size, salinity, and collection season. The following tests and species were used in accordance with the PRDI Work Plan:

- 10-Day Acute Toxicity Amphipod Test (*Eohaustorius estuarius)*
- Larval Development Test (*Dendraster excentricus)*
- 20- Day Juvenile Polychaete Chronic Toxicity Test (*Neanthes arenaceodentata)*

This section provides a summary of bioassay test results. SMS biological effects criteria are presented in Table 9. The results of bioassay testing are presented in Tables 10, 11, and 12. Table 13 provides an assessment of performance criteria for control and reference samples. Table 14 presents the biological endpoint evaluation, which summarizes the samples that pass or fail when compared to SQS and CSL performance criteria. The complete biological laboratory report, chain of custody, and laboratory data are provided in Appendix H.

6.2.1 10-Day Acute Toxicity Amphipod Test

Results of the 10-day acute toxicity test using *Eohaustorius estuarius* are presented in Table 10. Bioassay testing was initiated within designated hold times for test and reference samples on October 7, 2008. Test conditions and methods were in compliance with PSEP (1995), SAPA (Ecology 2008), and the various updates presented during the SMARM in 2009. The test met SMS quality control requirements for the control and reference samples, as shown in Tables 13 and 14. Bioassay endpoint evaluations were determined using statistical testing and SMS criteria. As indicated in Table 14, all samples met SQS and CSL biological criteria.

A detailed summary of results is provided in Table 10 of the Biological Testing of Sediment for Whatcom Waterway in Appendix H (Newfields 2008).

6.2.2 Larval Development Test

Results of the larval development test using *Dendraster excentricus* are presented in Table 11. Bioassay testing was initiated within designated hold times for test and reference samples on October 10, 2008. Test conditions and methods were in compliance with PSEP (1995), SAPA (Ecology 2008), and the various updates presented during the SMARM in 2009. The test met SMS quality control requirements for the control and reference samples, as shown in Tables 13 and 14. Bioassay endpoint evaluations were determined using statistical testing and SMS criteria. As indicated in Table 14, all samples met SQS and CSL criteria. A detailed summary of results is provided in Tables 14 and 15 of the Biological Testing of Sediment for Whatcom Waterway in Appendix H (Newfields 2008).

6.2.3 20-Day Juvenile Polychaete Chronic Toxicity Test

Results of the 20- day juvenile polychaete chronic toxicity test using *Neanthes arenaceodentata* are presented in Table 12. Bioassay testing was initiated within designated hold times for test and reference samples on October 8, 2008. Test conditions and methods were in compliance with PSEP (1995), SAPA (Ecology 2008), and the various updates presented during the SMARM in 2009. The control sample met SMS quality control requirements, but growth in each of the reference samples was slightly below SMS reference criteria, as shown in Tables 13 and 14. This was due to control performance that was well above minimum growth requirements (especially in one very high replicate) and the fact that both reference samples had greater than 90 percent fines, which could have contributed to lower growth.

Because of the lower relative reference growth, the test sample growth was compared to control growth. When compared to the control sample, all samples met SMS criteria, with the exception of sample 5B-01-SS. Growth in 5B-01-SS was 69 percent of control growth, which was slightly below the SQS criteria of 70 percent. When compared to the reference growth, sample 5B-01-SS had higher growth than REF-01-SS and met SQS criteria when compared to REF-02-SS. Per discussion with Ecology, it was agreed that based on these

factors, especially the high control growth, sample 5B-01-SS was determined to pass SQS criteria (Adolphson 2009).

6.2.4 Summary of Bioassay Testing

Bioassay endpoint evaluations were determined using statistical testing and SMS criteria. As indicated in Chart 1 and Table 14, all samples submitted for bioassay testing complied with current SQS and CSL interpretive criteria. A detailed summary of results is provided in Tables 10 to 15 of the Biological Testing of Sediment for Whatcom Waterway in Appendix H (Newfields 2008).

6.3 Sediment Cap Design Parameters

Two types of data were collected in surface sediments to assist in the design of sediment caps. These included testing for sediment porewater mercury concentrations, and testing for mercury speciation (total vs. methyl mercury). These data are to be used in conjunction with geotechnical data, wind/wave modeling information, and other design parameters, to evaluate potential cap design requirements.

6.3.1 Sediment Porewater Testing

Sediment porewater mercury concentration data were collected at selected locations within Unit 2C, Unit 5B, and in Units 6B/6C. Two porewater sampling locations were tested in each of these site areas. Porewater testing included total dissolved solids and dissolved mercury. In situ water quality parameters were also measured at the time of sampling and included pH, temperature, conductivity, dissolved oxygen, and oxidation-reduction potential (redox).

Results of sediment porewater testing are presented in Table 8. Sediment porewater analytical laboratory reports are included in Appendix G. All sediment porewater dissolved mercury results were reported at non-detect concentrations (less than 0.1 µg/L).

6.3.2 Surface Sediment Mercury Speciation Testing

Surface sediment methyl mercury sampling was performed at a total of six on-site sampling locations (Units 1B, 1C, 2C, 6B, and 5C) and at one off-site reference location (Samish Bay).

In situ sediment parameters were also measured directly from the Van Veen sampler and included pH, temperature, conductivity, dissolved oxygen, and redox potential.

Results of methyl mercury testing are presented in Table 7, including measured concentrations of total mercury and methyl mercury. Relative concentrations of methyl mercury (as a percentage of total mercury) were calculated and also presented in Table 7.

As measured by relative methyl mercury concentrations, no areas of elevated methyl mercury production were noted. All relative methyl mercury concentrations were less than 2 percent (range 0.18 to 1.8 percent) with a maximum percentage of 1.8 percent from the surface sediment sample in Unit 1C dredge area. The relative concentration of methyl mercury from the off-site reference area was 0.84 percent. These measured values are consistent with typical literature values, which indicate that methylmercury typically makes up less than 2 percent of total mercury in shallow surface sediments of other U.S. bays and harbors (e.g., Benoit et.al. 2005; Hollweg et.al. 2009). Surface sediment methyl mercury analytical laboratory reports are included in Appendix G.

7 SUBSURFACE SEDIMENT TESTING

This section summarizes subsurface chemical testing data collected throughout the Site. The subsurface testing was conducted using a combination of vibracore, hollow-stem auger, mud-rotary, and diver-assisted piston core sampling methods as described in Section 2.

Figures 6 and 7 present the subsurface vibracore sampling locations. Locations of sampling conducted by hollow-stem auger, mud-rotary or diver-assisted piston core sampling are shown on Figure 8. Tables 15a to 15d present a summary of the ASB subsurface sediment chemical analytical results, and Tables 16 to 19 present the summary of subsurface analytical results for areas of the Whatcom Waterway and adjacent areas. Key observations from subsurface sampling are described below.

7.1 ASB Subsurface Testing

Three types of sampling were conducted in the ASB area (Site Unit 8). These included sampling of shallow subsurface sediments beneath the ASB bottom (Section 7.1.1), sampling of shallow berm sediments beneath the ASB sludges (Section 7.1.2), and sampling of deep berm sand and native sand materials beneath the ASB berms (Section 7.1.3).

7.1.1 Sampling Beneath the ASB Bottom

Chart 4 and Tables 15a and 15b summarize the results of subsurface sediment testing that was performed at 25 locations beneath the ASB bottom. Sampling was focused on discrete (1-foot thick) sampling intervals below the ASB "hard bottom" (the contact between the ASB sludge/bentonite layer and the underlying native sands). Sample depths presented in Tables 15a and 15b are listed as in situ depths below the "hard bottom" contact.

At all 25 test locations, Tier 1 analyses for mercury, total organic carbon, and total solids were performed at three depth intervals (1 to 2, 2 to 3, and 3 to 4 feet) below the "hard bottom" contact. No exceedances of the mercury SQS were noted in any of these samples, indicating that elevated mercury concentrations were confined to the ASB sludge layer within the ASB.

Tier 2 sampling parameters were performed at selected locations. These analyses included cadmium, chromium, zinc, SVOCs, guaiacols, and dioxin/furans. No exceedances of SQS criteria were noted for any of these compounds. Guaiacols were not detected in any of the samples. Results of dioxin/furan testing are summarized in Chart 4. A total of 15 sediment samples were tested for dioxin/furans. Dioxin/furan testing was performed at each primary-grid station (8-01-VC to 8-09-VC) and deeper intervals were tested based on the upper interval dioxin/furan TEQ concentration. Dioxin/furan concentrations declined sharply with depth below the ASB "hard bottom" contact. Concentrations in the first sampling interval ranged between 0.182 and 23.1 ng/kg TEQ. Concentrations in the second interval ranged from 0.248 to 7.02 ng/kg TEQ, and were even lower (0.106 ng/kg) in the third sampling interval.

As described in Section 6.1, dioxin/furan compounds do not have numeric SMS criteria. The criteria applicable to dredge material management decisions vary depending on the destination of the generated sediments. Potentially applicable criteria for different management options may include one or more of the following, depending on the nature of the material management action:

- **DMMP Criteria for Open-Water Disposal:** The DMMP criteria for open-water disposal are undergoing re-evaluation. Under the previous DMMP Interim Guidelines, concentration limits per dredged material management unit ranged from a mean of 2.4 to 8.7 ng/kg TEQ with a maximum of 5.2 to 12.2 ng/kg TEQ, depending on the non-dispersive disposal site. Other criteria applied to dispersive sites. Recently, the DMMP has proposed updated testing and suitability criteria. The April 2010 proposal released by the DMMP for public review includes a tiered testing structure, with multiple project testing and suitability criteria. Under this proposal, bioaccumulation testing is required for sediments containing dioxin/furan concentrations greater than 10 ng/kg TEQ. The April 2010 proposal has not yet been finalized.
- **MTCA Criteria for Unrestricted Upland Reuse:** The direct contact MTCA Method B cleanup level for unrestricted reuse (e.g., residential soil) is 11 ng/kg. Additional restrictions may apply to unrestricted upland reuse of dredged materials.

- **MTCA Criteria for Restricted Upland Reuse:** The direct contact MTCA Method C cleanup level for industrial soils is 1,500 ng/kg. Additional restrictions may apply to industrial reuse of dredged materials.
- **Antidegradation Policy:** Sediment cleanup actions must comply with the SMS antidegradation policy, meaning that post-cleanup sediments exceeding background concentrations or other defined cleanup levels must be equal to or less than the concentrations existing prior to the cleanup action. Ecology seeks to reduce surface sediment concentrations through cleanup actions, point and non-point source control measures and through monitoring activities.
- **Solid Waste Disposal Facility Criteria:** Materials managed by subtitle D disposal (including reuse as daily cover and/or disposal as solid waste) must comply with applicable facility standards, including concentration limits on dioxin/furans contained in the Dangerous Waste regulations.

Chart 4
Subsurface Sediment Mercury and Dioxin/Furan Testing Results - ASB Bottom

Transect	Depth Below Hard Bottom[1]	Total Mercury (mg/kg dry wt.) and Dioxin/Furan TEQ[2] (ng/kg dry wt.)									
Transect 1		***8-01-VC***		***8-10-VC***		***8-02-VC***		***8-11-VC***		***8-03-VC***	
		Hg	D/F	Hg	D/F	Hg	D/F	Hg	D/F	Hg	D/F
	1-2 ft	0.09	23.1	0.09	4.50	0.06U	0.576	0.06U	--	0.05U	1.89
	2-3 ft	0.06U	7.02	0.07U	1.78	0.06U	--	0.06U	--	0.05U	--
	3-4 ft	0.07U	0.106	0.06U	--	0.05U	--	0.05U	--	0.05U	--
Transect 2		***8-12-VC***		***8-13-VC***		***8-14-VC***		***8-15-VC***		***8-16-VC***	
	1-2 ft	0.06U	--	0.06U	--	0.06U	--	0.05U	--	0.05U	--
	2-3 ft	0.06U	--	0.06U	--	0.06U	--	0.06U	--	0.05U	--
	3-4 ft	0.06U	--	0.06U	--	0.06U	--	0.06U	--	0.06U	--
Transect 3		***8-04-VC***		***8-17-VC***		***8-05-VC***		***8-18-VC***		***8-06-VC***	
	1-2 ft	0.05U	1.90	0.05U	--	0.05U	0.433	0.06U	--	0.05U	0.626
	2-3 ft	--	--	0.06U	--	0.06U	--	0.06U	--	0.04U	--
	3-4 ft	--	--	0.06U	--	0.04U	--	0.05U	--	0.05U	--
Transect 4		***8-19-VC***		***8-20-VC***		***8-21-VC***		***8-22-VC***		***8-23-VC***	
	1-2 ft	0.05U	--	0.05U	--	0.05U	--	0.05U	--	0.06U	--
	2-3 ft	0.05U	--	0.05U	--	0.06U	--	0.05U	--	0.05U	--
	3-4 ft	--	--	0.05U	--	0.05U	--	0.06U	--	0.05U	--
Transect 5		***8-07-VC***		***8-24-VC***		***8-08-VC***		***8-25-VC***		***8-09-VC***	
	1-2 ft	0.06	1.25	0.05U	--	0.04U	0.182	0.1	4.46	0.19	12.7
	2-3 ft	0.05U	--	0.05U	--	0.05U	--	0.05U	0.248	0.05U	0.508
	3-4 ft	0.05U	--	0.05U	--	0.04U	--	0.05U	--	0.04U	--

Notes:
Transects and station locations are presented on Figure 6.
Primary-grid stations include 8-01-VC to 8-09-VC and secondary-grid stations include 8-10-VC to 8-25-VC.
Tables 15a and 15b present the detailed results for all ASB primary and secondary-grid sampling.
Mercury data were compared to the chemical SQS (0.41 mg/kg), the CSL (0.59 mg/kg), and the BSL (1.2 mg/kg). There are no numeric SMS criteria for dioxin/furans, see 6.1.2. See 7.1.1 for potentially applicable dredge material management criteria.
1 – Sample intervals are presented as below the ASB solids/sand (hard bottom) interface.
2 - TEQ values were calculated for the validated dioxin/furan congeners using the 2005 World Health Organization's toxic equivalency factors for mammals. Undetected congeners were assigned a concentration equal to ½ the detection limit (ND=1/2).
-- Sample was not submitted for chemical analysis.

7.1.2 ASB Interior Sloping Berm

Chart 5 and Table 15c summarize the results of shallow subsurface testing conducted along the ASB berm interior. Sample depths presented in Table 15c are listed as in situ depths below the "hard bottom" contact. Sampling included testing along 12 transects as shown on Figures 6 and 8, with a "B" and "C" station at each transect. The "B" stations were collected from approximately +14 feet MLLW and the "C" stations were collected from approximately 0 MLLW on the berm interior sloping surface. Sampling was focused on 1-foot intervals below the "hard bottom" contact beneath the ASB sludges.

Tier 1 testing (total mercury, total organic carbon, and total solids) was conducted at three depth intervals (1 to 2, 2 to 3, and 3 to 4 feet) below the sludge/sediment interface in each of the cores. As shown in Chart 3, mercury concentrations in all of the sampling intervals were below the SQS, with the maximum detected concentration measuring 0.27 mg/kg.

Selected subsurface samples were tested for Tier 2 analyses, including cadmium, chromium, zinc, SVOCs, guaiacols, and dioxin/furans. No exceedances of SQS criteria were noted for any of the Tier 2 compounds. Guiacols were not detected in any of the tested samples. Dioxin/furan concentrations decreased rapidly with depth. Concentrations detected in the 1 to 2 foot samples ranged from 0.24 to 23.9 ng/kg TEQ. In the 2 to 3 foot samples, the highest measured concentration was 3.93 ng/kg. These concentrations are well below background concentrations for the Puget Sound Main Basin or Puget Sound urban bays (see Chart 2).

Chart 5

Subsurface Sediment Mercury and Dioxin/Furan Testing Results - ASB Interior Sloping Berms

Transect	Depth Below Hard Bottom[1]	Total Mercury (mg/kg dry wt.) and Dioxin/Furan TEQ[2] (ng/kg dry wt.)									
North Berm		***8-109B-VC***		***8-109C-VC***		***8-110B-VC***		***8-110C-VC***		***8-111C-VC***	
		Hg	**D/F**	**Hg**	**D/F**	**Hg**	**D/F**	**Hg**	**D/F**	**Hg**	**D/F**
	1-2 ft	0.05U	1.24	0.04U	0.602	0.08	0.288	0.05U	0.459	0.05U	13.7
	2-3 ft	0.04U	--	0.05U	--	0.05U	--	0.04U	--	0.05U	3.93
	3-4 ft	0.04U	--	0.04U	--	0.04U	--	0.05U	--	0.05U	--
East Berm		***8-112B-VC***		***8-112C-VC***		***8-101B-VC***		***8-101C-VC***		***8-102C-VC***	
	1-2 ft	0.27	23.9	0.06U	1.01	0.05	1.14	0.05U	0.393	0.09	3.90
	2-3 ft	0.04U	0.455	0.05U	--	0.05U	--	0.05U	--	0.04U	--
	3-4 ft	0.04U	--	0.05U	--	0.04U	--	0.04U	--	0.05U	--
South Berm		***8-103B-VC***		***8-103C-VC***		***8-104B-VC***		***8-104C-VC***		***8-105C-VC***	
	1-2 ft	0.05U	0.240	0.17	5.27	0.05U	0.389	0.04U	0.501	0.04U	0.822
	2-3 ft	0.04U	--	0.05U	--	0.06U	--	0.05U	--	0.05U	--
	3-4 ft	0.04U	--	0.05U	--	0.06U	--	0.05U	--	0.05U	--
West Berm		***8-106B-VC***		***8-106C-VC***		***8-107B-VC***		***8-107C-VC***		***8-108C-VC***	
	1-2 ft	0.04U	0.294	0.05U	0.365	0.05U	16.8	0.05	0.290	0.04U	0.680
	2-3 ft	0.04U	--	0.05U	--	0.05U	0.280	0.05U	--	0.05U	--
	3-4 ft	0.04U	--	0.06U	--	--	--	--	--	0.04U	--

Notes:
Berm identification and station locations are presented on Figure 6.
Table 15c presents the detailed results for all ASB interior sloping berm sampling.
Mercury data were compared to the chemical SQS (0.41 mg/kg), the CSL (0.59 mg/kg), and the BSL (1.2 mg/kg). There are no numeric SMS criteria for dioxin/furans, see 6.1.2. See 7.1.1 for potentially applicable dredge material management criteria.
1 – Sample intervals are presented as below the ASB solids/sand (hard bottom) interface.
2 –TEQ values were calculated for the validated dioxin/furan congeners using the 2005 World Health Organization's toxic equivalency factors for mammals. Undetected congeners were assigned a concentration equal to ½ the detection limit (ND=1/2).
-- Sample was not submitted for chemical analysis.

7.1.3 ASB Deep Sand Composites

Chart 6 and Table 15d summarize the results of chemical and physical testing for the deep sand composites collected beneath the ASB berm. These samples were collected using a

combination of hollow-stem auger and vibracore sampling methods. Sample compositing was performed as described in Section 2.

The chemical analytical results for all ASB deep sand composites were below applicable SMS chemical criteria. Chemical and physical testing results are summarized in Table 15d. Chart 6 summarizes measured total mercury concentrations. All mercury results were below reported detection limits. Dioxin/furan concentrations were detected at concentrations ranging from 0.215 ng/kg TEQ (8-105C-C2) to 0.368 ng/kg TEQ (8-101BC-C2). These concentrations are well below background concentrations for the Puget Sound Main Basin or Puget Sound urban bays (see Chart 2).

Chart 6
Subsurface Sediment Mercury and Dioxin/Furan Testing Results - Composites Beneath ASB Berm

	Total Mercury (mg/kg dry wt.) and Dioxin/Furan TEQ[1] (ng/kg dry wt.)					
Transect	**Hg**	**D/F**	**Hg**	**D/F**	**Hg**	**D/F**
North Berm	***8-109C-C2***		***8-110BC-C2***		***8-111C-C2***	
	0.04U	0.355	0.05U	0.335	0.05U	0.341
East Berm	***8-112C-C2***		***8-101BC-C2***		***8-102C-C2***	
	0.05U	0.223	0.05U	0.368	0.05U	0.304
South Berm	***8-103C-C2***		***8-104BC-C2***		***8-105C-C2***	
	0.05U	0.312	0.05U	0.307	0.05U	0.215
West Berm	***8-106C-C2***		***8-107***		***8-108***	
	0.05U	0.245	--	--	--	--

Notes:
Berm identification and station locations are presented on Figures 6 and 8.
Tables 2a and 3a presents the sample composite identification and depth intervals. Those sample IDs with both a "BC" include a composite from both the "B" and "C" stations. Those sample IDs with only a "C" include a composite from only the "C" station.
Table 15d presents the detailed results for all ASB interior sloping berm sampling.
Mercury data were compared to the chemical SQS (0.41 mg/kg), the CSL (0.59 mg/kg), and the BSL (1.2 mg/kg). There are no numeric SMS criteria for dioxin/furans, see 6.1.2. See 7.1.1 for potentially applicable dredge material management criteria.
1 – TEQ values were calculated for the validated dioxin/furan congeners using the 2005 World Health Organization's toxic equivalency factors for mammals. Undetected congeners were assigned a concentration equal to ½ the detection limit (ND=1/2).
-- Sample was not submitted for chemical analysis.

7.2 Inner Waterway Subsurface Testing

Subsurface sampling within the Inner Waterway was primarily focused on geotechnical analyses in proposed dredge areas. In planned monitored natural recovery areas (Units 3A and 5C) subsurface testing also included chemical testing to assist in the evaluation of sediment stability. In addition, selected samples from shallow subsurface sediments (Unit 3B) were collected for disposal profiling including Toxicity Characteristic Leaching Procedure (TCLP) and Synthetic Precipitation Leaching Procedure (SPLP) leachate testing. A composite from Unit 3B shallow sediments was also developed for MET and DRET testing. Results of disposal profiling are summarized in Section 7.7. Other subsurface testing data from inner waterway areas are summarized in Section 7.2 below.

7.2.1 Dredge and Cap Areas (Unit 3B)

Subsurface sediment testing within Unit 3B consisted of 1 station (3B-01-VC) with discrete sampling at depth intervals of 1 to 3, 4 to 6, 7 to 9, and 9 to 12 feet below mudline. One depth interval (1 to 3 feet) was analyzed for total mercury and all depth intervals were tested for physical parameters. Chemical and physical testing results and actual (in situ) sample depths are summarized in Table 16. The mercury concentration from sample 3B-01-VC (1 to 3 feet below mudline) was 0.83 mg/kg, above the CSL of 0.59mg/kg.

7.2.2 Capping Area (Unit 2C)

The design for subsurface sediment testing within Unit 2C consisted of 2 stations (2C-01-VC and 2C-02-VC) with discrete sampling at depth intervals of 1 to 3, 4 to 6, and 7 to 9 feet below mudline. All depth intervals were tested for physical parameters. Physical testing results are summarized in Table 16.

7.2.3 Head of Waterway MNR Area (Unit 3A)

Subsurface sediment testing within Unit 3A included 5 stations with discrete sampling at depth intervals of 1 to 3, 4 to 6, and 7 to 9 feet below mudline. Subsurface sediment samples in Unit 3A were analyzed for metals, TBT, and SVOCs from the 1 to 3 and 4 to 6 feet intervals. Total mercury was also tested in the 7 to 9 feet intervals.

The chemical and physical results for the Unit 3A shallow subsurface stations are presented in Table 16. Chart 7summarizes the total mercury results for both the shallow subsurface testing data and the corresponding surface sampling results. Mercury results did not exceed the chemical SQS in any of the surface samples within Unit 3A, or in any of the subsurface samples at the core location at the mouth of Whatcom Creek (3A-02). In the other subsurface samples, mercury concentrations generally increased with depth below mudline. No BSL exceedances were noted in the 1 to 3 feet sampling intervals in any core location.

Chart 7

Subsurface Sediment Mercury Testing Results - Unit 3A (Head of Waterway)

Location	Sampling Depths[1]	Total Mercury (mg/kg dry wt.)		
		3A-01		***3A-02***
North Side	Surface (0-12 cm)	0.20		0.13
	1-3 ft	0.21		0.30
	4-6 ft	0.56		0.12
	7-9 ft	1.5[2]		0.20
			3A-03	
Middle	Surface (0-12 cm)		0.09	
	1-3 ft		0.60	
	4-6 ft		3.3[2]	
	7-9 ft		6.3[2]	
		3A-04		***3A-05***
South Side	Surface (0-12 cm)	0.40		0.40
	1-3 ft	0.98		1.0
	4-6 ft	4.6[2]		3.9[2]
	7-9 ft	4.4[2]		1.8[2]

Notes:

Detected concentration is greater than SMS SQS screening level (0.41 mg/kg)

Detected concentration is greater than SMS CSL screening level (0.59 mg/kg)

Table 16 presents the detailed results for all Unit 3A subsurface sediment sampling.

All five surface samples were analyzed for conformational bioassays, and no exceedances of biological SQS or CSL interpretive criteria were noted.

Sample 3A-03 from 4-6 ft also resulted in a SQS exceedence for acenaphthalene, fluorene, and dibenzofuran.

Sample 3A-04 from 4-6 ft also resulted in a CSL exceedence for 2,4-dimethylphenol.

Sample 3A-05 from 4-6 ft also resulted in a CSL exceedence for 4-methylphenol.

1. Sample intervals are presented as below mudline. Surface sediment was collected from 0-12cm below mudline.
2. Measured mercury concentration in subsurface sediments exceeds both the CSL and the site-specific BSL (1.2 mg/kg) applicable to surface sediments.

Subsurface sediment sample results for other metals were all below applicable SQS chemical criteria. No other test parameters exceeded screening levels in the 1 to 3 foot sampling interval from any Unit 3A cores. In addition to heavy metals testing, bulk TBT and SVOCs were analyzed from the 1 to 3 and 4 to 6 feet intervals in Unit 3A. Bulk TBT was detected in all Unit 3A subsurface sediment samples, but at relatively low bulk TBT concentrations (concentrations ranged from 10 to 64 µg/kg, below the PSDDA screening level of 73 µg/kg). None of the SVOC concentrations exceeded applicable SQS criteria in the surface or 1 to 3 feet subsurface samples, though some exceedances were noted in deeper sediments. Detected SVOC concentrations above SQS, but below CSL criteria included acenaphthalene (47.2 mg/kg-OC), fluorene (38.5 mg/kg-OC), and dibenzofuran (27.3 mg/kg-OC) at station 3A-03-VC (4-6 feet depth). Two additional SVOCs, 4-methylphenol and 2,4-dimethylphenol, were detected above CSL criteria at concentrations of 1,000 µg/kg (3A-05-VC-4-6) and 40 µg/kg (3A-04-VC-4-6), respectively.

Results of subsurface testing in Unit 3A confirm that sediments in the natural recovery areas comply with SMS criteria in the surface sediments. No sediment quality exceedances were noted at the mouth of Whatcom Creek (core 3A-02) at any depth, and no exceedances of SQS other than mercury were noted in the 1 to 3 foot sampling intervals in any cores. None of the 1-3 foot sampling intervals contained exceedances of the mercury BSL in any cores. Deeper subsurface sediments in four of the cores contained contaminants (mercury and other compounds) at elevated concentrations, with the concentrations generally highest in the 4 to 6 foot or 7 to 9 foot sampling depths.

7.2.4 Marina Access Channel (Unit 2B)

Deeper subsurface chemical and physical testing was performed at sampling location 2B-01-VC (Figure 6). Testing in that core included physical sampling at depth intervals of 1 to 3, 4 to 6, and 7 to 9 feet below mudline. Chemical quality was tested in the depth interval of 9 to 12 feet below mudline for the DMMP suite of chemical testing. This sampling was intended to evaluate sediment quality at the depth of the proposed marina access channel. As a result of preliminary engineering design evaluations, the marina access channel location may change. The available information collected along the length of the ASB berm is sufficient to inform the subsequent engineering design. Table 16 presents the testing results. No exceedances of SMS criteria or DMMP screening levels were noted in this deep subsurface

sample. Diethylphthalate was detected (80 ug/kg) above the Puget Sound LAET sediment quality value of 48 ug/kg. Dioxin/furan levels (0.34 ng/kg TEQ) were below background levels for the Puget Sound Main Basin and the urban bays.

7.2.5 Inner Waterway MNR Area (Unit 5C)

Chart 8 and Table 16 summarize the results of shallow subsurface sampling performed along the south side of the ASB (Unit 5C). That sampling included chemical and physical testing at three sampling locations. Chemical testing included mercury and SVOCs. No exceedances of SMS criteria were noted in subsurface sediment samples.

Chart 8

Subsurface Sediment Mercury Testing Results - Unit 5C (South of ASB MNR Area)

Transect	Sampling Depths[1]	Total Mercury (mg/kg dry wt.)		
		5C-01	***5C-02***	***5C-03***
North Side of Waterway	Surface (0-12 cm)[2]	0.12	--	0.31
	1-3 ft	0.04U	0.05U	0.16
	4-6 ft	0.05U	0.06U	0.05U
	7-9 ft	0.06U	0.06U	0.06U

Notes:
Table 16 presents the detailed results for all Unit 5C subsurface sediment sampling.
All Unit 5C subsurface sediment concentrations were below SQS criteria for mercury (0.41 mg/kg) and other compounds.
1. Sample intervals are presented as below mudline. Surface sediment was collected from 0-12cm below mudline.
2. Surface sediment stations are located adjacent to the associated subsurface sediment station above.
-- Sample was not submitted for chemical analysis.

7.3 Outer Waterway Subsurface Testing

Subsurface sediment testing was performed in two areas of the Outer Whatcom Waterway, including Units 1A/1B and 1C. That testing was primarily focused on collecting chemical and physical data to verify remedial dredge depths and evaluate materials handling options for dredged sediments. Subsurface sediment sampling in Unit 1C focused on chemical testing of sediment above and below the estimated known historic dredge depths and sampling of the slope areas beneath the BST wharf. Sediment sampling in Unit 1A and 1B focused on

four 4-foot composites with sampling of those constituents not tested during previous dredge characterization testing performed as part of the PRDE investigations (Anchor 2003).

In addition, sediment samples from anticipated dredge intervals in Unit 1C and in Unit 1A and 1B composite samples were collected for disposal profiling including TCLP and SPLP leachate testing. One composite from Unit 1C and one composite from Unit 1A and 1B sediments were also developed for MET and DRET testing. Results of disposal profiling are provided in Section 7.7.

7.3.1 Bellingham Shipping Terminal (Unit 1C)

Subsurface sediment sampling in Unit 1C included testing at multiple depth intervals to assist with the development of dredge prisms for cleanup in this area. Subsurface sampling was performed at 8 offshore locations and at 7 stations beneath the BST wharf. Figure 16 summarizes the measured mercury concentrations for subsurface sediments collected from Unit 1C within the Outer Waterway, and Tables 17a (offshore sampling locations) and 17b (under-dock sampling locations) summarize the results of chemical and physical testing for these sampling locations.

Mercury concentrations in shallow subsurface sediment were higher than those in corresponding surface sediments. These results are consistent with historic evidence of sediment natural recovery.

Sampling of subsurface sediments was performed at multiple depth intervals to define the deepest extent of mercury contamination. The base of the mercury contamination ranged in elevation from between approximately elevations 34 feet below MLLW and 40 feet below MLLW. None of the Unit 1C subsurface sediment samples contained SMS criteria exceedances for any parameters other than mercury.

Figure 17 summarizes the results of dioxin/furan testing in subsurface samples collected from Unit 1C, as well as those collected from Units 1A and 1B. Dioxin/furan concentrations in subsurface sediments from Unit 1C were higher than corresponding surface sediment concentrations. The concentrations of dioxin/furans generally corresponded with total mercury concentrations (refer to Tables 17a and 17b) and alternated at similar elevations.

7.3.2 Outer Channel Area (Units 1A & 1B)

Subsurface testing in Units 1A and 1B included chemical testing of sample composites for constituents not previously tested during the PRDE investigations (Anchor 2003). This additional testing was required to assess material reuse and disposal options. Additional chemical testing parameters included volatile organic compounds (VOCs), guaiacols, and dioxins/furans. VOC sampling was performed on discrete cores at the time of processing rather than from homogenized composite samples to reduce the potential for volatilization during sampling.

The chemical and physical results and actual (in situ) sample depths for the Unit 1A and 1B composite subsurface sediment samples are summarized in Table 17c. VOC and guaiacol concentrations were below method reporting limits in all samples tested.

Measured subsurface dioxin/furan concentrations are shown on Figure 17. These concentrations ranged from 26.0 ng/kg TEQ (1A-01-VC-C1) to 39.8 ng/kg TEQ (1B-01-VC-C1). These concentrations were higher than the concentrations in corresponding surface samples from Unit 1B (13.4 ng/kg TEQ in surface sample 1B-01-SS). These concentrations exceed the concentration limits applied under the previous DMMP guidelines (maximum of 5.2 to 12.2 ng/kg TEQ for non-dispersive sites). These concentrations also exceed the bioaccumulation testing trigger (10 ng/kg dry weight) defined in the April 2010 proposed update to the DMMP guidelines. See Section 7.1.1. No bioaccumulation testing was performed as part of the current PRDI investigations. Therefore, additional testing, including bioaccumulation testing, would therefore be required in order to pursue management of the Unit 1A & 1B sediments under the DMMP. The Unit 1A/1B dioxin/furan concentrations are well below the MTCA Method C industrial soil cleanup levels (1,500 ng/kg; potentially applicable to controlled upland reuse of dredge materials as fill).

7.4 Unit 5B Subsurface Testing

Subsurface sediment testing was performed at three locations within Unit 5B. Both chemical and physical testing were performed at two of the sampling locations (5B-01-VC and 5B-02-

VC), with only physical testing performed at the third location (5B-03-VC). Three discrete sampling intervals (1 to 3 feet, 4 to 6 feet, and 7 to 9 feet below mudline) were chosen for chemical and physical analyses. Subsurface sediment samples in these Unit 5B cores were analyzed for mercury and SVOCs.

The chemical and physical results and actual (in situ) sample depths for Unit 5B subsurface sediment stations are summarized in Table 18. Total mercury concentrations in Unit 5B subsurface sediments are summarized in Chart 9. Mercury was not detected above the SQS in any of the subsurface samples collected from immediately adjacent to the ASB (5B-02-VC). In the offshore sampling location (5B-01-VC), elevated mercury levels (10.2 mg/kg) were measured in the 1 to 3 foot sampling interval. Mercury concentrations in deeper sampling intervals from the offshore core were below applicable SQS criteria.

Chart 9

Subsurface Sediment Mercury Testing Results - Unit 5B

5B-01-VC				
	Concentrations (mg/kg dry wt)			
Interval[1]	Hg	Phenol	4-MP	2,4-DMP
SQS	0.41	0.42	0.67	0.029
CSL	0.59	1.2	0.67	0.029
1-3 ft	10.2[2]	0.060	0.082	0.0062U
4-6 ft	0.41	0.024	0.038	0.0061U
7-9 ft	0.17	0.020U	0.015	0.0061U

5B-02-VC				
	Concentrations (mg/kg dry wt)			
Interval[1]	Hg	Phenol	4-MP	2,4-DMP
SQS	0.41	0.42	0.67	0.029
CSL	0.59	1.2	0.67	0.029
1-3 ft	0.15	0.020U	0.013	0.014
4-6 ft	0.06U	0.020U	0.020U	0.0061U
7-9 ft	0.06	--	--	--

Notes:

Detected concentration is greater than SMS SQS screening level

Detected concentration is greater than SMS CSL screening level

Table 18 presents the detailed results for all Unit 5B subsurface sediment sampling.

Constituents: Hg=mercury, 4-MP=4-methylphenol, 2,4-DMP=2,4-dimethylphenol

1. Sample intervals are depth below mudline.
2. Measured subsurface mercury concentration exceeded both the CSL and the site-specific BSL (1.2 mg/kg) applicable to surface sediments.

-- Sample was not submitted for chemical analysis.

7.5 Unit 6 Subsurface Testing

No subsurface chemical testing was proposed for Unit 6 as part of the PRDI Work Plan. However, after reviewing the results of surface sampling data (which indicated no chemical or biological exceedances in this area), limited subsurface sampling was performed in order to assess impacts of potential sediment disturbances, such as propeller wash scour. Sediment sampling was performed by diver core from the surface to 3 feet below mudline. Four diver core locations were chosen based on spatial distribution within Units 6B and 6C. Within each unit, one sample was analyzed for total mercury and the other for total mercury and SVOCs. Chart 10 summarizes the results of subsurface sampling in Unit 6, including results for total mercury and three phenolic compounds (phenol, 4-methylphenol, and 2,4-dimethylphenol). Figure 18 summaries the total mercury results by spatial location. A complete summary of chemical and physical testing data is provided in Table 18.

No exceedances of SMS chemical criteria were noted for phenolic compounds in any of the samples. Total mercury CSL exceedances occurred in the 1 to 2 and 2 to 3 foot intervals of

6B-01 and in the 2 to 3 foot interval of 6C-02, both of which are located in the outer cap area (Figure 18). Total mercury SQS exceedances were noted in both intervals of 6B-02 and only in the 1 to 2 foot interval of 6C-01 and 6C-02, with the 2 to 3 foot interval of nearshore station 6C-01 yielding no SMS exceedance.

Chart 10

Subsurface Sediment Mercury and Phenolic Testing Results - Unit 6

6B-01-DC	
Concentrations (mg/kg dry wt)	
Interval [1]	Hg
SQS	0.41
CSL	0.59
1-2 ft	0.62
2-3 ft	2.49[2]

6B-02-DC				
Concentrations (mg/kg dry wt)				
Interval [1]	Hg	Phenol	4-MP	2,4-DMP
SQS	0.41	0.42	0.67	0.029
CSL	0.59	1.2	0.67	0.029
1-2 ft	0.45	0.02 U	0.02 U	0.02 U
2-3 ft	0.52	0.02 U	0.02 U	0.02 U

6C-02-DC	
Concentrations (mg/kg dry wt)	
Interval [1]	Hg
SQS	0.41
CSL	0.59
1-2 ft	0.47
2-3 ft	0.67

6C-01-DC				
Concentrations (mg/kg dry wt)				
Interval [1]	Hg	Phenol	4-MP	2,4-DMP
SQS	0.41	0.42	0.67	0.029
CSL	0.59	1.2	0.67	0.029
1-2 ft	0.57	0.02 U	0.02 U	0.02 U
2-3 ft	0.35	0.02 U	0.02 U	0.02 U

Notes:

Detected concentration is greater than SMS SQS screening level

Detected concentration is greater than SMS CSL screening level

Table 18 presents the detailed results for all Unit 6 subsurface sediment sampling.

Constituents: Hg=mercury, 4-MP=4-methylphenol, 2,4-DMP=2,4-dimethylphenol

U = Compound analyzed, but not detected above detection limit

1. Sample interval is expressed as distance below the mudline.
2. Measured mercury concentration exceeds both the CSL and/or the site-specific BSL (1.2 mg/kg) applicable to surface sediments.

7.6 Unit 9 Subsurface Testing

Sampling of subsurface sediment quality beyond the originally estimated boundary of Unit 9 included testing of sediments from the 0-4 foot depth interval from each of 6 sampling stations. The purpose of testing within Unit 9 was to evaluate the lateral extent of elevated subsurface mercury concentrations within the site. As noted in Section 2.7, all six of the

cores are described in this document as "Unit 9 cores", though four of the six locations are beyond the updated Unit 9 boundary. Figure 19 summarizes the measured Unit 9 subsurface mercury concentrations at each of the six locations. Samples were also analyzed for TOC and total solids.

Testing results for the Unit 9 cores are summarized on Figure 19 and in Table 18. The two cores located closest to the Log Pond contained mercury concentrations in excess of the SQS. Mercury concentrations in the other four cores were less than the SQS (0.41 mg/kg). Results indicate that the elevated subsurface sediment concentrations are generally limited to the area shown previously as part of the Consent Decree. Figure 19 shows the updated boundary of site Unit 9 based on the new sampling data.

7.7 Dredge Material Leachability Testing

Selected subsurface samples (12) from Units 1A, 1B, 1C, 3B, and 8 were tested for mercury and SVOC leachability using the EPA TCLP and SPLP test procedures. These tests were performed to supplement previous TCLP data collected during 1996 adjacent to BST (RETEC 2006) and as part of the materials profiling for potential use of Canadian disposal facilities. Tests were performed in accordance with dangerous waste criteria (WAC 173-303-090, WAC 173-340-747) and approved testing methods SW1311 (TCLP) and SW1312 (SPLP).

The PRDI TCLP and SPLP testing results and actual (in situ) sample depths are summarized in Table 19. Leachability testing was performed on each Unit 1A and 1B composite sample, each collected Unit 1C "U" sample (above historic dredge), one Unit 3B composite sample, and one Unit 8 composite sample. No exceedances of state/federal TCLP test criteria were noted (WAC 173-303-090). All mercury and SVOC TCLP results were reported at non-detect concentrations. SPLP results were reported at non-detect concentrations, except samples 1A-01-VC-C1 and 1C-07-VC-U, which each had a SPLP mercury concentration of 0.0001 mg/L (at detection limit) and composite sample 8-01 which indicated concentrations of barium (0.082 mg/L), chromium (0.009 mg/L), and mercury (0.0001 mg/L). .

7.8 Elultriate and Dewatering Testing

Additional materials handling testing was conducted as part of the PRDI including MET and DRET testing of selected test composites, ASB solids dewatering testing, and solidification testing of a Unit 1A and 1B composite sample. Testing was performed in order to assess potential water quality impacts that may occur during dredging or other remedial efforts. Results are provided in Table 20.

8 GEOTECHNICAL TESTING

Geotechnical testing was performed throughout the Site as part of the PRDI testing program. These samples were obtained using a variety of sampling methods including hollow-stem auger borings, mud rotary borings, and surface grabs.

Laboratory geotechnical tests performed included Atterberg limits, grain-size analysis, moisture content, specific gravity, consolidation, and consolidated-undrained triaxial tests. Field geotechnical tests were conducted in situ, or in place, and included the standard penetration test and vane shear test. A more detailed description of these tests and sampling procedures can be found in Appendix A.

All borings were conducted and logged by a geotechnical engineer or geologist from Anchor QEA licensed in Washington State. The field logs and lab tests were used conjunctively to create boring logs showing subsurface layers of soil. All boring logs are presented in Appendix B. Geotechnical testing results are presented in Tables 21 to 26, boring stations are shown on Figure 8, and vane shear stations are shown on Figure 9. Discrete and composite samples were taken for geotechnical testing, as outlined in Section 2 and Tables 3a and 3b showing the approximate sampling depths and testing.

8.1 ASB (Unit 8)

Twenty hollow-stem auger borings were conducted within the ASB (Unit 8). Twelve of these borings were along the top of the berm, four were mid-way along the slope, and four were near the toe of the slope.

The main objective of these ASB berm borings was to provide an understanding and profile of the subsurface of the berm and underlying sediments for calculating slope stability for remediation and for determining potential materials handling of the berm material during cleanup. Some chemical testing was performed using berm samples collected from these borings, as described in Section 2 and Section 7.

Table 21a shows the actual (in situ) sample depths and test results for samples from borings 8-101A-HSA to 8-106A-HSA. Table 21b shows the actual sample depths and test results for samples from boring 8-107A-HSA to 8-112A-HSA.

8.2 Inner Waterway (Units 2 and 3)

Fifteen borings were drilled within Inner Whatcom Waterway (Units 2A, 2C, and 3B). Eight of these borings were done over the water, from a barge, to a depth of approximately 25 feet below the mudline. The other seven were completed on land near the water's edge to a depth of approximately 75 feet below ground surface. These "A" (upland borings) and "C" (over-water) borings were intended to line up with each other to provide cross sections of the wharf and bulkhead areas.

Table 22 lists test results and actual (in situ) depths for discrete samples from geotechnical testing from the Inner Waterway area.

8.3 Outer Waterway (Unit 1C)

Twelve borings were drilled within Outer Whatcom Waterway (Unit 1C). One of these borings was completed over the water, near the middle of the waterway, on a barge, to a depth of approximately 25 feet below the mudline. Four borings were advanced on land to a depth of approximately 75 feet below ground surface. The other seven of these borings were sampled through deck drains in the Bellingham Shipping Terminal wharf using mud rotary drilling. The "B" and "C" borings went to a full depth of approximately 25 and 50 feet, respectively. These "A," "B," and "C" borings were intended to line up with each other to provide cross sections of the pier area. No borings were conducted in Units 5B, and 6C, however vane shear tests were conducted in these areas.

Table 23 shows test results and actual (in situ) depths for discrete samples from geotechnical testing from the Unit 1C area.

8.4 ASB Shoulder (Unit 5)

Four vane shear tests were conducted in Unit 5B in the vicinity of the planned capping area. Physical testing was also performed in three vibracore borings placed in this area (Section 7).

Vane shear tests were conducted to depths up to two feet below mudline. Table 25 shows geotechnical test results and actual (in situ) depths for discrete samples from vane shear sampling from Unit 5.

8.5 Barge Dock Area (Unit 6)

Four vane shear tests were conducted in Unit 6. Vane shear tests were conducted to depths up to three feet. Physical testing was also performed in three vibracore borings placed in this area (Section 7).

Table 25 shows geotechnical test results and actual (in situ) depths for discrete samples from vane shear sampling from Unit 6.

8.6 Log Pond (Unit 4)

One hollow-stem auger boring and nine vane shear tests were conducted in the Log Pond (Unit 4). The hollow-stem auger was conducted from a barge and extended to a depth of 50 feet below mudline. Vane shear tests were conducted to depths up to three feet. Tables 24 and 25 shows geotechnical test results and actual (in situ) depths for discrete samples from vane shear and boring sampling from the Log Pond area.

9 NEXT STEPS

This report and the associated attachments complete the transmittal of the testing available from the PRDI testing program. The next deliverables required under the existing Consent Decree include the following:

- **Preliminary Design Concept Report (PDCR):** The PDCR will contain a preliminary definition of the dredging areas and depths, capping areas and preliminary cap design assumptions.

- **Engineering Design Report (EDR):** The EDR will provide the detailed description of the engineering design for the cleanup action, and will include an estimated schedule for completion of the cleanup. That report will also include a copy of the proposed Construction QAPP and the Compliance Monitoring and Contingency Response Plan. The EDR will be provided for public review and comment.

The cleanup action is subject to certain permit requirements as described in the Cleanup Action Plan (Ecology 2007b). Permit submittals are anticipated concurrent with completion of the EDR. Permitting will include applicable public notice provisions.

10 REFERENCES

Adolphson, P., 2009. Personal communication with D. Berlin. Bellevue, WA. January 26, 2009.

Anchor. 2003. Pre-Remedial Design Evaluation Testing Report. Prepared for GP West, the Port of Bellingham, the City of Bellingham and the Department of Natural Resources by Anchor Environmental, L.L.C., Seattle, Washington. March 2003.

Anchor. 2008a. Pre-Remedial Design Investigation Work Plan, Whatcom Waterway Site Cleanup. Prepared for Port of Bellingham, Bellingham, Washington, by Anchor Environmental, L.L.C., Seattle, Washington. June 2008.

Anchor. 2008b. Pre-Remedial Design Investigation Work Plan Appendix B-Quality Assurance Project Plan (QAPP), Whatcom Waterway Site Cleanup. Prepared for Port of Bellingham, Bellingham, Washington, by Anchor Environmental, L.L.C., Seattle, Washington. June 2008.

ASTM 177-90a. 2002. Standard Practices for Use of the Term Precision and Bias in ASTM Test Methods. ASTM International

Benoit, J.M, D.H. Shull, P. Robinson, L.R. Ucran. 2005. Infaunal burrow densities and sediment monomethyl mercury distributions in Boston Harbor, Massachusetts. Marine Chemistry 102: 124-133. Elsevier Press. September 2005.

Bloom, Nicolas, Gary Gill, Steven Cappellino, Charles Dobbs and Larry McShea, Charles Driscoll, Robert Mason and John Rudd. 1999. *Speciation and Cycling of Mercury in Lavaca Bay, Texas, Sediments.* Environ. Sci. Technol.: 33: 7-13.

Burkhard, Lawrence Pl, Phillip M. Cook and Marta T. Lukasewycz. 2005. Comparison of Biota-Sediment Accumulation Factors Across Ecosystems. *Environ. Sci. Technol*. Vol. 39, No. 15. pp. 5716-5721.

DeWitt, T.H., G.R. Ditsworth, and R.C. Schwartz, 1988. Effects of Natural Sediment Features on Survival of the Phoxocepalid Amphipod, *Rhepoxynius Abronius*. Mar. Env. Res. 25:99-124.

DiGiano et al. 1995. Dredging Elutriate Test (DRET) Development. U.S. Army Corps of Engineers – Dredging Operations Technical Support Program. August 1995.

Dredged Material Management Program (DMMP). 2007. Dredged Material Evaluation and Disposal Procedures (Users Manual). December 2007.

DMMP. 2009. Summary of Dioxin Background Sampling Data for the Main Basin and Urban Bays of Puget Sound. Contained in "Options Considered in Addition to the Agency Proposal for Establishing Dioxin Suitability Guidelines for Open-Water Disposal at Non-Dispersive Sites. http://www.nws.usace.army.mil/PublicMenu/documents/DMMO/Options_for_web_posting_02-19-09.pdf. February, 2009.

Ecology. See Washington State Department of Ecology.

EPA. See U.S. Environmental Protection Agency.

Fox, D.F. 1993. Reference Sediment Performance Analysis, PSDDA Fifth Annual Review Meeting Minutes, Appendix A, overheads 9a-9aa.

Hart Crowser. 2009. Sediment Site Characterization, Evaluation of Bellingham Bay, Creosote Piling and Structure Removal, Cornwall Avenue Landfill Mapping, Boulevard Park Overwater Walkway Feasibility, and Dioxin Background Sampling and Analysis, Bellingham, Washington. Prepared by Hart Crowser for the Washington Department of Ecology. June 2009.

Hollweg, T.A., C.C. Gilmour, R.P. Mason. 2009. Methylmercury production in sediments of Chesapeake Bay and the mid-Atlantic continental margin. Marine Chemistry 114: 86-101. Elsevier Press. April 2009.

Newfields, Inc. 2008. Biological Testing of Sediment for Whatcom Waterway. Prepared for Anchor Environmental. December.

Palermo, M. R. 1986. Development of a Modified Elutriate Test for Predicting the Quality of Effluent Discharged from Confined Dredged Material Disposal Areas. Technical Report D-86-4, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.

Puget Sound Estuary Program (PSEP). 1986. Recommended protocols for measuring conventional sediment variables in Puget Sound. Prepared for the U.S. Environmental Protection Agency, Region 10, Seattle, Washington.

PSEP. 1995. Recommended Guidelines for Conducting Laboratory Bioassays on Puget Sound Sediments. Prepared for the U.S. Environmental Protection Agency, Region 10, Seattle, Washington and Puget Sound Water Quality Authority, Olympia WA by King County Environmental Lab, Seattle, WA. 30 pp+ appendices.

PSEP. 1997a. Puget Sound Estuary Program: Recommended Guidelines for Sampling Marine Sediment, Water Column, and Tissue in Puget Sound. Prepared for the U.S.

Environmental Protection Agency Region 10, and the Puget Sound Water Quality Authority. Puget Sound Water Quality Authority, Olympia, Washington.

PSEP. 1997b. Puget Sound Estuary Program: Recommended Guidelines for Measuring Organic Compounds in Puget Sound Sediment and Tissue Samples. Prepared for the U.S. Environmental Protection Agency Region 10, and the Puget Sound Water Quality Authority. Puget Sound Water Quality Authority, Olympia, Washington.

PSEP. 1997c. Puget Sound Estuary Program: Recommended Protocols for Measuring Metals in Puget Sound Sediment and Tissue Samples. Prepared for the U.S. Environmental Protection Agency Region 10, and the Puget Sound Water Quality Authority. Puget Sound Water Quality Authority, Olympia, Washington.

RETEC. 2006. Draft Supplemental Remedial Investigation and Feasibility Study. Volume 1: RI Report and Draft Supplemental Remedial Investigation and Feasibility Study. Volume 2: FS Report. Prepared for the Port of Bellingham.

SAIC. 2008. Dioxin/furan Concentrations at the Non-Dispersive Open-Water Dredged material Disposal Sites in Puget Sound. Prepared by SAIC on Behalf of the Washington State Department of Natural Resources. July, 2008.

U.S. Army Corps of Engineers (USACE). 2007. Dredge Material Management Program User's Manual. Revised February.

U.S. Environmental Protection Agency (EPA). 1986. Test Methods for the Evaluation of Solid Waste: Physical/Chemical Methods, 3rd Edition. EPA SW-846, 1986.

EPA. 1993. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods – 3rd Edition, Update 4A. EPA SW-846, August 1993.

EPA. 1999. USEPA Contract Laboratory Program National Functional Guidelines for Organic Data Review. EPA540/R-99/008, October 1999.

EPA. 2001. Methods for Collection, Storage, and Manipulation of Sediments for Chemical and Toxicological Analyses: Technical Manual. EPA/823/B-01-022, October 2001.

EPA. 2004. USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review. EPA540-R-04-004, October 2004.

EPA. 2005. National Functional Guidelines for Chlorinated Dibenzo-p-Dioxins (CDDs) and Chlorinated Dibenzofurans (CDFs) Data Review. OSWER 9240.1-51, EPA-540-R-05-001, September 2005.

EPA. 2008. OSV Bold Survey Report. Puget Sound Sediment PCB and Dioxin 2008 Survey, July 31 to August 6, 2008. Submitted by Matthew Liebman, U.S. Environmental Protection Agency New England Oceans and Coastal Protection Unit, Boston, MA. Final Report September 11, 2008.

Washington State Department of Ecology (Ecology). 2007a. Final Supplemental Environmental Impact Statement for the Cleanup of the Whatcom Waterway Site, Bellingham Bay Comprehensive Strategy.

Ecology. 2007b. Exhibit B to Consent Decree: Cleanup Action Plan, Whatcom Waterway Site, Bellingham, Washington. Issued by Ecology.

Ecology. 2008. Sediment Sampling and Analysis Plan Appendix. Ecology Publication No. 03-09-043. Sediment Source Control Standards User Manual, Washington Department of Ecology Sediment Management Unit. Revised February 2008.

Ecology. 2010a. SMS Rule Revisions - Human Health and Background Issues, Summary of Advisory Group Feedback, April 2010. http://www.ecy.wa.gov/programs/tcp/regs/2009MTCA/AdvGrpMeetingInfo/mtg_100426/SedDiscus.pdf

Ecology. 2010b. Station Locations Tested for Dioxin/Furan Concentrations During 2010 Urban Waters Sampling Study within Bellingham Bay. Obtained from L. McInerney at the Washington Department of Ecology. July 2010.

Ecology. 2010c. Electronic data from regional sediment quality studies are available from Ecology's Environmental Information Management system. http://www.ecy.wa.gov/eim/

Weisbrod, Annie V., Kent B. Woodburn, Albert A. Koelmans, Thomas F. Parkerton, Anne E. McElroy and Katrine Borga. 2009. Evaluation of Bioaccumulation Using In Vivo Laboratory and Field Studies. *Integrated Environmental Assessment and Management* Vol. 5, No. 4. Pp. 598-623.

TABLES

FIGURES

APPENDIX A
PRDI SAMPLING METHODOLOGY

APPENDIX B
PRDI SAMPLING LOGS BY METHOD

APPENDIX C THROUGH APPENDIX H ON ATTACHED DVD

Table 1
Summary of Surface Sediment Chemical and Physical Sampling

Station ID		Actual Coordinates[1] Easting	Actual Coordinates[1] Northing	Mudline Elevation (MLLW)[2]	Sample Method	Sampling Interval (cm)	Surface Sediment Testing: In-Situ Measurements	Surface Sediment Testing: Chemical/Conventional[3]	Surface Sediment Testing: Physical[4]	Surface Sediment Testing: Analyses for Cap Design	Bioassay[5]
Inner Waterway											
2C	2C-01-SS	1240091.7	641595.7	-32.9	Van Veen grab	0 to 12 cm	Temp, pH, ORP	Hg, TS, TVS, TPS, TOC, SO_4, S_2	GS	MeHg	No
	2C-02-SS	1240737.3	642215.2	-30.0	Van Veen grab	0 to 12 cm	Temp, pH, ORP	Hg, TS, TVS, TPS, TOC, SO_4, S_2	GS	MeHg	No
	2C-03-SS	1241269.3	642581.3	-24.4	Van Veen grab	0 to 12 cm	--	Hg, SVOC, TS, TOC, NH_3, S_2	GS	--	No
3A	3A-01-SS	1241690.8	643370.2	-11.1	Van Veen grab	0 to 12 cm	--	SMS Metals, SVOC, TS, TOC, bulk TBT, NH_3, S_2	GS	--	Yes
	3A-02-SS	1241864.5	643536.5	-3.9	Van Veen grab	0 to 12 cm	--	SMS Metals, SVOC, TS, TOC, bulk TBT, NH_3, S_2	GS	--	Yes
	3A-03-SS	1241826.2	643340	-3.0	Van Veen grab	0 to 12 cm	--	SMS Metals, SVOC, TS, TOC, bulk TBT, NH_3, S_2	GS	--	Yes
	3A-04-SS	1241889.7	643192.8	-14.4	Van Veen grab	0 to 12 cm	--	SMS Metals, SVOC, TS, TOC, bulk TBT, NH_3, S_2	GS	--	Yes
	3A-05-SS	1242039.9	643338.5	-11.8	Van Veen grab	0 to 12 cm	--	SMS Metals, SVOC, TS, TOC, bulk TBT, NH_3, S_2	GS	--	Yes
5C	5C-01-SS	1240354.9	642245.2	-6.2	Van Veen grab	0 to 12 cm	Temp, pH, ORP	Hg, SVOC, TS, TOC, TVS, NH_3, SO_4, S_2	GS	MeHg	Yes
	5C-02-SS	1240848.2	642702.3	-9.4	Van Veen grab	0 to 12 cm	--	Hg, SVOC, TS, TOC, NH_3, S_2	GS	--	Yes
Outer Waterway											
1B	1B-01-SS	1238468.3	640047.7	-36.0	Van Veen grab	0 to 12 cm	Temp, pH, ORP	Hg, TS, TVS, TOC, SO_4, S_2, D/F	GS	MeHg	No
1C	1C-01-SS	1239419	640973.6	-35.7	Van Veen grab	0 to 12 cm	Temp, pH, ORP	Hg, TS, TVS, TOC, SO_4, S_2, D/F	GS	MeHg	No
Unit 5											
5B	5B-01-SS	1239367.5	642161.6	-9.1	Van Veen grab	0 to 12 cm	--	Hg, SVOC, TS, TOC, NH_3, S_2	GS	--	Yes
	5B-02-SS	1239277.0	641829.0	-11.5	Van Veen grab	0 to 12 cm	--	Hg, SVOC, TS, TOC, NH_3, S_2	GS	--	Yes
	5B-03-SS	1239430.1	641490.1	-12.5	Van Veen grab	0 to 12 cm	--	Hg, SVOC, TS, TOC, NH_3, S_2	GS	--	Yes
	5B-04-SS	1239638.6	641465.8	-17.8	Van Veen grab	0 to 12 cm	--	Hg, SVOC, TS, TOC, NH_3, S_2	GS	--	Yes
	5B-05-SS	1239479.5	641889.5	-8.9	Van Veen grab	0 to 12 cm	--	Hg, SVOC, TS, TOC, NH_3, S_2	GS	--	Yes
	5B-06-SS	1239623.8	641689.6	-8.7	Van Veen grab	0 to 12 cm	--	Hg, SVOC, TS, TOC, NH_3, S_2	GS	--	No
	5B-07-SS	1239933.0	641797.7	-7.3	Van Veen grab	0 to 12 cm	--	Hg, SVOC, TS, TOC, NH_3, S_2	GS	--	Yes
Unit 6											
6B	6B-01-SS	1239815.2	640576.9	-22.2	Van Veen grab	0 to 12 cm	--	Hg, SVOC, TS, TOC, NH_3, S_2	GS	--	Yes
	6B-02-SS	1239638.7	640173.7	-21.6	Van Veen grab	0 to 12 cm	--	Hg, SVOC, TS, TOC, NH_3, S_2	GS	--	Yes
	6B-03-SS	1239977.9	639927.4	-19.2	Van Veen grab	0 to 12 cm	--	Hg, SVOC, TS, TOC, NH_3, S_2	GS	--	Yes
	6B-04-SS	1240225.6	640047.0	-18.9	Van Veen grab	0 to 12 cm	--	Hg, SVOC, TS, TOC, NH_3, S_2	GS	--	Yes
	6B-05-SS	1239987.8	640276.6	-24.2	Van Veen grab	0 to 12 cm	Temp, pH, ORP	Hg, SVOC, TS, TVS, TOC, NH_3, SO_4, S_2	GS	MeHg	Yes
6C	6C-01-SS	1239966.4	640452.0	-13.8	Van Veen grab	0 to 12 cm	--	Hg, SVOC, TS, TOC, NH_3, S_2	GS	--	Yes
	6C-02-SS	1240158.1	640234.7	-15.5	Van Veen grab	0 to 12 cm	--	Hg, SVOC, TS, TOC, NH_3, S_2	GS	--	Yes
ASB											
8	8-01-COMP	--[6]	--[6]	varies	vibracore and Van Veen grab	varies	--	See Table 2a	--	--	No
Reference Areas											
REF	REF-01-SS	1228930.6	581365.3	-57.3	Van Veen grab	0 to 12 cm	Temp, pH, ORP	Hg, TS, TVS, TPS, TOC, NH_3, SO_4, S_2	GS	MeHg	Yes
	REF-02-SS	1228731.0	581840.0	-58.3	Van Veen grab	0 to 12 cm	--	TS, TPS, TOC, NH_3, S_2	GS	--	Yes

Notes:

1. NAD 83/98 (Washington State Plane NAD 83 Lambert Conformal North Zone Grid, Per the 1998 Adjustment)
2. Mudlines were calculated using field depth measurements and tide data from Wtides (Rosario Strait, Bellingham, Washington, from merged harmonic analysis).
3. Chemical testing: Hg = Total Mercury, MeHg= Methyl Mercury, TS = Total Solids, TOC = Total Organic Carbon, TPS = Total Preserved Solids, TBT = Tribuytl tin, NH_3 = ammonia, S_2 = sulfide, SO_4 = Sulfate, TVS= Total Volatile Solids , SVOC= Semi-volatile Organic Compounds, D/F=Dioxin/Furans
4. Physical testing: GS = Grain Size
5. Bioassays conducted included E. estuarius, D. Excentricus, and N. arenaceodentata.
6. A single composite was prepared from several basin vibracores and discrete surface grabs throughout the ASB for TCLP, SPLP, MET/DRET and solidification testing.

-- Not Analyzed/Applicable

Table 2a
Summary of ASB Virbracore Subsurface Sediment Chemical and Physical Sampling

Station ID	Actual Coordinates[1]		Field Estimated Mudline Elevation (MLLW)[2]	Sample Method	Penetration (feet below mudline)/ Recovery %	Sample ID	Sampling Interval (feet below apparent sludge/sand contact)	Discrete/ Composite	Tier 1 Testing[3,4]		Tier 2 Testing	Materials Handling
	Easting	Northing							Chemistry	Physical	Chemistry	
ASB Bottom Sampling - Primary-Grid												
8-01-COMP	--[6]	--[6]	--[6]	vibracore and Van Veen grab	varies	8-01-COMP	--	Composite	--	--	--	TCLP, SPLP, MET & DRET, Solidification
8-01-VC	1239482.6	642858.9	-8.6	vibracore	15 / 91%	8-01-VC-1-2	1-2 ft	D	Hg, TS, TOC	GS, MC, AL, SG	SVOCs, Cr, Cd, Zn, D/F	--
						8-01-VC-2-3	2-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	D/F	--
						8-01-VC-3-4	3-4 ft	D	Hg, TS, TOC	GS, MC, AL, SG	D/F	--
8-02-VC	1239789.6	643145.4	-12.1	vibracore	15 / 89%	8-02-VC-1-2	1-2 ft	D	Hg, TS, TOC	GS, MC, AL, SG	SVOCs, Cr, Cd, Zn, D/F	--
						8-02-VC-2-3	2-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
						8-02-VC-3-4	3-4 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
8-03-VC	1240050.5	643402.5	-7.8	vibracore	12 / 89%	8-03-VC-1-2	1-2 ft	D	Hg, TS, TOC	GS, MC, AL, SG	SVOCs, Cr, Cd, Zn, D/F	--
						8-03-VC-2-3	2-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
						8-03-VC-3-4	3-4 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
8-04-VC	1239653.8	642555.3	-7.8	vibracore	13 / 90%	8-04-VC-1-2	1-2 ft	D	Hg, TS, TOC	GS, MC, AL, SG	SVOCs, Cr, Cd, Zn, D/F	--
8-05-VC	1239968.9	642863.6	-8.6	vibracore	15 / 93%	8-05-VC-1-2	1-2 ft	D	Hg, TS, TOC	GS, MC, AL, SG	SVOCs, Cr, Cd, Zn, D/F	--
						8-05-VC-2-3	2-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
						8-05-VC-3-4	3-4 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
8-06-VC	1240262.9	643158.8	-6.7	vibracore	13 / 97%	8-06-VC-1-2	1-2 ft	D	Hg, TS, TOC	GS, MC, AL, SG	SVOCs, Cr, Cd, Zn, D/F	--
						8-06-VC-2-3	2-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
						8-06-VC-3-4	3-4 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
8-07-VC	1239853.3	642201.9	-4.1	vibracore	15 / 91%	8-07-VC-1-2	1-2 ft	D	Hg, TS, TOC	GS, MC, AL, SG	SVOCs, Cr, Cd, Zn, D/F	--
						8-07-VC-2-3	2-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
						8-07-VC-3-4	3-4 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
8-08-VC	1240185.3	642528.9	-12.8	vibracore	13 / 98%	8-08-VC-1-2	1-2 ft	D	Hg, TS, TOC	GS, MC, AL, SG	SVOCs, Cr, Cd, Zn, D/F	--
						8-08-VC-2-3	2-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
						8-08-VC-3-4	3-4 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
8-09-VC	1240519.4	642857.2	-4.3	vibracore	14 / 98%	8-09-VC-1-2	1-2 ft	D	Hg, TS, TOC	GS, MC, AL, SG	SVOCs, Cr, Cd, Zn, D/F	--
						8-09-VC-2-3	2-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	SVOCs, Cr, Cd, Zn, D/F	--
						8-09-VC-3-4	3-4 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
ASB Bottom Sampling - Secondary-Grid												
8-10-VC	1239634.8	642997.3	-10.4	vibracore	13 / 100%	8-10-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	D/F	--
						8-10-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	D/F	--
						8-10-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-11-VC	1239929.3	643246.4	-10.2	vibracore	13 / 95%	8-11-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	--	--
						8-11-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-11-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-12-VC	1239567.4	642709.8	-6.7	vibracore	15 / 91%	8-12-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	--	--
						8-12-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-12-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-13-VC	1239719.3	642850.1	-6.6	vibracore	15 / 91%	8-13-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	--	--
						8-13-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-13-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-14-VC	1239878.2	643005.8	-7.1	vibracore	15 / 85%	8-14-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	--	--
						8-14-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-14-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-15-VC	1240013.5	643158.2	-7.8	vibracore	15 / 88%	8-15-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	--	--
						8-15-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-15-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-16-VC	1240157.3	643282.8	-7.7	vibracore	12.5 / 87%	8-16-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	--	--
						8-16-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-16-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-17-VC	1239814.6	642710.6	-5.3	vibracore	15 / 90%	8-17-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	--	--
						8-17-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-17-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-18-VC	1240125.1	643019.5	-6.7	vibracore	13 / 96%	8-18-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	--	--
						8-18-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-18-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-19-VC	1239760.8	642371.7	-2.9	vibracore	15 / 89%	8-19-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	--	--
						8-19-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
8-20-VC	1239924.1	642539.7	-5.3	vibracore	15 / 91%	8-20-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	--	--
						8-20-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-20-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-21-VC	1240097.4	642690.8	-10.1	vibracore	15 / 82%	8-21-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	--	--
						8-21-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-21-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-22-VC	1240242.5	642866.8	-2.4	vibracore	15 / 90%	8-22-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	--	--
						8-22-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-22-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--

Table 2a
Summary of ASB Virbracore Subsurface Sediment Chemical and Physical Sampling

Station ID	Actual Coordinates[1]		Field Estimated Mudline Elevation (MLLW)[2]	Sample Method	Penetration (feet below mudline)/ Recovery %	Sample ID	Sampling Interval (feet below apparent sludge/sand contact)	Discrete/ Composite	Tier 1 Testing[3,4]		Tier 2 Testing	Materials Handling
	Easting	Northing							Chemistry	Physical	Chemistry	
8-23-VC	1240388.7	643009.0	-6.3	vibracore	13 / 96%	8-23-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	--	--
						8-23-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-23-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-24-VC	1240008.4	642373.2	-5.6	vibracore	15 / 87%	8-24-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	--	--
						8-24-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-24-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-25-VC	1240366.6	642707.8	-7.8	vibracore	13 / 95%	8-25-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	D/F	--
						8-25-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	D/F	--
						8-25-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
ASB Interior Sloping Berm												
8-101B-VC	1240408.2	643276.3	14.4	vibracore	5.5 / 52%	8-101B-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-101B-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-101B-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-101C-VC	1240320.2	643311.2	2.7	vibracore	13 / 90%	8-101C-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-101C-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-101C-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
						8-101BC-C2	5.5-7.5 ft	Composite[5]	DMMP Suite	GS, MC, AL, SG	--	--
8-102B-VC	1240602.1	643074.6	14.5	vibracore	5.0 / 50%	8-102B-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-102B-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-102B-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-102C-VC	1240569.4	643042.3	-2.3	vibracore	13 / 87%	8-102C-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-102C-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-102C-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
						8-102C-C2	5-8 ft	Composite[5]	DMMP Suite	GS, MC, AL, SG	--	--
8-103B-VC	1240626.9	642780.3	14.3	vibracore	5.5 / 71%	8-103B-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-103B-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-103B-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-103C-VC	1240596.0	642787.4	-5.2	vibracore	13 / 76%	8-103C-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-103C-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-103C-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
						8-103C-C2	5-8 ft	Composite[5]	DMMP Suite	GS, MC, AL, SG	--	--
8-104B-VC	1240265.4	642382.6	14.4	vibracore	7.0 / 70%	8-104B-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-104B-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-104B-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-104C-VC	1240228.9	642426.7	-2.0	vibracore	15 / 100%	8-104C-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-104C-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-104C-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
						8-104BC-C2	6-12 ft	Composite[5]	DMMP Suite	GS, MC, AL, SG	--	--
8-105B-VC	1239992.9	642125.3	14.1	vibracore	7.0 / 59%	8-105B-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-105B-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-105B-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-105C-VC	1239891.3	642091.2	-0.6	vibracore	15 / 100%	8-105C-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-105C-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-105C-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
						8-105C-C2	5-10 ft	Composite[5]	DMMP Suite	GS, MC, AL, SG	--	--
8-106B-VC	1239674.0	642143.0	13.8	vibracore	6.0 / 73%	8-106B-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-106B-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-106B-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-106C-VC	1239725.0	642154.0	-2.8	vibracore	13 / 100%	8-106C-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-106C-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-106C-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
						8-106C-C2	5-7.5 ft	Composite[5]	DMMP Suite	GS, MC, AL, SG	--	--
8-107B-VC	1239543.7	642420.4	14.2	vibracore	6.0 / 66%	8-107B-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-107B-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	D/F	--
						8-107B-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-107C-VC	1239595.3	642421.4	1.9	vibracore	13 / 82%	8-107C-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-107C-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
8-108B-VC	1239388.8	642763.2	14.2	vibracore	5.1 / 80%	8-108B-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-108B-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-108B-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-108C-VC	1239419.3	642773.6	0.7	vibracore	5.8 / 90%	8-108C-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-108C-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
8-109B-VC	1239432.5	642964.7	13.8	vibracore	6.0 / 52%	8-109B-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-109B-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-109B-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--

Table 2a
Summary of ASB Virbracore Subsurface Sediment Chemical and Physical Sampling

Station ID	Actual Coordinates[1]		Field Estimated Mudline Elevation (MLLW)[2]	Sample Method	Penetration (feet below mudline)/ Recovery %	Sample ID	Sampling Interval (feet below apparent sludge/sand contact)	Discrete/ Composite	Tier 1 Testing[3,4]		Tier 2 Testing	Materials Handling
	Easting	Northing							Chemistry	Physical	Chemistry	
8-109C-VC	1239462.5	642933.4	0.8	vibracore	13 / 97%	8-109C-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-109C-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-109C-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
						8-109C-C2	5-6 ft	Composite[5]	DMMP Suite	GS, MC, AL, SG	--	--
8-110B-VC	1239722.1	643238.5	14.3	vibracore	7.5 / 49%	8-110B-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-110B-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
8-110C-VC	1239748.3	643216.3	2.2	vibracore	13 / 85%	8-110C-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-110C-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-110C-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
						8-110BC -C2	4-5 ft	Composite[5]	DMMP Suite	GS, MC, AL, SG	--	--
8-111B-VC	1239971.6	643487.8	14.2	vibracore	5.5 / 60%	8-111B-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-111B-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-111B-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-111C-VC	1240006.5	643456.4	1.3	vibracore	13 / 91%	8-111B-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-111B-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	D/F	--
						8-111B-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
						8-111C-C2	5-6 ft	Composite[5]	DMMP Suite	GS, MC, AL, SG	--	--
8-112B-VC	1240157.3	643529.4	14.8	vibracore	4.0 / 43%	8-112B-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-112B-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-112B-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
8-112C-VC	1240136.1	643515.4	2.1	vibracore	13 / 95%	8-112C-VC-1-2	1-2 ft	D	Hg, TS, TOC	--	SVOCs, Cr, Cd, Zn, D/F	--
						8-112C-VC-2-3	2-3 ft	D	Hg, TS, TOC	--	--	--
						8-112C-VC-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
						8-112C-C2	5.5-7.5 ft	Composite[5]	DMMP Suite	GS, MC, AL, SG	--	--

Notes:

1. NAD 83/98 (Washington State Plane NAD 83 Lambert Conformal North Zone Grid, Per the 1998 Adjustment)
2. ASB mudline (top of solids) depths were estimated in the field using either leadline or plate pole. This information supplemented ASB mudline elevations measured during site surveys.
3. Chemical testing: Hg = Mercury, TS = Total Solids, TOC = Total Organic Carbon, SVOCs = semi-volatile organic compounds, Cr = Chromium, Zn = Zinc, Cd = Cadmium, D/F = Dioxin/Furans
4. Physical testing: GS = Grain Size, MC = Moisture Content, SG = Specific gravity, AL = Atterberg Limits
5. Composites beneath ASB berm were collected from "C" vibracore stations and "B" hollow-stem auger stations when sufficient sample quantity was available.
6. A single composite was prepared from several basin vibracores and discrete surface grabs throughout the ASB for TCLP, SPLP, MET/DRET and solidification testing.

-- Not Analyzed/Applicable

Table 2b
Summary of Whatcom Waterway Vibracore Subsurface Sediment Chemical and Physical Sampling

Station ID		Actual Coordinates[1] Easting	Northing	Mudline Elevation (MLLW)[2]	Sample Method	Penetration (feet below mudline)/ Recovery %	Sample ID	Sampling Interval (feet below mudline)	Discrete/ Composite	Tier 1 Testing[3] Chemistry[4]	Physical[5]	Materials Handling[6]	Tier 2 Testing Chemistry
Inner Waterway - Dredge and Cap Area													
3B	3B-01-VC	1241628.3	643102.7	-17.5	vibracore	13 / 100%	3B-01-VC-1-3	1-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	TCLP, SPLP	--
							3B-01-VC-4-6	4-6 ft	D	--	GS, MC, AL, SG	--	--
							3B-01-VC-7-9	7-9 ft	D	--	GS, MC, AL, SG	--	--
							3B-01-VC-9-12	9-12 ft	D	--	GS, MC, AL, SG		--
							2A-3B-01-Comp	Varies	Composite[8]	--	--	DRET & MET Testing	--
Inner Waterway - Capping Area													
2C	2C-01-VC	1240443.1	641948.3	-30.6	vibracore	13 / 75%	2C-01-VC-1-3	1-3 ft	D	--	GS, MC, AL, SG	--	--
							2C-01-VC-4-6	4-6 ft	D	--	GS, MC, AL, SG	--	--
							2C-01-VC-7-9	7-9 ft	D	--	GS, MC, AL, SG	--	--
	2C-02-VC	1240958.0	642455.4	-30.3	vibracore	13 / 98%	2C-02-VC-1-3	1-3 ft	D	--	GS, MC, AL, SG	--	--
							2C-02-VC-4-6	4-6 ft	D	--	GS, MC, AL, SG	--	--
							2C-02-VC-7-9	7-9 ft	D	--	GS, MC, AL, SG	--	--
Inner Waterway - Head of Waterway MNR Area													
3A	3A-01-VC	1241693.1	643365.3	-12.5	vibracore	13 / 85%	3A-01-VC-1-3	1-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC, SMS metals, bulk TBT
							3A-01-VC-4-6	4-6 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC, SMS metals, bulk TBT
							3A-01-VC-7-9	7-9 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
	3A-02-VC	1241870.4	643525.4	-5.3	vibracore	13 / 59%	3A-02-VC-1-3	1-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC, SMS metals, bulk TBT
							3A-02-VC-4-6	4-6 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC, SMS metals, bulk TBT
							3A-02-VC-7-9	7-9 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
	3A-03-VC	1241880.1	643368.0	-7.5	vibracore	13 / 82%	3A-03-VC-1-3	1-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC, SMS metals, bulk TBT
							3A-03-VC-4-6	4-6 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC, SMS metals, bulk TBT
							3A-03-VC-7-9	7-9 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
	3A-04-VC	1242042.7	643335.3	-11.4	vibracore	13 / 74%	3A-04-VC-1-3	1-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC, SMS metals, bulk TBT
							3A-04-VC-4-6	4-6 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC, SMS metals, bulk TBT
							3A-04-VC-7-9	7-9 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
	3A-05-VC	1241889.6	643189.6	-14.5	vibracore	12.8 / 99%	3A-05-VC-1-3	1-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC, SMS metals, bulk TBT
							3A-05-VC-4-6	4-6 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC, SMS metals, bulk TBT
							3A-05-VC-7-9	7-9 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
Inner Waterway - MNR Areas													
2B	2B-01-VC	1240127.0	642024.5	-6.2	vibracore	15 / 88%	2B-01-VC-1-3	1-3 ft	D	--	GS, MC, AL, SG	--	--
							2B-01-VC-4-6	4-6 ft	D	--	GS, MC, AL, SG	--	--
							2B-01-VC-7-9	7-9 ft	D	--	GS, MC, AL, SG	--	--
							2B-01-VC-9-12	9-12 ft	Composite[8]	DMMP Suite	GS, MC, AL, SG	--	--
5C	5C-01-VC	1240335.3	642229.8	-4.0	vibracore	13 / 93%	5C-01-VC-1-3	1-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC
							5C-01-VC-4-6	4-6 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC
							5C-01-VC-7-9	7-9 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
	5C-02-VC	1240527.4	642408.1	-4.1	vibracore	13 / 91%	5C-02-VC-1-3	1-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC
							5C-02-VC-4-6	4-6 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC
							5C-02-VC-7-9	7-9 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
	5C-03-VC	1240720.9	642613.8	-8.9	vibracore	13 / 98%	5C-03-VC-1-3	1-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC
							5C-03-VC-4-6	4-6 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC
							5C-03-VC-7-9	7-9 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
Outer Waterway - Bellingham Shipping Terminal Area													
1C	1C-01-VC	1239124.1	640827.2	-30.7	vibracore	13 / 95%	1C-01-VC-U-0-3.4	0-3.4 ft	D	Hg, TS, TOC	GS, MC, AL, SG	TCLP, SPLP	D/F
									Composite[8]	--	--	DRET & MET Testing	--
							1C-01-VC-L-1-2	4.4-5.4 ft	D	Hg, TS, TOC	--	--	Hg
							1C-01-VC-L-2-3	5.4-6.4 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	Hg
							1C-01-VC-L-3-4	6.4-7.4 ft	D	Hg, TS, TOC	--	--	Hg, SVOCs
							1C-01-VC-L-4-5	7.4-8.4 ft	D	--	--	--	Hg, TOC, D/F
							1C-01-VC-L-5-6	8.4-9.4 ft	D	--	--	--	Hg, SVOCs, TOC, D/F
							1C-01-VC-L-6-7	9.4-10.4 ft	D	--	--	--	Hg
	1C-02-VC	1239215.9	640715.8	-37.4	vibracore	13 / 93%	1C-02-VC-L-1-2	1-2 ft	D	Hg, TS, TOC	--	--	D/F
							1C-02-VC-L-2-3	2-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
							1C-02-VC-L-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--
							1C-02-VC-L-4-5	4-5 ft	D	--	--	--	Hg, SVOCs, TOC, D/F
							1C-02-VC-L-5-6	5-6 ft	D	--	--	--	Hg
							1C-02-VC-L-6-7	6-7 ft	D	--	--	--	Hg
	1C-03-VC	1239343.7	641059.3	-31.6	vibracore	13 / 96%	1C-03-VC-U-0-1	0-1ft	D	Hg, TS, TOC	GS, MC, AL, SG	TCLP, SPLP	--
									Composite[8]	--	--	DRET & MET Testing	--
							1C-03-VC-L-1-2	2-3 ft	D	Hg, TS, TOC	--	--	--
							1C-03-VC-L-2-3	3-4 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOCs
							1C-03-VC-L-3-4	4-5 ft	D	Hg, TS, TOC	--	--	--
	1C-04-VC	1239446.1	640928.5	-34.9	vibracore	13 / 100%	1C-04-VC-L-1-2	1-2 ft	D	Hg, TS, TOC	--	--	--
							1C-04-VC-L-2-3	2-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOCs
							1C-04-VC-L-3-4	3-4 ft	D	Hg, TS, TOC	--	--	--

Table 2b
Summary of Whatcom Waterway Vibracore Subsurface Sediment Chemical and Physical Sampling

Station ID		Actual Coordinates[1] Easting	Actual Coordinates[1] Northing	Mudline Elevation (MLLW)[2]	Sample Method	Penetration (feet below mudline)/ Recovery %	Sample ID	Sampling Interval (feet below mudline)	Discrete/ Composite	Tier 1 Testing[3] Chemistry[4]	Tier 1 Testing[3] Physical[5]	Tier 1 Testing[3] Materials Handling[6]	Tier 2 Testing Chemistry
1C	1C-05-VC	1239578.8	641279.1	-28.3	vibracore	13 / 100%	1C-05-VC-U-0-2.5	0-2.5 ft	D	Hg, TS, TOC	GS, MC, AL, SG	TCLP, SPLP	D/F
									Composite[8]	--	--	DRET & MET Testing	--
							1C-05-VC-L-1-2	3.5-4.5 ft	D	Hg, TS, TOC	--	--	D/F
							1C-05-VC-L-2-3	4.5-5.5 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
							1C-05-VC-L-3-4	5.5-6.5 ft	D	Hg, TS, TOC	--	--	SVOCs, D/F
							1C-05-VC-L-4-5	6.5-7.5 ft	D	--	--	--	Hg, D/F
							1C-05-VC-L-5-6	7.5-8.5 ft	D	--	--	--	Hg
	1C-06-VC	1239699.3	641143.9	-35.7	vibracore	13 / 92%	1C-06-VC-U-0-1	0-1ft	D	Hg, TS, TOC	GS, MC, AL, SG	TCLP, SPLP	--
									Composite[8]	--	--	DRET & MET Testing	--
							1C-06-VC-L-1-2	2-3 ft	D	Hg, TS, TOC	--	--	--
							1C-06-VC-L-2-3	3-4 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOCs, D/F
							1C-06-VC-L-3-4	4-5 ft	D	Hg, TS, TOC	--	--	D/F
	1C-07-VC	1239789.6	641469.4	-29.1	vibracore	13 / 82%	1C-07-VC-U	0-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	TCLP, SPLP	D/F
									Composite[8]	--	--	DRET & MET Testing	--
							1C-07-VC-L-1-2	4-5 ft	D	Hg, TS, TOC	--	--	--
							1C-07-VC-L-2-3	5-6 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOCs, D/F
							1C-07-VC-L-3-4	6-7 ft	D	Hg, TS, TOC	--	--	--
							1C-07-VC-L-4-5	7-8 ft	D	--	--	--	Hg, D/F
							1C-07-VC-L-5-6	8-9 ft	D	--	--	--	Hg, TS, TOC
							1C-07-VC-L-6-7	9-10 ft	D	--	--	--	Hg, SVOCs, TOC, TS, D/F
	1C-08-VC	1239901.6	641345.7	-36.3	vibracore	13 / 98%	1C-08-VC-U-0-1	0-1 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
									Composite[8]	--	--	DRET & MET Testing	--
							1C-08-VC-L-1-2	2-3 ft	D	Hg, TS, TOC	--	--	--
							1C-08-VC-L-2-3	3-4 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
							1C-08-VC-L-3-4	4-5 ft	D	--	--	--	Hg, SVOCs, TOC, TS, D/F
							1C-08-VC-L-4-5	5-6 ft	D	--	--	--	Hg
Outer Waterway - Outer Channel Area													
1A	1A-01-VC	1237751.1	639493.2	-33.1	vibracore	7 / 100%	1A-01-VC-C1	0-4 ft/each core	Composite	VOCs, Dioxins/furans, & guaiacols[9]	GS, MC, SG	TCLP, SPLP, MET/DRET, Solidification[10]	--
	1A-02-VC	1237921.1	639319.2	-32.7	vibracore	7 / 100%							
	1A-03-VC	1237955.1	639692.3	-34.2	vibracore	7 / 99%							
	1A-04-VC	1238125.1	639518.3	-30.9	vibracore	7 / 100%							
	1A-05-VC	1238073.1	639808.2	-35.1	vibracore	7 / 98%	1A-01-VC-C2	0-4 ft/each core	Composite	VOCs, Dioxins/furans, & guaiacols[9]	GS, MC, SG	TCLP, SPLP, MET/DRET, Solidification[10]	--
	1A-06-VC	1238243.1	639633.2	-31.6	vibracore	7 / 100%							
1B	1B-01-VC	1238277.2	640006.2	-34.4	vibracore	7 / 83%							
	1B-02-VC	1238447.1	639832.2	-30.5	vibracore	7 / 86%							
	1B-03-VC	1238395.1	640122.2	-33.6	vibracore	7 / 96%	1B-01-VC-C1	0-4 ft/each core	Composite	VOCs, Dioxins/furans, & guaiacols[9]	GS, MC, SG	TCLP, SPLP, MET/DRET, Solidification[10]	--
	1B-04-VC	1238565.1	639948.3	-32.2	vibracore	7 / 100%							
	1B-05-VC	1238599.1	640321.2	-33.4	vibracore	7 / 93%							
	1B-06-VC	1238762.7	640159.3	-32.3	vibracore	7 / 100%							
	1B-07-VC	1238710.9	640450.0	-33.0	vibracore	7 / 100%	1B-01-VC-C2	0-4 ft/each core	Composite	VOCs, Dioxins/furans, & guaiacols[9]	GS, MC, SG	TCLP, SPLP, MET/DRET, Solidification[10]	--
	1B-08-VC	1238880.7	640275.9	-32.5	vibracore	7 / 99%							
	1B-09-VC	1238914.7	640648.9	-32.5	vibracore	7 / 100%							
	1B-10-VC	1239084.7	640474.9	-31.0	vibracore	7 / 96%							
Unit 5 Subsurface													
5B	5B-01-VC	1239440.4	641768.6	-8.9	vibracore	13 / 69%	5B-01-VC-1-3	1-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC
							5B-01-VC-4-6	4-6 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC
							5B-01-VC-7-9	7-9 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC
	5B-02-VC	1239632.7	641917.2	-8.1	vibracore	13 / 100%	5B-02-VC-1-3	1-3 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC
							5B-02-VC-4-6	4-6 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	SVOC
							5B-02-VC-7-9	7-9 ft	D	Hg, TS, TOC	GS, MC, AL, SG	--	--
	5B-03-VC	1239928.0	641841.4	-6.0	vibracore	13 / 95%	5B-02-VC-1-3	1-3 ft	D	--	GS, MC, AL, SG	--	--
							5B-02-VC-4-6	4-6 ft	D	--	GS, MC, AL, SG	--	--
							5B-02-VC-7-9	7-9 ft	D	--	GS, MC, AL, SG	--	--
Unit 6 Subsurface													
6B	6B-01-VC	1239821.5	640125.3	-23.3	vibracore	6.0 / 60%	6B-01-VC-1-3	1-3 ft	D	--	GS, MC, AL, SG	--	--
	6B-01-DC	1239863.1	640145.8	-21.9	diver core	2.6 / 100%	6B-01-DC-0-1	0 -1 ft	D	--	--	--	--
							6B-01-DC-1-2	1 - 2 ft	D	--	--	--	Hg
							6B-01-DC-2-3	2 - 2.5 ft	D	--	--	--	Hg
	6B-02-VC	1240108.6	640095.8	-24.8	vibracore	13 / 75%	6B-01-VC-1-3	1-3 ft	D	--	GS, MC, AL, SG	--	--
							6B-01-VC-4-6	4-6 ft	D	--	GS, MC, AL, SG	--	--
							6B-01-VC-7-9	7-9 ft	D	--	GS, MC, AL, SG	--	--
	6B-02-DC	1240111.5	640088.6	-24.6	diver core	3.9 / 100%	6B-02-DC-0-1	0 -1 ft	D	--	--	--	--
							6B-02-DC-1-2	1 - 2 ft	D	--	--	--	Hg, TS, TOC, SVOC
							6B-02-DC-2-3	2 - 3 ft	D	--	--	--	Hg, TS, TOC, SVOC
6C	6C-01-VC	1240075.1	640365.1	-15.5	vibracore	13 / 100%	6C-01-VC-1-3	1-3 ft	D	--	GS, MC, AL, SG	--	--
							6C-01-VC-4-6	4-6 ft	D	--	GS, MC, AL, SG	--	--
							6C-01-VC-7-9	7-9 ft	D	--	GS, MC, AL, SG	--	--
	6C-01-DC	1240076.1	640364.8	-14.5	diver core	3.4 / 100%	6C-01-DC-0-1	0 -1 ft	D	--	--	--	--
							6C-01-DC-1-2	1 - 2 ft	D	--	--	--	Hg, TS, TOC, SVOC
							6C-01-DC-2-3	2 - 3 ft	D	--	--	--	Hg, TS, TOC, SVOC
	6C-02-VC	1239828.7	640391.1	-23.5	vibracore	13 / 84%	6C-01-VC-1-3	1-3 ft	D	--	GS, MC, AL, SG	--	--
							6C-01-VC-4-6	4-6 ft	D	--	GS, MC, AL, SG	--	--
							6C-01-VC-7-9	7-9 ft	D	--	GS, MC, AL, SG	--	--
	6C-02-DC	1239830.3	640390.1	-25.2	diver core	3.5 / 100%	6C-02-DC-0-1	0 -1 ft	D	--	--	--	--
							6C-02-DC-1-2	1 - 2 ft	D	--	--	--	Hg
							6C-02-DC-2-3	2 - 3 ft	D	--	--	--	Hg

Table 2b
Summary of Whatcom Waterway Vibracore Subsurface Sediment Chemical and Physical Sampling

Station ID		Actual Coordinates[1] Easting	Actual Coordinates[1] Northing	Mudline Elevation (MLLW)[2]	Sample Method	Penetration (feet below mudline)/ Recovery %	Sample ID	Sampling Interval (feet below mudline)	Discrete/ Composite	Tier 1 Testing[3] Chemistry[4]	Tier 1 Testing[3] Physical[5]	Tier 1 Testing[3] Materials Handling[6]	Tier 2 Testing Chemistry
Unit 9 Subsurface													
9	9-01-VC	1232481.7	643805.8	-27.1	vibracore	7 / 95%	9-01-VC-0-4	0-4 ft	Composite	Hg, TS, TOC	--	--	--
	9-02-VC	1235027.3	642986.8	-25.4	vibracore	7 / 100%	9-02-VC-0-4	0-4 ft	Composite	Hg, TS, TOC	--	--	--
	9-03-VC	1237073.2	642568.8	-19.0	vibracore	7 / 99%	9-03-VC-0-4	0-4 ft	Composite	Hg, TS, TOC	--	--	--
	9-04-VC	1236551.2	636319.5	-40.6	vibracore	7 / 100%	9-04-VC-0-4	0-4 ft	Composite	Hg, TS, TOC	--	--	--
	9-05-VC	1235804.2	635123.7	-44.9	vibracore	7 / 99%	9-05-VC-0-4	0-4 ft	Composite	Hg, TS, TOC	--	--	--
	9-06-VC	1235093.8	633748.4	-40.8	vibracore	4.7 / 87%	9-06-VC-0-4	0-4 ft	Composite	Hg, TS, TOC	--	--	--

Notes:

1. NAD 83/98 (Washington State Plane NAD 83 Lambert Conformal North Zone Grid, Per the 1998 Adjustment)
2. Mudlines were calculated using field depth measurements and tide data from Wtides (Rosario Strait, Bellingham, Washington, from merged harmonic analysis).
3. Tier 1 samples were analyzed initially.
4. Chemical testing: Hg = Mercury, TS = Total Solids, TOC = Total Organic Carbon, TBT= Tribuytltin, SVOCs = semi-volatile organic compounds, VOCs = volatile organic compounds, D/F = Dioxins/Furans
5. Physical testing: GS = Grain Size, MC = Moisture Content, SG = Specific gravity, AL = Atterberg Limits
6. Materials handling testing: MET = Modified Elutriate Test, DRET = Dredge Elutriate Test, TCLP = Toxicity Characteristic Leaching Procedure, SPLP = Synthetic Precipitation Leaching Procedure
7. A single composite was prepared from discrete samples in 3B and 2A collected by vibracore with discrete samples in 3B collected by hollowstem auger.
8. A single composite was prepared from six discrete "U" samples from the Unit 1C sediments for MET and DRET testing.
9. VOCs and TOC were sampled from discrete cores from the 0-4-foot depth interval for the Unit 1A/1B composites.
10. A single composite from Units 1A and 1B was collected for MET/DRET and solidification testing.

-- Not Analyzed/Applicable

Table 3a
Summary of ASB Geotechnical Sampling

Station ID	Boring Location	Sample Method	Bottom of Boring	Coordinates[1]		Mudline/ Surface Elevation (MLLW)[2]	Sample ID	Sample Depth Interval (feet below surface or mudline)	Chemical Testing	Physical Testing[3]
				Easting	Northing					
8-101A-HSA	Top of Berm	Hollowstem Auger	63.5 ft	1240418.9	643314.6	23.3 ft	8-101A-HSA-S1	2.5-4	--	GS, MC
							8-101A-HSA-S5	10-11.5	--	MC, SG, AL
							8-101A-HSA-S6	15-16.5	--	MC
							8-101A-HSA-S7	20-21.5	--	MC
							8-101A-HSA-S8	25-26.5	--	MC
							8-101A-HSA-S9	30-31.5	--	GS, MC
							8-101A-HSA-S10	35-36.5	--	MC, SG, AL
							8-101A-HSA-S11	40-41.5	--	GS, MC
							8-101A-HSA-S12	45-46.5	--	MC, SG, AL
							8-101A-HSA-S13	50-51.5	--	GS, MC
							8-101A-HSA-S14	55-56.5	--	MC, SG, AL
							8-101A-HSA-S15	60-63.5	--	GS, MC
8-101B-HSA	Over-Water	Hollowstem Auger	54 ft	1240344.9	643315.8	9.9 ft	8-101B-HSA-S3	5.5-7	--	GS, MC
							8-101B-HSA-S6	12.5-14	--	GS, MC
							8-101B-HSA-S7	17.5-19	--	MC, SG
							8-101B-HSA-S8	22.5-24	--	MC
							8-101B-HSA-S9	27.5-29	--	GS, MC
							8-101B-HSA-S10	32.5-34	--	MC, SG, AL
							8-101B-HSA-S11	37.5-39	--	MC
							8-101B-HSA-S14	52.5-54	--	GS, MC
							8-101BC-C2	Composite: S-8, S-9, S-10[4]	DMMP Suite	GS, MC, SG, AL
8-102A-HSA	Top of Berm	Hollowstem Auger	63.5 ft	1240675.4	643048.2	22.9 ft	8-102A-HSA-S-1	2.5-4	--	GS, MC
							8-102A-HSA-S-2	5-6.5	--	MC
							8-102A-HSA-S-4	7.5-9	--	MC, SG, AL
							8-102A-HSA-S-6	15-16.5	--	GS, MC
							8-102A-HSA-S-7	20-21.5	--	MC
							8-102A-HSA-S-8	25-26.5	--	MC
							8-102A-HSA-S-9	30-31.5	--	GS, MC
							8-102A-HSA-S-10	35-36.5	--	MC, SG, AL
							8-102A-HSA-S-11	40-41.5	--	GS, MC
							8-102A-HSA-S-12	45-46.5	--	MC, SG, AL
							8-102A-HSA-S-13	50-51.5	--	MC
							8-102A-HSA-S-14	55-56.5	--	MC, SG, AL
							8-102A-HSA-S-15	60-63.5	--	MC, SG
8-102C-HSA	Over-Water	Hollowstem Auger	46.5 ft	1240619.6	642995.7	1.1 ft	8-102C-HSA-S3	5-6.5	--	GS, MC
							8-102C-HSA-S5	10-11.5	--	MC, SG
							8-102C-HSA-S7	15-16.5	--	GS, MC
							8-102C-HSA-S8	20-21.5	--	MC, SG, AL
							8-102C-HSA-S9	25-26.5	--	MC, AL
							8-102C-HSA-S10	30-31.5	--	GS, MC
							8-102C-HSA-S12	45-46.5	--	GS, MC
8-103A-HSA	Top of Berm	Hollowstem Auger	71.5 ft	1240670.1	642755.4	22.9 ft	8-103A-HSA-S-2	2.4-4	--	MC
							8-103A-HSA-S-3	5-6.5	--	GS, MC
							8-103A-HSA-S-5	10-11.5	--	MC, SG, AL
							8-103A-HSA-S-6	15-16.5	--	GS, MC
							8-103A-HSA-S-7	20-21.5	--	MC
							8-103A-HSA-S-8	25-26.5	--	GS, MC
							8-103A-HSA-S-9	30-31.5	--	MC
							8-103A-HSA-S-10	35-36.5	--	MC, SG, AL
							8-103A-HSA-S-11	40-41.5	--	GS, MC
							8-103A-HSA-S-12	45-46.5	--	MC, SG, AL
							8-103A-HSA-S-13	50-51.5	--	MC
							8-103A-HSA-S-14	55-56.5	--	MC, SG, AL
							8-103A-HSA-S-16	62-63.5	--	MC
							8-103A-HSA-S-17	65-66.5	--	MC, SG, AL
							8-103A-HSA-S-18	70-71.5	--	GS, MC
8-104A-HSA	Top of Berm	Hollowstem Auger	51.5 ft	1240281.8	642372.4	22.6 ft	8-104A-HSA-S1	0-1.5	--	MC
							8-104A-HSA-S2	2.5-4	--	MC
							8-104A-HSA-S3	5-6.5	--	GS, MC
							8-104A-HSA-S5	10-11.5	--	MC
							8-104A-HSA-S6	15-16.5	--	GS, MC
							8-104A-HSA-S7	20-21.5	--	MC
							8-104A-HSA-S8	25-26.5	--	MC
							8-104A-HSA-S9	30-31.5	--	GS, MC
							8-104A-HSA-S10	35-36.5	--	MC, SG, AL
							8-104A-HSA-S11	40-41.5	--	GS, MC
							8-104A-HSA-S12	45-46.5	--	MC, SG, AL
							8-104A-HSA-S13	50-51.5	--	MC
8-104B-HSA	Over-Water	Hollowstem Auger	59.5 ft	1240267.0	642394.5	11.1 ft	8-104B-HSA-0-1	0-1	--	MC
							8-104B-HSA-S5	10-11.5	--	MC
							8-104B-HSA-S6	16-17.5	--	GS, MC
							8-104B-HSA-S9	31-32.5	--	GS, MC
							8-104B-HSA-S10	36-37.5	--	MC, SG, AL
							8-104B-HSA-S11	41-42.5	--	MC
							8-104B-HSA-S12	46-47.5	--	GS, MC
							8-104B-HSA-S13	51-52.5	--	MC
							8-104B-HSA-S15	58-59.5	--	GS, MC
							8-104BC-C2	Composite: S-7, S-8[4]	DMMP Suite	GS, MC, SG, AL

Table 3a
Summary of ASB Geotechnical Sampling

Station ID	Boring Location	Sample Method	Bottom of Boring	Coordinates[1]		Mudline/ Surface Elevation (MLLW)[2]	Sample ID	Sample Depth Interval (feet below surface or mudline)	Chemical Testing	Physical Testing[3]
				Easting	Northing					
8-105A-HSA	Top of Berm	Hollowstem Auger	78.5 ft	1239933.5	642035.1	22.4 ft	8-105A-HSA-S1	0-1.5	--	MC
							8-105A-HSA-S2	2.5-4	--	MC
							8-105A-HSA-S3	5-6.5	--	GS, MC
							8-105A-HSA-S5	10-11.5	--	MC
							8-105A-HSA-S7	20-21.5	--	MC
							8-105A-HSA-S8	25-26.5	--	MC
							8-105A-HSA-S9	30-31.5	--	GS, MC
							8-105A-HSA-S10	35-36.5	--	MC, SG, AL
							8-105A-HSA-S11	40-41.5	--	GS, MC
							8-105A-HSA-S12	45-46.5	--	MC, SG, AL
							8-105A-HSA-S13	50-51.5	--	MC
							8-105A-HSA-S14	55-56.5	--	MC, SG, AL
							8-105A-HSA-S15	60-61.5	--	GS, MC
							8-105A-HSA-S16	65-66.5	--	MC
							8-105A-HSA-S17	70-71.5	--	MC, SG, AL
							8-105A-HSA-S18	75-78.5	--	GS, MC, Cu Triax, Consolidatoin[5]
8-105C-HSA	Over-Water	Hollowstem Auger	52.5 ft	1239880.1	642084.2	1.8 ft	8-105C-HSA-0-1	0-1	--	MC
							8-105C-HSA-S3	5-6.5	--	GS, MC
							8-105C-HSA-S5	9-10.5	--	MC, SG, AL
							8-105C-HSA-S6	11.5-13	--	MC
							8-105C-HSA-S7	14-15.5	--	GS, MC
							8-105C-HSA-S8	19-20.5	--	MC, SG, AL
							8-105C-HSA-S9	24-25.5	--	MC
							8-105C-HSA-S10	29-30.5	--	GS, MC
							8-105C-HSA-S11	34-35.5	--	MC
							8-105C-HSA-S12	39-40.5	--	GS, MC
							8-105C-HSA-S13	44-45.5	--	MC
							8-105C-HSA-S14	49-51	--	CuTriax, Consolidation[5]
							8-105C-HSA-S15	51-52.5	--	GS, MC
8-106A-HSA	Top of Berm	Hollowstem Auger	78.5 ft	1239635.7	642125.1	23.3 ft	8-106A-HSA-S1	0-1.5	--	MC
							8-106A-HSA-S2	2.5-4	--	MC
							8-106A-HSA-S3	5-6.5	--	GS, MC
							8-106A-HSA-S5	10-11.5	--	MC
							8-106A-HSA-S6	15-16.5	--	GS, MC
							8-106A-HSA-S8	25-26.5	--	MC
							8-106A-HSA-S9	30-31.5	--	GS, MC
							8-106A-HSA-S10	35-36.5	--	MC, SG, AL
							8-106A-HSA-S11	40-41.5	--	GS, MC
							8-106A-HSA-S12	45-46.5	--	MC, SG, AL
							8-106A-HSA-S13	50-51.5	--	MC
							8-106A-HSA-14	55-56.5	--	MC, SG, AL
							8-106A-HSA-15	60-61.5	--	GS, MC
							8-106A-HSA-16	65-66.5	--	MC
							8-106A-HSA-17	70-71.5	--	MC, SG, AL
							8-106A-HSA-18	75-78.5	--	GS, MC
8-107A-HSA	Top of Berm	Hollowstem Auger	86.5 ft	1239505.6	642413.3	22.4 ft	8-107A-HSA-S1	0-1.5	--	MC
							8-107A-HSA-S2	2.5-4	--	MC
							8-107A-HSA-S3	5-6.5	--	GS, MC
							8-107A-HSA-S4	7.5-9	--	MC, SG, AL
							8-107A-HSA-S5	10-11.5	--	MC
							8-107A-HSA-S6	15-16.5	--	GS, MC
							8-107A-HSA-S7	20-21.5	--	MC
							8-107A-HSA-S8	25-26.5	--	GS, MC
							8-107A-HSA-S10	35-36.5	--	MC, SG, AL
							8-107A-HSA-S11	40-41.5	--	GS, MC
							8-107A-HSA-S12	45-46.5	--	MC, SG, AL
							8-107A-HSA-S13	50-51.5	--	MC
							8-107A-HSA-S14	55-56.5	--	MC, SG, AL
							8-107A-HSA-S15	60-61.5	--	GS, MC
							8-107A-HSA-S16	65-66.5	--	MC
							8-107A-HSA-S17	70-71.5	--	MC, SG, AL
							8-107A-HSA-S18	75-76.5	--	GS, MC
							8-107A-HSA-S19	80-81.5	--	MC
							8-107A-HSA-S20	83-86.5	--	GS, MC, AL
8-107B-HSA	Over-Water	Hollowstem Auger	71 ft	1239549.8	642428.3	9.5 ft	8-107B-HSA-0-1	0-1	--	MC, AL
							8-107B-HSA-S-6	12.5-14	--	GS, MC
							8-107B-HSA-S-8	22.5-24	--	MC, SG, AL
							8-107B-HSA-S-9	27.5-29	--	GS, MC
							8-107B-HSA-S-10	32.5-34	--	MC, SG, AL
							8-107B-HSA-S-11	37.5-39	--	MC
							8-107B-HSA-S-12	42.5-44	--	GS, MC
							8-107B-HSA-S-13	47.5-49	--	MC, SG, AL
							8-107B-HSA-S-14	52.5-54	--	GS, MC
							8-107B-HSA-S-15	57.5-59	--	MC, SG, AL
							8-107B-HSA-S-17	69.5-71	--	MC, SG, AL

Table 3a
Summary of ASB Geotechnical Sampling

Station ID	Boring Location	Sample Method	Bottom of Boring	Coordinates[1]		Mudline/ Surface Elevation (MLLW)[2]	Sample ID	Sample Depth Interval (feet below surface or mudline)	Chemical Testing	Physical Testing[3]
				Easting	Northing					
8-108A-HSA	Top of Berm	Hollowstem Auger	81.5 ft	1239351.7	642756.8	22.6 ft	8-108A-HSA-S1	0-1.5	--	MC
							8-108A-HSA-S2	2.5-4	--	MC
							8-108A-HSA-S3	5-6.5	--	GS, MC
							8-108A-HSA-S4	7.5-9	--	MC, SG, AL
							8-108A-HSA-S5	10-11.5	--	MC
							8-108A-HSA-S6	15-16.5	--	GS, MC
							8-108A-HSA-S7	20-21.5	--	MC
							8-108A-HSA-S8	25-26.5	--	MC
							8-108A-HSA-S9	30-31.5	--	GS, MC
							8-108A-HSA-S10	35-36.5	--	MC, SG, AL
							8-108A-HSA-S11	40-41.5	--	GS, MC
							8-108A-HSA-S12	45-46.5	--	MC, SG, AL
							8-108A-HSA-S13	50-51.5	--	MC
							8-108A-HSA-S14	55-56.5	--	MC, SG, AL
							8-108A-HSA-S15	60-61.5	--	GS, MC
							8-108A-HSA-S16	65-66.5	--	MC
							8-108A-HSA-S17	70-71.5	--	MC, SG, AL
							8-108A-HSA-S18	75-78.5	--	GS, MC
							8-108A-HSA-S19	80-81.5	--	MC
8-108C-HSA	Over-Water	Hollowstem Auger	50 ft	1239413.6	642775.1	-0.6 ft	8-108C-HSA-0-1	0-1	--	MC
							8-108C-HSA-S3	5-7.5	--	GS, MC
							8-108C-HSA-S5	10-11.5	--	MC, SG
							8-108C-HSA-S7	16.5-18	--	GS, MC
							8-108C-HSA-S8	21.5-23	--	MC, SG, AL
							8-108C-HSA-S9	26.5-28	--	MC
							8-108C-HSA-S10	31.5-33	--	GS, MC
							8-108C-HSA-S11	36.5-38	--	MC, SG, AL
							8-108C-HSA-S12	41.5-43	--	GS, MC
							8-108C-HSA-S14	48.5-50	--	MC, SG, AL
8-109A-HSA	Top of Berm	Hollowstem Auger	73.5 ft	1239405.0	643001.9	22.5 ft	8-109A-HSA-S1	0-1.5	--	MC
							8-109A-HSA-S2	2.5-4	--	GS, MC
							8-109A-HSA-S3	5-6.5	--	MC
							8-109A-HSA-S6	15-17.5	--	GS, MC
							8-109A-HSA-S7	20-21.5	--	MC, SG, AL
							8-109A-HSA-S8	25-26.5	--	MC
							8-109A-HSA-S9	30-31.5	--	GS, MC
							8-109A-HSA-S10	35-36.5	--	MC, SG, AL
							8-109A-HSA-S11	40-41.5	--	GS, MC
							8-109A-HSA-S12	45-46.5	--	MC, SG, AL
							8-109A-HSA-S13	50-51.5	--	MC
							8-109A-HSA-S14	55-56.5	--	MC, SG, AL
							8-109A-HSA-S15	60-61.5	--	GS, MC
							8-109A-HSA-S16	65-66.5	--	GS, MC
							8-109A-HSA-S17	70-73.5	--	MC, SG, AL
8-110A-HSA	Top of Berm	Hollowstem Auger	63.5 ft	1239687.7	643279.6	22.8 ft	8-110A-HSA-S1	0-1.5	--	MC
							8-110A-HSA-S2	2.5-4	--	MC
							8-110A-HSA-S5	10-11.5	--	MC
							8-110A-HSA-S6	15-16.5	--	GS, MC
							8-110A-HSA-S7	20-21.5	--	MC
							8-110A-HSA-S8	25-26.5	--	MC
							8-110A-HSA-S9	30-31.5	--	GS, MC
							8-110A-HSA-S10	35-36.5	--	MC, SG, AL
							8-110A-HSA-S11	40-41.5	--	GS, MC
							8-110A-HSA-S12	45-46.5	--	MC, SG, AL
							8-110A-HSA-S13	50-51.5	--	GS, MC
							8-110A-HSA-S14	55-56.5	--	MC, SG, AL
							8-110A-HSA-S15	60-63.5	--	MC, AL, CuTriax, Consolidation[5]
8-110B-HSA	Over-Water	Hollowstem Auger	53 ft	1239729.4	643232.6	7.6 ft	8-110B-HSA-S6	11.5-13	--	GS, MC
							8-110B-HSA-S8	21.5-25	--	MC, SG, AL
							8-110B-HSA-S9	26.5-28	--	GS, MC
							8-110B-HSA-S10	31.5-33	--	MC, SG, AL
							8-110B-HSA-S11	36.5-38	--	MC, SG, AL
							8-110B-HSA-S12	41.5-43	--	GS, MC
							8-110B-HSA-S13	46.5-48.5	--	MC, SG, AL, CuTriax, Consolidation[5]
							8-110B-HSA-S14	51.5-53	--	GS, MC
							8-110BC-C2	Composite: S-8, S-9, S-10[4]	DMMP Suite	GS, MC, SG, AL
8-111A-HSA	Top of Berm	Hollowstem Auger	66.5 ft	1239936.0	643520.7	22.8 ft	8-111A-HSA-S1	0-1.5	--	MC
							8-111A-HSA-S2	2.5-4	--	MC
							8-111A-HSA-S3	5-6.5	--	GS, MC
							8-111A-HSA-S5	10-11.5	--	MC, SG, AL
							8-111A-HSA-S6	15-16.5	--	GS, MC
							8-111A-HSA-S7	20-21.5	--	MC
							8-111A-HSA-S8	25-26.5	--	MC
							8-111A-HSA-S9	30-30.5	--	GS, MC
							8-111A-HSA-S10	35-36.5	--	MC, SG, AL
							8-111A-HSA-S11	40-41.5	--	GS, MC
							8-111A-HSA-S12	45-46.5	--	MC, SG, AL
							8-111A-HSA-S13	50-51.5	--	MC
							8-111A-HSA-S14	55-56.5	--	MC, SG, AL
							8-111A-HSA-S15	60-63.5	--	GS, MC
							8-111A-HSA-S16	65-66.5	--	MC, SG, AL

Table 3a
Summary of ASB Geotechnical Sampling

Station ID	Boring Location	Sample Method	Bottom of Boring	Coordinates[1]		Mudline/ Surface Elevation (MLLW)[2]	Sample ID	Sample Depth Interval (feet below surface or mudline)	Chemical Testing	Physical Testing[3]
				Easting	Northing					
8-111C-HSA	Over-Water	Hollowstem Auger	41.5 ft	1239987.3	643464.7	3.9 ft	8-111C-HSA-S3	4-5.5	--	GS, MC
							8-111C-HSA-S5	10-11.5	--	MC, SG, AL
							8-111C-HSA-S6	12.5-14	--	MC
							8-111C-HSA-S7	15-16.5	--	GS, MC
							8-111C-HSA-S8	25-26.5	--	MC, SG, AL
							8-111C-HSA-S9	30-31.5	--	GS, MC
							8-111C-HSA-S11	40-41.5	--	GS, MC, AL
8-112A-HSA	Top of Berm	Hollowstem Auger	76.5 ft	1240153.6	643581.6	23.3 ft	8-112A-HSA-S1	0-1.5	--	MC
							8-112A-HSA-S2	2.5-4	--	MC, SG, AL
							8-112A-HSA-S3	5-6.5	--	GS, MC
							8-112A-HSA-S5	10-11.5	--	MC
							8-112A-HSA-S6	15-16.5	--	GS, MC
							8-112A-HSA-S7	20-21.5	--	MC
							8-112A-HSA-S8	25-26.5	--	MC
							8-112A-HSA-S9	30-31.5	--	GS, MC
							8-112A-HSA-S10	35-36.5	--	MC, SG, AL
							8-112A-HSA-S11	40-41.5	--	GS, MC
							8-112A-HSA-S12	45-46.5	--	MC, SG, AL
							8-112A-HSA-S13	50-51.5	--	MC
							8-112A-HSA-S14	55-56.5	--	MC, SG, AL
							8-112A-HSA-S15	60-63.5	--	GS, MC
							8-112A-HSA-S16	65-66.5	--	MC
							8-112A-HSA-S17	70-71.5	--	MC, SG, AL
							8-112A-HSA-S18	75-76.5	--	GS, MC

Notes:

1. NAD 83/98 (Washington State Plane NAD 83 Lambert Conformal North Zone Grid, Per the 1998 Adjustment)
2. Mudlines were calculated using field depth measurements and tide data from Wtides (Rosario Strait, Bellingham, Washington, from merged harmonic analysis).
3. Physical testing: GS = Grain Size, MC = Moisture Content, SG = Specific gravity, AL = Atterberg Limits
4. Composites beneath ASB berm were collected from "C" vibracore stations and "B" hollow-stem auger stations when sufficient sample quantity was available.
5. Cu Triax and consolidation testing results were not available at the time of this Data Report and will be reported in the Engineering Design Repot.

-- Not Analyzed/Applicable

Table 3b
Summary of Whatcom Waterway Geotechnical Sampling

Station ID		Boring Location	Sample Method	Bottom of Boring (feet)	Actual Coordinates[1]		Mudline/ Surface Elevation (MLLW)[2]	Sample ID	Sample Depth Interval (feet below surface or mudline)	Tier 1 Chemical Testing[3]	Physical Testing[4,5]	Tier 2 Chemical Testing
					Easting	Northing						
Inner Waterway												
2A	2A-101A-HSA	Upland (Yard Area)	Hollowstem Auger	50.5 ft	1241162.8	642993.4	13.4 ft	2A-101A-HSA-S2	2.5-4	--	MC	--
								2A-101A-HSA-S3	4-5.5	--	GS, MC	--
								2A-101A-HSA-S4	7.5-9	--	MC, SG, AL	--
								2A-101A-HSA-S5	9-10.5	--	MC	--
								2A-101A-HSA-S6	14-15.5	--	GS, MC	--
								2A-101A-HSA-S7	19-20.5	--	MC	--
								2A-101A-HSA-S8	24-25.5	--	MC, AL	--
								2A-101A-HSA-S9	29-30.5	--	GS, MC	--
								2A-101A-HSA-S10	34-35.5	--	MC	--
								2A-101A-HSA-S11	39-40.5	--	MC, AL	--
								2A-101A-HSA-S13	49-50.5	--	MC	--
	2A-101C-HSA	In-Water	Hollowstem Auger	36.5 ft	1241236.0	642924.5	-19.4 ft	2A-101C-HSA-S2	3-4.5	--	GS, MC	--
								2A-101C-HSA-S4	8-9.5	--	MC, SG, AL	--
								2A-101C-HSA-S5	10.5-12	--	GS, MC	--
								2A-101C-HSA-S6	13-14.5	--	MC	--
								2A-101C-HSA-S7	18-19.5	--	MC, SG, AL	--
								2A-101C-HSA-S9	28-29.5	--	MC	--
								2A-101C-HSA-S11	35-36.5	--	MC, SG, AL	--
	2A-102A-HSA	Upland (Yard Area)	Hollowstem Auger	70.5 ft	1241468.8	642591.9	15.9 ft	2A-102A-HSA-S2	2.5-3	--	MC	--
								2A-102A-HSA-S3	5-5.5	--	GS, MC	--
								2A-102A-HSA-S4	7.5-9	--	MC, SG, AL	--
								2A-102A-HSA-S5	9-10.5	--	MC	--
								2A-102A-HSA-S6	14-15.5	--	GS, MC	--
								2A-102A-HSA-S7	19-20.5	--	MC	--
								2A-102A-HSA-S8	24-25.5	--	MC, AL	--
								2A-102A-HSA-S9	29-30.5	--	GS, MC	--
								2A-102A-HSA-S10	34-35.5	--	MC	--
								2A-102A-HSA-S11	39-40.5	--	MC, AL	--
								2A-102A-HSA-S12	44-45.5	--	GS, MC	--
								2A-102A-HSA-S13	49-50.5	--	MC	--
								2A-102A-HSA-S14	54-55.5	--	MC, SG, AL	--
								2A-102A-HSA-S15	59-60.5	--	GS, MC	--
								2A-102A-HSA-S17	69-70.5	--	MC, AL	--
	2A-102C-HSA	In-Water	Hollowstem Auger	25.5 ft	1241410.5	642714.4	-21.2 ft	2A-102C-HSA-S2	10-11.5	--	GS, MC	--
								2A-102C-HSA-S3	12.5-14	--	MC, SG, AL	--
								2A-102C-HSA-S4	15-16.5	--	MC	--
								2A-102C-HSA-S5	17.5-19	--	GS, MC	--
								2A-102C-HSA-S6	21-22.5	--	MC	--
								2A-102C-HSA-S7	26-27.5	--	MC, SG, AL	--
	2A-103A-HSA	Over-Water (Pier)	Hollowstem Auger	75.5 ft	1241234.3	642405.0	15.9 ft (on-pier)	2A-103A-HSA-S2	2.5-4	--	MC	--
								2A-103A-HSA-S3	5-6.5	--	GS, MC	--
								2A-103A-HSA-S4	8-9.5	--	MC, SG	--
								2A-103A-HSA-S5	10-11.5	--	MC	--
								2A-103A-HSA-S6	13-14.5	--	GS, MC	--
								2A-103A-HSA-S7	19-20.5	--	MC	--
								2A-103A-HSA-S8	24-25.5	--	MC, AL	--
								2A-103A-HSA-S9	29-30.5	--	GS, MC	--
								2A-103A-HSA-S10	34-35.5	--	MC	--
								2A-103A-HSA-S11	39-40.5	--	MC, AL	--
								2A-103A-HSA-S12	44-45.5	--	GS, MC	--
								2A-103A-HSA-S13	49-50.5	--	MC	--
								2A-103A-HSA-S14	54-55.5	--	MC, SG, AL	--
								2A-103A-HSA-S15	59-60.5	--	GS, MC	--
								2A-103A-HSA-S16	64-65.5	--	MC	--
								2A-103A-HSA-S18	74-75.5	--	GS, MC	--
	2A-103C-HSA	In-Water	Hollowstem Auger	31.5 ft	1241002.9	642324.7	-24.6 ft	2A-103C-HSA-S5	14.5-16	--	MC, SG, AL	--
								2A-103C-HSA-S6	19.5-21	--	GS, MC	--
								2A-103C-HSA-S7	24.5-26	--	MC, SG, AL	--
2C	2C-101C-HSA	In-Water	Hollowstem Auger	33.5 ft	1240097.4	641629.6	-32.3 ft	2C-101C-HSA-S2	10-11.5	--	GS, MC	--
								2C-101C-HSA-S3	12.5-14	--	MC	--
								2C-101C-HSA-S4	15-16.5	--	MC, SG, AL	--
								2C-101C-HSA-S5	17.5-19	--	GS, MC	--
								2C-101C-HSA-S6	22.5-24	--	MC	--
								2C-101C-HSA-S7	27.5-29	--	MC, SG, AL	--

Table 3b
Summary of Whatcom Waterway Geotechnical Sampling

Station ID		Boring Location	Sample Method	Bottom of Boring (feet)	Actual Coordinates[1]		Mudline/ Surface Elevation (MLLW)[2]	Sample ID	Sample Depth Interval (feet below surface or mudline)	Tier 1 Chemical Testing[3]	Physical Testing[4,5]	Tier 2 Chemical Testing
					Easting	Northing						
3B	3B-101A-HSA	Upland (Yard Area)	Hollowstem Auger	68.0 ft	1241354.1	643164.5	12.2 ft	3B-101A-HSA-S2	2.5-4	--	MC	--
								3B-101A-HSA-S3	4-5.5	--	GS, MC	--
								3B-101A-HSA-S4	7.5-9	--	MC, SG, AL	--
								3B-101A-HSA-S5	9-10.5	--	MC	--
								3B-101A-HSA-S6	14-15.5	--	GS, MC	--
								3B-101A-HSA-S7	19-20.5	--	MC	--
								3B-101A-HSA-S8	24-25.5	--	MC, AL	--
								3B-101A-HSA-S9	29-30.5	--	GS, MC	--
								3B-101A-HSA-S10	34-35.5	--	MC	--
								3B-101A-HSA-S11	39-40.5	--	MC, AL	--
								3B-101A-HSA-S12	44-45.5	--	GS, MC	--
								3B-101A-HSA-S14	54-55.5	--	MC, SG, AL	--
								3B-101A-HSA-S15	59-60.5	--	GS, MC	--
								3B-101A-HSA-S16	64-68	--	GS, MC	--
	3B-101C-HSA	In-Water	Hollowstem Auger	27.0 ft	1241411.7	643095.4	-15.2 ft	3B-101C-HSA-S2	2.5-4	--	MC	--
								3B-101C-HSA-S3	5-6.5	--	MC, SG, AL	--
								3B-101C-HSA-S4	7.5-9	--	GS, MC	--
								3B-101C-HSA-S5	10-11.5	--	GS, MC	--
								3B-101C-HSA-S6	15-16.5	--	MC	--
								3B-101C-HSA-S7	20-21.5	--	MC, SG, AL	--
	3B-102A-HSA	Upland (Yard Area)	Hollowstem Auger	75.5 ft	1241533.8	643348.3	11.9 ft	3B-102A-HSA-S2	2.5-4	--	MC	--
								3B-102A-HSA-S3	4-5.5	--	GS, MC	--
								3B-102A-HSA-S4	7.5-9	--	MC, SG, AL	--
								3B-102A-HSA-S5	9-10.5	--	MC	--
								3B-102A-HSA-S6	14-15.5	--	GS, MC	--
								3B-102A-HSA-S7	19-20.5	--	MC	--
								3B-102A-HSA-S8	24-25.5	--	MC, AL	--
								3B-102A-HSA-S9	29-30.5	--	GS, MC	--
								3B-102A-HSA-S10	34-35.5	--	MC	--
								3B-102A-HSA-S11	39-40.5	--	MC, AL	--
								3B-102A-HSA-S12	44-45.5	--	GS, MC	--
								3B-102A-HSA-S13	49-50.5	--	MC	--
								3B-102A-HSA-S14	54-55.5	--	MC, SG, AL	--
								3B-102A-HSA-S15	59-60.5	--	GS, MC	--
								3B-102A-HSA-S16	64-65.5	--	MC	--
								3B-102A-HSA-S17	69-71		CuTriax, Consolidation[6]	--
								3B-102A-HSA-S18	74-75.5	--	MC, AL	--
	3B-102C-HSA	In-Water	Hollowstem Auger	34.5 ft	1241641.2	643237.2	-12.9 ft	3B-102C-HSA-S2	10-11.5	--	GS, MC	--
								3B-102C-HSA-S3	12.5-14	--	MC	--
								3B-102C-HSA-S4	15-16.5	--	MC, SG, AL	--
								3B-102C-HSA-S5	17.5-19	--	GS, MC	--
								3B-102C-HSA-S6	22.5-24	--	MC	--
								3B-102C-HSA-S7	27.5-29	--	MC, SG, AL	--
								3B-102C-HSA-S8	32.5-34.5	--	CuTriax, Consolidation[6]	--
	3B-103A-HSA	Over-Water (Pier)	Hollowstem Auger	39.0 ft	1241907.3	642988.8	12.6 ft (on-pier)	3B-103A-HSA-S2	2.5-3	--	MC	--
								3B-103A-HSA-S3	4-5.5	--	GS, MC	--
								3B-103A-HSA-S4	7.5-9	--	MC, SG, AL	--
								3B-103A-HSA-S5	9-10.5	--	MC	--
								3B-103A-HSA-S6	14-15.5	--	GS, MC	--
								3B-103A-HSA-S7	19-20.5	--	MC	--
								3B-103A-HSA-S8	24-25.5	--	MC, AL	--
								3B-103A-HSA-S9	29-30.5	--	GS, MC	--
								3B-103A-HSA-S10	34-35.5	--	MC	--
	3B-103C-HSA	In-Water	Hollowstem Auger	25.0 ft	1241802.0	643097.1	-12.4 ft	3B-103C-HSA-S2	5-6.5	--	MC, SG, AL	--
								3B-103C-HSA-S3	7.5-9	--	GS, MC	--
								3B-103C-HSA-S4	10-11.5	--	MC	--
								3B-103C-HSA-S5	12.5-14	--	GS, MC	--
								3B-103C-HSA-S6	17.5-19	--	MC	--
								3B-103C-HSA-S7	22.5-24	--	MC, SG, AL	--
	3B-104A-HSA	Upland (Yard Area)	Hollowstem Auger	75.5 ft	1241697.6	642882.5	15.2 ft	3B-104A-HSA-S2	2.5-4	--	MC	--
								3B-104A-HSA-S3	6-7.5	--	GS, MC	--
								3B-104A-HSA-S4	7.5-9	--	MC, SG, AL	--
								3B-104A-HSA-S5	9-10.5	--	MC	--
								3B-104A-HSA-S6	14-15.5	--	GS, MC	--
								3B-104A-HSA-S7	19-20.5	--	MC	--
								3B-104A-HSA-S8	24-25.5	--	MC, AL	--
								3B-104A-HSA-S9	29-30.5	--	GS, MC	--
								3B-104A-HSA-S10	34-35.5	--	MC	--
								3B-104A-HSA-S11	39-40.5	--	MC, AL	--
								3B-104A-HSA-S12	44-45.5	--	GS, MC	--
								3B-104A-HSA-S13	49-50.5	--	MC	--
								3B-104A-HSA-S14	54-55.5	--	MC, SG, AL	--
								3B-104A-HSA-S15	59-60.5	--	GS, MC	--
								3B-104A-HSA-S16	64-65.5	--	MC	--
								3B-104A-HSA-S17	69-71	--	MC, AL, CuTriax, Consolidation[6]	--
								3B-104A-HSA-S18	74-75.5	--	GS, MC	--
	3B-104C-HSA	In-Water	Hollowstem Auger	35.0 ft	1241613.8	642922.5	-16.5 ft	3B-104C-HSA-S2	10.5-12	--	GS, MC	--
								3B-104C-HSA-S3	13-14.5	--	MC	--
								3B-104C-HSA-S4	15.5-17	--	MC, SG, AL	--
								3B-104C-HSA-S5	18-19.5	--	GS, MC	--
								3B-104C-HSA-S6	23-24.5	--	MC	--
								3B-104C-HSA-S8	28-29.5	--	MC, SG, AL, CuTriax, Consolidation[6]	--

Table 3b
Summary of Whatcom Waterway Geotechnical Sampling

Station ID		Boring Location	Sample Method	Bottom of Boring (feet)	Actual Coordinates[1]		Mudline/ Surface Elevation (MLLW)[2]	Sample ID	Sample Depth Interval (feet below surface or mudline)	Tier 1 Chemical Testing[3]	Physical Testing[4,5]	Tier 2 Chemical Testing
					Easting	Northing						
Outer Waterway												
1C	1C-101B-HSA	Over-Water (Wharf)	Diver-Assisted Piston Core	3.0 ft	1239757.3	640958.2	-5.8 ft	1C-101B-HSA-S1A	0-1.4	Hg, TS, TOC	--	SVOCs, D/F
								1C-101B-HSA-S2A	1.4-2.0	Hg, TS, TOC	--	SVOCs, D/F
		Over-Water (Pier)	Mud Rotary	48.8 ft	1239757.3	640958.2	-5.8 ft	1C-101B-HSA-S1	9.3-10.8	Hg, TS, TOC	--	--
								1C-101B-HSA-S2	11.8-13.3	Hg	--	--
								1C-101B-HSA-S3	14.3-15.8	Hg, TS, TOC	GS, MC	--
								1C-101B-HSA-S4	16.8-18.3	Hg, TS, TOC	--	--
								1C-101B-HSA-S5	21.8-23.3	--	MC, SG	--
								1C-101B-HSA-S6	26.8-28.3	--	GS, MC	--
								1C-101B-HSA-S7	31.8-33.3	--	MC	--
								1C-101B-HSA-S8	36.8-38.3	--	MC, SG, AL	--
	1C-101C-HSA	Over-Water (Pier)	Diver-Assisted Piston Core	1.5 ft	1239713.6	641001.7	-23.8 ft	1C-101C-HSA-S1A	0-1.2	Hg, TS, TOC	--	SVOCs, D/F
		Over-Water (Pier)	Mud Rotary	34.5 ft	1239713.6	641001.7	-23.8 ft	1C-101C-HSA-S1	5-6.5	Hg, TS, TOC	--	--
								1C-101C-HSA-S2	7.5-9	Hg, TS, TOC	--	--
								1C-101C-HSA-S3	10-11.5	Hg, TS, TOC	--	--
								1C-101C-HSA-S4	12.5-14	Hg, TS, TOC	--	--
								1C-101C-HSA-S5	17.5-19	--	GS, MC	--
								1C-101C-HSA-S6	22.5-24	--	MC	--
	1C-102A-HSA	Upland (Warehouse)	Hollowstem Auger	75.5 ft	1239862.4	641043.6	15.5 ft	1C-102A-HSA-S2	1.5-3	--	MC	--
								1C-102A-HSA-S3	4.5-6	--	GS, MC	--
								1C-102A-HSA-S4	6.5-8	--	MC, SG	--
								1C-102A-HSA-S5	9-10.5	--	MC	--
								1C-102A-HSA-S6	14-15.5	--	GS, MC	--
								1C-102A-HSA-S7	19-20.5	--	MC	--
								1C-102A-HSA-S8	24-25.5	--	MC, AL	--
								1C-102A-HSA-S9	29-30.5	--	GS, MC	--
								1C-102A-HSA-S10	34-35.5	--	MC	--
								1C-102A-HSA-S11	39-41.5	--	MC, AL	--
								1C-102A-HSA-S12	44-45.5	--	GS, MC	--
								1C-102A-HSA-S13	49-50.5	--	MC	--
								1C-102A-HSA-S14	54-55.5	--	MC, SG, AL	--
								1C-102A-HSA-S15	59-60.5	--	MC	--
								1C-102A-HSA-S16	64-65.5	--	MC, AL	--
								1C-102A-HSA-S17	67-69	--	MC, AL, CuTriax, Consolidation[6]	--
								1C-102A-HSA-S18	69.5-70.5	--	GS, MC	--
								1C-102A-HSA-S19	74-75.5	--	MC	--
	1C-102C-HSA	Over-Water (Pier)	Mud Rotary	36.1 ft	1239821.9	641092.6	-16.9 ft	1C-102C-HSA-S1	0-4.1	Hg, TS, TOC	--	SVOCs, D/F
								1C-102C-HSA-S2	5.1-6.6	Hg, TS, TOC	--	--
								1C-102C-HSA-S3	10.1-11.6	Hg, TS, TOC	--	SVOCs, D/F
								1C-102C-HSA-S4	12.6-14.1	Hg, TS, TOC	--	SVOCs, D/F
								1C-102C-HSA-S5	17.6-19.1	--	MC	--
								1C-102C-HSA-S6	22.6-24.1	--	GS, MC	--
								1C-102C-HSA-S7	27.6-29.1	--	MC	--
								1C-102C-HSA-S8	32.6-34.6	--	CUTriax, Consolidation[6]	--
								1C-102C-HSA-S9	34.6-36.1	--	GS, MC, SG	--
	1C-103A-HSA	Upland (Warehouse)	Hollowstem Auger	75.5 ft	1240073.7	641213.5	16.5 ft	1C-103A-HSA-S2	1.5-3	--	MC	--
								1C-103A-HSA-S3	4-5.5	--	GS, MC	--
								1C-103A-HSA-S4	6.5-8	--	MC, SG	--
								1C-103A-HSA-S5	9-10.5	--	MC	--
								1C-103A-HSA-S6	14-15.5	--	GS, MC	--
								1C-103A-HSA-S7	19-20.5	--	MC	--
								1C-103A-HSA-S8	24-25.5	--	GS, MC	--
								1C-103A-HSA-S9	29-30.5	--	MC, AL	--
								1C-103A-HSA-S10	34-35.5	--	MC	--
								1C-103A-HSA-S11	39-40.5	--	MC	--
								1C-103A-HSA-S12	44-45.5	--	GS, MC	--
								1C-103A-HSA-S13	49-50.5	--	MC	--
								1C-103A-HSA-S14	54-55.5	--	MC, SG, AL	--
								1C-103A-HSA-S15	59-60.5	--	GS, MC	--
								1C-103A-HSA-S16	64-65.5	--	MC, AL	--
								1C-103A-HSA-S18	74-75.5	--	MC, AL	--
	1C-103B-HSA	Over-Water (Pier)	Mud Rotary	54.0 ft	1240010.9	641251.6	-7.1 ft	1C-103B-HSA-S1	0-3.5	Hg	--	D/F
								1C-103B-HSA-S2	4.5-6	Hg, TS, TOC	--	--
								1C-103B-HSA-S3	7-8.5	Hg, TS, TOC	--	--
								1C-103B-HSA-S4	9.5-11	Hg, TS, TOC	MC, SG, AL	--
								1C-103B-HSA-S5	14.5-16	--	GS, MC	--
								1C-103B-HSA-S6	19.5-21	--	MC	--
								1C-103B-HSA-S7	24.5-26	--	MC	--
								1C-103B-HSA-S8	29.5-31	--	MC, AL	--
								1C-103B-HSA-S10	39.5-41	--	GS, MC	--
								1C-103B-HSA-S11	44.5-46	--	MC, SG, AL	--
								1C-103B-HSA-S12	49.5-51.5	--	CuTriax, Consolidation[6]	--
								1C-103B-HSA-S13	51.5-53	--	MC	--

Table 3b
Summary of Whatcom Waterway Geotechnical Sampling

Station ID		Boring Location	Sample Method	Bottom of Boring (feet)	Actual Coordinates[1]		Mudline/ Surface Elevation (MLLW)[2]	Sample ID	Sample Depth Interval (feet below surface or mudline)	Tier 1 Chemical Testing[3]	Physical Testing[4,5]	Tier 2 Chemical Testing
					Easting	Northing						
1C	1C-103C-HSA	Over-Water (Pier)	Mud Rotary	36.5 ft	1240013.5	641273.3	-22.8 ft	1C-103C-HSA-S1	0-1.5	Hg	--	D/F
								1C-103C-HSA-S2	2.5-4	Hg, TS, TOC	--	--
								1C-103C-HSA-S3	5-6.5	Hg, TS, TOC	--	--
								1C-103C-HSA-S4	7.5-9	Hg, TS, TOC	--	--
								1C-103C-HSA-S5	10-11.5	--	MC	--
								1C-103C-HSA-S7	20-21.5	--	MC, SG	--
								1C-103C-HSA-S8	25-26.5	--	MC, AL	--
								1C-103C-HSA-S9	30-31.5	--	GS, MC	--
								1C-103C-HSA-S10	37.5-39	--	MC, AL	--
	1C-104A-HSA	Upland (Warehouse)	Hollowstem Auger	81.0 ft	1240188.9	641336.0	16.1 ft	1C-104A-HSA-S2	1.5-3	--	MC	--
								1C-104A-HSA-S3	4-5.5	--	GS, MC	--
								1C-104A-HSA-S4	6.5-8	--	MC, SG	--
								1C-104A-HSA-S5	11.5-13	--	MC	--
								1C-104A-HSA-S6	14-15.5	--	GS, MC	--
								1C-104A-HSA-S7	19-20.5	--	MC	--
								1C-104A-HSA-S8	24-25.5	--	MC, AL	--
								1C-104A-HSA-S9	29-30.5	--	GS, MC	--
								1C-104A-HSA-S10	34-35.5	--	MC	--
								1C-104A-HSA-S11	39-40.5	--	MC, AL	--
								1C-104A-HSA-S12	44-45.5	--	GS, MC	--
								1C-104A-HSA-S13	49-50.5	--	MC	--
								1C-104A-HSA-S14	54-55.5	--	MC, SG, AL	--
								1C-104A-HSA-S15	59-60.5	--	MC	--
								1C-104A-HSA-S16	64-65.5	--	MC, AL	--
								1C-104A-HSA-S17	69-70.5	--	GS, MC	--
								1C-104A-HSA-S18	79-81	--	GS, MC, Cu Triax, Consolidation[6]	--
	1C-104B-HSA	Over-Water (Pier)	Hollowstem Auger	49.1 ft	1240143.2	641377.6	-6.9 ft	1C-104B-HSA-S1	0-3.6	Hg, TS, TOC	--	SVOCs, D/F
								1C-104B-HSA-S2	4.6-6.1	Hg, TS, TOC	--	SVOCs, D/F
								1C-104B-HSA-S4	12.1-13.6	Hg, TS, TOC	--	SVOCs, D/F
								1C-104B-HSA-S5	17.1-18.6	--	MC	--
								1C-104B-HSA-S6	22.1-23.6	--	GS, MC	--
								1C-104B-HSA-S7	27.1-28.6	--	MC, SG	--
								1C-104B-HSA-S8	32.1-33.6	--	MC, AL	--
								1C-104B-HSA-S9	37.1-38.6	--	GS, MC	--
								1C-104B-HSA-S10	42.1-43.6	--	MC, SG	--
	1C-104C-HSA	Over-Water (Wharf)	Hollowstem Auger	32.0 ft	1240124.1	641394.9	-20.5 ft	1C-104C-HSA-S1	0-5	Hg, TS, TOC	--	SVOCs, D/F
								1C-104C-HSA-S2	6-7.5	Hg	--	--
								1C-104C-HSA-S3	8.5-10	Hg, TS, TOC	--	--
								1C-104C-HSA-S4	11-12.5	Hg, TS, TOC	--	--
								1C-104C-HSA-S5	13.5-15	--	GS, MC	--
								1C-104C-HSA-S6	18.5-20	--	MC	--
								1C-104C-HSA-S7	23.5-25	--	MC, SG, AL	--
								1C-104C-HSA-S9	30.5-32	--	GS, MC	--
	1C-105A-HSA	Upland (Warehouse)	Hollowstem Auger	75.5 ft	1240257.6	641264.8	17.3 ft	1C-105A-HSA-S2	1.5-3	--	MC	--
								1C-105A-HSA-S3	4-5.5	--	GS, MC	--
								1C-105A-HSA-S4	6.5-8	--	MC, SG	--
								1C-105A-HSA-S5	9-10.5	--	MC	--
								1C-105A-HSA-S6	14-15.5	--	GS, MC	--
								1C-105A-HSA-S7	19-20.5	--	MC	--
								1C-105A-HSA-S8	24-25.5	--	MC, AL	--
								1C-105A-HSA-S9	29-30.5	--	GS, MC	--
								1C-105A-HSA-S10	34-35.5	--	MC	--
								1C-105A-HSA-S11	39-40.5	--	MC, AL	--
								1C-105A-HSA-S12	44-45.5	--	GS, MC	--
								1C-105A-HSA-S13	49-50.5	--	MC	--
								1C-105A-HSA-S14	54-55.5	--	GS, MC, AL	--
								1C-105A-HSA-S15	59-60.5	--	MC	--
								1C-105A-HSA-S17	69-70.5	--	MC, AL	--
								1C-105A-HSA-S18	74-75.5	--	GS, MC	--
	1C-106C-HSA	In-Water	Hollowstem Auger	35.5 ft	1239958.8	641525.6	-28.2 ft	1C-106C-HSA-S2	10.5-12	--	MC	--
								1C-106C-HSA-S3	13-14.5	--	GS, MC	--
								1C-106C-HSA-S4	15.5-17	--	MC, SG, AL	--
								1C-106C-HSA-S5	18-19.5	--	GS, MC	--
								1C-106C-HSA-S6	23.5-25	--	MC	--
								1C-106C-HSA-S7	28.5-30	--	MC, SG, AL	--
Log Pond												
4	4-101B-HSA	In-Water	Hollowstem Auger	52.5 ft	1240259.2	641414.6	-6.8 ft	4-101B-HSA-S2	3.5-5	--	MC	--
								4-101B-HSA-S3	6-7.5	--	GS, MC	--
								4-101B-HSA-S4	8.5-10	--	MC, SG	--
								4-101B-HSA-S5	11-12.5	--	MC	--
								4-101B-HSA-S6	16-17.5	--	GS, MC	--
								4-101B-HSA-S7	21-22.5	--	MC	--
								4-101B-HSA-S8	26-27.5	--	MC,AL	--
								4-101B-HSA-S9	31-32.5	--	GS, MC	--
								4-101B-HSA-S10	36-37.5	--	MC	--
								4-101B-HSA-S11	41-42.5	--	MC, SG, AL	--
								4-101B-HSA-S12	46-48	--	CuTriax, Consolidation[6]	--
								4-101B-HSA-S13	51-52.5	--	MC	--

Notes:

1. NAD 83/98 (Washington State Plane NAD 83 Lambert Conformal North Zone Grid, Per the 1998 Adjustment)
2. Mudlines were calculated using field depth measurements and tide data from Wtides (Rosario Strait, Bellingham, Washington, from merged harmonic analysis).
3. Chemical testing: Hg = Mercury, TS = Total Solids, TOC = Total Organic Carbon, SVOCs = semi-volatile organic compounds, D/F = Dioxin/Furans
4. Physical testing: GS = Grain Size, MC = Moisture Content, SG = Specific gravity, AL = Atterberg Limits
5. Blowcounts were documented at each depth and are presented on the boring logs in Appendix B.
6. Cu Triax and consolidation testing results were not available at the time of this Data Report and will be reported in the Engineering Design Repot.

-- Not Analyzed/Applicable

Table 4
Summary of Vane Shear Testing

Station ID		Sample ID	Actual Coordinates[1]		Mudline Elevation (MLLW)[2]	Vane Shear Measurement Depth (feet)[3]	Vane Diameter (mm)	Confirmatory Sample Method	Confirmatory Sampling Depth (feet)[4]	Physical Testing[5]
			Easting	Northing						
Log Pond										
4	4-01-VS	4-01-VS	1240231.3	641370.8	-1.3	0-1, 1-2	25.4	trowel	0-0.5	GS, MC, AL
	4-02-VS	4-02-VS	1240315.9	641278.4	-0.2	0-1	25.4	trowel	0-0.5	GS, MC, AL
	4-03-VS	4-03-VS	1240408.1	641207.5	0.6	0-1, 1-2, 2-3	25.4	trowel	0-0.5	GS, MC, AL
	4-04-VS	4-04-VS	1240491.6	641254.9	0.7	0-1, 1-2, 2-3	25.4	trowel	0-0.5	GS, MC, AL
	4-05-VS	4-05-VS	1240582.5	641320.2	0.6	0-1, 1-2, 2-3	25.4	trowel	0-0.5	GS, MC, AL
	4-06-VS	4-06-VS	1240714.8	641439.4	0.0	0-1, 1-2, 2-3	25.4	trowel	0-0.5	GS, MC, AL
	4-07-VS	4-07-VS	1240707.6	641587.0	-1.8	0-1, 1-2, 2-3	25.4	trowel	0-0.5	GS, MC
	4-08-VS	4-08-VS	1240730.3	641708.8	-1.0	0-1, 1-2, 2-2.75	25.4	trowel	0-0.5	GS, MC, AL
	4-09-VS	4-09-VS	1240882.5	641897.9	-1.1	0-1, 1-2, 2-3	25.4	trowel	0-0.5	GS, MC, AL
Unit 5 and 6										
5B	5B-01-VS	5B-01-VS	1239419.0	641889.5	-9.2	0-1, 1-2	25.4	Van Veen grab	0-1	GS, MC, AL
	5B-02-VS	5B-02-VS	1239549.4	642018.2	-7.7	0-1, 1-1.75	20	Van Veen grab	0-1	GS, MC, AL
	5B-03-VS	5B-03-VS	1239518.0	641644.7	-9.1	0-1, 1-1.5	25.4/16	Van Veen grab	0-1	GS, MC, AL
	5B-04-VS	5B-04-VS	1239698.2	641749.4	-7.9	0-1, 1-1.5	20	Van Veen grab	0-1	GS, MC, AL
6C	6C-01-VS	6C-01-VS	1240079.3	640435.6	-8.7	0-1, 1-1.5	16	Van Veen grab	0-1	GS, MC, AL
	6C-02-VS	6C-02-VS	1240090.8	640473.5	-4.2	0-1, 1-1.5	20	Van Veen grab	0-1	GS, MC, AL
	6C-03-VS	6C-03-VS	1240201.5	640269.8	-5.7	0-1, 1-2, 2-3	20	Van Veen grab	0-1	GS, MC, AL
	6C-04-VS	6C-04-VS	1240255.4	640334.0	-3.6	0-1	20	Van Veen grab	0-1	GS, MC, AL

Notes:

Sediment Van Veen surface grabs were co-located with vane shear (VST) locations to facilitate standardization of the field vane shear measurements.

1. NAD 83/98 (Washington State Plane NAD 83 Lambert Conformal North Zone Grid, Per the 1998 Adjustment)
2. Mudlines were calculated using field depth measurements and tide data from Wtides (Rosario Strait, Bellingham, Washington, from merged harmonic analysis).
3. Both peak and residual VST strength were measured at each interval
4. Sample depth refers to surface grabs, not to the VST test depth.
5. Physical testing: GS = Grain Size, MC = Moisture Content, AL = Atterberg Limits

Table 5
Summary of Sediment Porewater Sampling

Station ID		Sample ID	Actual Coordinates[1]		Mudline Elevation (MLLW)[2]	Sample Method[4]	Sampling Depth	Chemical Testing[3]	In-Situ Measurement
			Easting	Northing					
Inner Waterway									
2C	2C-01-PW	2C-01-PW	1240416.6	641910.3	-30.8	Mini-Piezometer	1-foot below Mudline	Dissolved Hg, TSS	pH, temp, cond, DO, ORP
	2C-02-PW	2C-02-PW	1241273.2	642762.4	-25.1	Mini-Piezometer	1-foot below Mudline	Dissolved Hg, TSS	pH, temp, cond, DO, ORP
Unit 5 and 6									
5B	5B-01-PW	5B-01-PW	1239416.4	641914.7	-8.7	Mini-Piezometer	1-foot below Mudline	Dissolved Hg, TSS	pH, temp, cond, DO, ORP
	5B-02-PW	5B-02-PW	1239627.8	641657.3	-8.7	Mini-Piezometer	1-foot below Mudline	Dissolved Hg, TSS	pH, temp, cond, DO, ORP
6B	6B-01-PW	6B-01-PW	1239911.1	640106.0	-21.7	Mini-Piezometer	1-foot below Mudline	Dissolved Hg, TSS	pH, temp, cond, DO, ORP
6C	6C-01-PW	6C-01-PW	1240085.5	640340.9	-15.9	Mini-Piezometer	1-foot below Mudline	Dissolved Hg, TSS	pH, temp, cond, DO, ORP

Notes:

1. NAD 83/98 (Washington State Plane NAD 83 Lambert Conformal North Zone Grid, Per the 1998 Adjustment)
2. Mudlines were calculated using field depth measurements and tide data from Wtides (Rosario Strait, Bellingham, Washington, from merged harmonic analysis).
3. Chemical testing and Insitu measurements: ORP= Oxidation Reduction Potential, Hg = Total Mercury, TSS = Total Suspended Solids, Cond= conductivity, DO= Dissolved Oxygen
4. Porewater was field filtered at the time of sample collection.

Table 6
Summary of Data Quality Objectives and Quality Control

Analysis Type	Data Quality Objectives			Laboratory Quality Control								
	Precision	Accuracy	Completeness	Initial Calibration	Ongoing Calibration	Standard Reference Material[f]	Replicates	Matrix Spikes	LCS/Blank Spike	Matrix Spike Duplicates	Method Blanks	Surrogate Spikes
Grain size	+/- 20% RPD	NA	95%	Each batch [a]	NA	NA	1 per 20 samples	NA	NA	NA	NA	NA
Total solids	+/- 20% RPD	NA	95%	Each batch [b]	NA	NA	1 per 20 samples	NA	NA	NA	NA	NA
Total volatile solids	+/- 20% RPD	NA	95%	Each batch [b]	NA	NA	1 per 20 samples	NA	NA	NA	NA	NA
Total organic carbon	+/- 20% RPD	75-125% R	95%	Daily or each batch	1 per 10 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	NA	1 per 20 samples	NA
Total sulfides	+/- 20% RPD	75-125% R	95%	Each batch [b]	1 per 10 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	NA	1 per 20 samples	NA
Ammonia	+/- 20% RPD	75-125% R	95%	Each batch [b]	1 per 10 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	NA	1 per 20 samples	NA
Metals	+/- 20% RPD	75-125% R	95%	Daily	1 per 10 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	NA	1 per 20 samples	NA
Tributyltin	+/- 35% RPD	50-150% R	95%	As needed [c]	Every 12 hours	1 per 20 samples	NA	1 per 20 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	Every sample
Dioxin/Furans	+/- 35% RPD	50-150% R	95%	As needed [c]	Every 12 hours	1 per 20 samples	NA	NA[d]	Na[d]	NA[d]	1 per 20 samples	Every sample
Semivolatile organics	+/- 35% RPD	50-150% R	95%	As needed [c]	Every 12 hours	1 per 20 samples	NA	1 per 20 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	Every sample
Pesticides/Polychlorinated biphenyls[e]	+/- 35% RPD	50-150% R	95%	As needed [c]	1 per 10 samples	1 per 20 samples	NA	1 per 20 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	Every sample
Volatile organics	+/- 35% RPD	70-150% R	95%	As needed [c]	Every 12 hours	1 per 20 samples	NA	1 per 20 samples	1 per 20 samples	1 per 20 samples	1 per 20 samples	Every sample

Notes:

1 = Data quality objectives are presented for both solid phase and water testing.
RPD = Relative percent difference
R = Recovery
b = Initial calibration verification and calibration blank must be analyzed at the beginning of each batch.
c = Initial calibrations are considered valid until the ongoing continuing calibration no longer meets method specifications. At that point, a new initial calibration is performed.
d = Isotope dilution required per method
e = Pesticides/PCB will have all detects confirmed via second column confirmation. The second column must be of a dissimilar stationary phase from the primary column and meet all method requirements for acceptance.
f = When a standard reference material is available.
NA = Not applicable.
LCS = Laboratory control sample

Table 7
Surface Sediment Chemical and Physical Testing Results

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	1B-01-SS	1C-01-SS	2C-01-SS	2C-02-SS	2C-03-SS	3A-01-SS	3A-02-SS	3A-03-SS	3A-04-SS	3A-05-SS	5B-01-SS	5B-02-SS	5B-03-SS	5B-04-SS
				Sample ID:	1B-01-SS	1C-01-SS	2C-01-SS	2C-02-SS	2C-03-SS	3A-01-SS	3A-02-SS	3A-03-SS	3A-04-SS	3A-05-SS	5B-01-SS	5B-02-SS	5B-03-SS	5B-04-SS
				Sample Date:	8/20/08	8/20/08	8/20/08	8/20/08	8/21/08	8/21/08	8/22/08	8/22/08	8/22/08	8/22/08	8/21/08	8/21/08	8/21/08	8/21/08
				Sample Depth:	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm
Grain Size (pct)																		
Total Gravel	--	--	--		--	--	--	--	0.1	0.4	0.2	0.2	--	0.3	0.1	2.4	1.6	0.6
Total Sand	--	--	--		0.7	1.5	2.4	3.9	6.4	45.9	76.4	78.8	7.1	5.4	51.7	30.3	31.5	9.7
Total Silt	--	--	--		62.8	80	62.8	59.8	60.1	37	10.3	9.5	60.6	56.7	35.3	39	41.2	55.4
Total Clay	--	--	--		36.4	18.5	34.9	36.1	33.3	16.8	13	11.7	32.4	37.6	12.9	28.2	25.9	34.4
Total Fines (Silt + Clay)	--	--	--		99.2	98.5	97.7	95.9	93.4	53.8	23.3	21.2	93	94.3	48.2	67.2	67.1	89.8
Total Grain Size	--	--	--		99.9	100	100.1	99.8	99.9	100.1	99.9	100.2	100.1	100	100	99.9	100.2	100.1
Conventional Parameters																		
Ammonia (mg-N/kg)	--	--	--		--	--	--	--	24.6	41.4	8.82 J	7.56 J	21.3 J	70.6 J	17	16.5	11.3	13.8
Sulfate (mg/kg)	--	--	--		2,510 J	3,840 J	2,590 J	3,020 J	--	--	--	--	--	--	--	--	--	--
Sulfide (mg/kg)	--	--	--		904	4,040 J	2,560 J	2,550	2,120	4,130 J	786	652	2,720	2,590	1,310 J	758 J	783	2,220
Total organic carbon (pct)	--	--	--		2.15	2.37	2.54	3.04	3.72	4.82	1.69	0.816	3.91	4.4	3.37	4.21	2.42	3.31
Total solids (pct)	--	--	--		36.9	26.5	34.8	36.4	41.4	34.1	66.1	69.7	41.6	37.4	41.6	41.8	45.4	37.7
Total Solids (preserved) (pct)	--	--	--		36.6	25.8	34.4	36.5	40.8	32.7	65.5	70.7	41.3	36.2	40.5	42.9	46.5	37.9
Total volatile solids (pct)	--	--	--		6.7	7.8	7.6	8.1	--	--	--	--	--	--	--	--	--	--
Metals (mg/kg)																		
Antimony	--	--	--		--	--	--	--	--	10 UJ	7 UJ	7 UJ	10 UJ	10 UJ	--	--	--	--
Arsenic	57	93	--		--	--	--	--	--	10 U	7 U	7 U	10	10 U	--	--	--	--
Cadmium	5.1	6.7	--		--	--	--	--	--	0.8	0.4	0.4	1.6	1.5	--	--	--	--
Chromium	260	270	--		--	--	--	--	--	47 J	30.6	31.9	70	71	--	--	--	--
Copper	390	390	--		--	--	--	--	--	49.6	23.1	23.2	75.3	76.4	--	--	--	--
Lead	450	530	--		--	--	--	--	--	37	25	22	45	49	--	--	--	--
Mercury	0.41	0.59	--		0.2	0.3	0.3	0.4	0.6	0.2	0.13	0.09	0.4	0.4	0.76	1.1	0.5	0.61
Nickel	--	--	--		--	--	--	--	--	48	28	27	85	86	--	--	--	--
Selenium	--	--	--		--	--	--	--	--	0.5 U	0.3 U	0.3 U	0.6	0.6	--	--	--	--
Silver	6.1	6.1	--		--	--	--	--	--	0.8 U	0.4 U	0.4 U	0.7 U	0.8 U	--	--	--	--
Zinc	410	960	--		--	--	--	--	--	155	118	96	195	214	--	--	--	--
Methyl mercury	--	--	--		0.0027	0.0055	0.0023	0.0030	--	--	--	--	--	--	--	--	--	--
Methyl mercury (pct of total mercury)	--	--	--		1.3	1.8	0.75	0.74	--	--	--	--	--	--	--	--	--	--
Butyltins (µg/kg)																		
Tributyltin (ion)	--	--	--		--	--	--	--	--	3.8 UJ	3.2 U	34	3.8 U	3.8 U	--	--	--	--
Aromatic Hydrocarbons (mg/kg-OC)																		
Total LPAH	370	780	--		--	--	--	--	10.9	8.6	33.3	32.8	11.1	3.7	2.7	3.9	8.0	3.6
Naphthalene	99	170	--		--	--	--	--	1.2	0.6	1.2 U	2.5 U	0.69	0.45 U	0.65	0.76	0.91	0.51 J
Acenaphthylene	66	66	--		--	--	--	--	0.4 J	0.41 U	1.2 U	2.5 U	0.54	0.45 U	0.59 U	0.48 U	0.79 U	0.6 U
Acenaphthene	16	57	--		--	--	--	--	1.1	0.66	1.4	3.3	0.56	0.45 U	0.59 U	0.24 J	0.5 J	0.6 U
Fluorene	23	79	--		--	--	--	--	1.2	0.87	2.3	3.4	0.9	0.45 U	0.33 J	0.43 J	0.95	0.36 J
Phenanthrene	100	480	--		--	--	--	--	5.1	4.4	17.8	20.8	6.1	2.5	1.2	1.7	3.9	1.9
Anthracene	220	1,200	--		--	--	--	--	1.9	2.1	11.8	5.3	2.3	1.2	0.47 J	0.74	1.7	0.79
2-Methylnaphthalene	38	64	--		--	--	--	--	0.97	0.46	1.2 U	2.5 U	0.51	0.45 U	0.42 J	0.38 J	0.62 J	0.36 J
Total HPAH	960	5,300	--		--	--	--	--	47.4	50.4	161	196	79.8	31.5	14.9	17.6	45.4	26.3
Fluoranthene	160	1,200	--		--	--	--	--	8.3	10.4	41.4	44.1	15.3	5.7	2.8	2.9	7.4	6.7
Pyrene	1,000	1,400	--		--	--	--	--	10.5	9.1	26.6	33.1	13	4.6	2.9	3.6	11.2	5.4
Benzo(a)anthracene	110	270	--		--	--	--	--	4.3	4.6	13.0	17.2	6.9	2.7	1.3	1.7	4.1	2.6
Chrysene	110	460	--		--	--	--	--	7.0	7.7	17.8	24.5	11.8	5.2	2.3	2.4	7.0	3.6
Benzo(b)fluoranthene	--	--	--		--	--	--	--	4.6	4.8	21.9	27	13.3	4.8	1.5	1.6	4.6	2.6
Benzo(k)fluoranthene	--	--	--		--	--	--	--	5.1	5.4	17.2	18.4	8.7	3.2	1.3	1.9	4.1	1.9
Total Benzofluoranthenes (b, j, k)	230	450	--		--	--	--	--	9.7	10.2	39.1	45.4	22.0	8.0	2.8	3.5	8.7	4.5
Benzo(a)pyrene	99	210	--		--	--	--	--	3.8	4.4	14.2	18.4	6.7	2.7	1.2	1.5	3.4	1.6
Indeno(1,2,3-c,d)pyrene	34	88	--		--	--	--	--	1.5	1.8	3.2	5.0	1.5	0.73	0.71	0.83	1.6	0.85
Dibenzo(a,h)anthracene	12	33	--		--	--	--	--	0.83 J	0.41 J	2.5 J	4.5	1.3	1.3	0.26	0.48	0.33	0.22
Benzo(g,h,i)perylene	31	78	--		--	--	--	--	1.5	1.9	2.9	4.2	1.3	0.59	0.65	0.81	1.6	0.79
Chlorinated Benzenes (mg/kg-OC)																		
1,2-Dichlorobenzene	2.3	2.3	--		--	--	--	--	0.16 U	0.37 U	0.36 U	0.75 U	0.15 U	0.14 U	0.18 U	0.14 U	0.25 U	0.18 U
1,4-Dichlorobenzene	3.1	9	--		--	--	--	--	0.16 U	0.37 U	0.36 U	0.75 U	0.15 U	0.14 U	0.18 U	0.14 U	0.25 U	0.18 U
1,2,4-Trichlorobenzene	0.81	1.8	--		--	--	--	--	0.16 U	0.37 U	0.36 U	0.75 U	0.15 U	0.14 U	0.18 U	0.14 U	0.25 U	0.18 U
Hexachlorobenzene	0.38	2.3	--		--	--	--	--	0.16 U	0.37 U	0.36 U	0.75 U	0.15 U	0.14 U	0.18 U	0.14 U	0.25 U	0.18 U
Phthalates (mg/kg-OC)																		
Dimethyl phthalate	53	53	--		--	--	--	--	0.32 J	0.41 U	1.2 U	2.5 U	0.51 U	0.45 U	0.59 U	0.48 U	0.79 U	0.6 U
Diethyl phthalate	61	110	--		--	--	--	--	0.54 U	0.41 U	1.2 U	2.5 U	0.51 U	0.45 U	0.59 U	0.48 U	0.79 U	0.6 U
Di-n-butyl phthalate	220	1,700	--		--	--	--	--	0.54 U	0.87	1.2 U	2.5 U	0.51 U	0.45 U	0.59 U	0.48 U	0.79 U	0.6 U

Table 7
Surface Sediment Chemical and Physical Testing Results

			Location ID:	1B-01-SS	1C-01-SS	2C-01-SS	2C-02-SS	2C-03-SS	3A-01-SS	3A-02-SS	3A-03-SS	3A-04-SS	3A-05-SS	5B-01-SS	5B-02-SS	5B-03-SS	5B-04-SS
			Sample ID:	1B-01-SS	1C-01-SS	2C-01-SS	2C-02-SS	2C-03-SS	3A-01-SS	3A-02-SS	3A-03-SS	3A-04-SS	3A-05-SS	5B-01-SS	5B-02-SS	5B-03-SS	5B-04-SS
			Sample Date:	8/20/08	8/20/08	8/20/08	8/20/08	8/21/08	8/21/08	8/22/08	8/22/08	8/22/08	8/22/08	8/21/08	8/21/08	8/21/08	8/21/08
			Sample Depth:	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**														
Butylbenzyl phthalate	4.9	64	--	--	--	--	--	0.4 U	**1.6**	**3**	**8.2**	**2.1**	**1.8**	0.45 U	0.36 U	0.62 U	0.45 U
Bis(2-ethylhexyl) phthalate	47	78	--	--	--	--	--	**5.11**	**13.9**	**22.5**	**19.6**	**10.2**	**4.09**	**0.74**	**0.71**	**1.2**	**1.1**
Di-n-octyl phthalate	58	4,500	--	--	--	--	--	0.54 U	**0.81**	1.2 U	2.5 U	0.51 U	0.45 U	0.59 U	0.48 U	0.79 U	0.6 U
Miscellaneous (mg/kg-OC)																	
Dibenzofuran	15	58	--	--	--	--	--	**1.2**	**0.66**	**1.3**	**2.7**	**0.69**	0.45 U	**0.36 J**	**0.38 J**	**0.91**	**0.39 J**
Hexachlorobutadiene	3.9	6.2	--	--	--	--	--	0.16 U	0.37 U	0.36 U	0.75 U	0.15 U	0.14 U	0.18 U	0.14 U	0.25 U	0.18 U
N-Nitrosodiphenylamine	11	11	--	--	--	--	--	0.16 UJ	0.37 UJ	0.36 UJ	0.75 UJ	0.15 UJ	0.14 UJ	0.18 UJ	0.14 UJ	0.25 UJ	0.18 UJ
Ionizable Organic Compounds (µg/kg)																	
Phenol	420	1,200	420	--	--	--	--	**89**	**14 J**	20 U	20 U	**120**	**41**	**24**	20 U	19 U	20 U
2-Methylphenol (o-Cresol)	63	63	63	--	--	--	--	6.1 U	18 UJ	6 UJ	6.1 UJ	6 UJ	6.1 UJ	6.1 U	6.1 U	6.1 U	6.1 U
4-Methylphenol (p-Cresol)	670	670	670	--	--	--	--	**160**	**44**	20 U	20 U	**32**	20 U	**48**	**64**	**22**	**28**
2,4-Dimethylphenol	29	29	29	--	--	--	--	6.1 UJ	18 UJ	6 UJ	6.1 UJ	6 UJ	6.1 UJ	6.1 UJ	6.1 UJ	6.1 UJ	6.1 UJ
Pentachlorophenol	360	690	140	--	--	--	--	31 U	93 U	**110 J**	31 U	**33**	**39**	31 U	31 U	31 U	30 U
Benzyl alcohol	57	73	57	--	--	--	--	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	19 UJ	20 UJ
Benzoic acid	650	650	650	--	--	--	--	200 U	200 U	200 UJ	200 UJ	200 UJ	200 UJ	200 U	200 U	190 U	200 U
Aromatic Hydrocarbons (ug/kg)																	
Total LPAH	--	--	5,200	--	--	--	--	**406**	**413**	**562**	**268**	**436**	**162**	**91**	**161**	**193**	**119**
Naphthalene	--	--	2,100	--	--	--	--	**43**	**29**	20 U	20 U	**27**	20 U	**22**	**32**	**22**	**17 J**
Acenaphthylene	--	--	560	--	--	--	--	**15 J**	20 U	20 U	20 U	**21**	20 U	20 U	20 U	19 U	20 U
Acenaphthene	--	--	500	--	--	--	--	**40**	**32**	**23**	**27**	**22**	20 U	20 U	**10 J**	**12 J**	20 U
Fluorene	--	--	540	--	--	--	--	**46**	**42**	**39**	**28**	**35**	20 U	**11 J**	**18 J**	**23**	**12 J**
Phenanthrene	--	--	1,500	--	--	--	--	**190**	**210**	**300**	**170**	**240**	**110**	**42**	**70**	**95**	**64**
Anthracene	--	--	960	--	--	--	--	**72**	**100**	**200**	**43**	**91**	**52**	**16 J**	**31**	**41**	**26**
2-Methylnaphthalene	--	--	670	--	--	--	--	**36**	**22**	20 U	20 U	**20**	20 U	**14 J**	**16 J**	**15 J**	**12 J**
Total HPAH	--	--	12,000	--	--	--	--	**1,762**	**2,430**	**2,715**	**1,602**	**3,122**	**1,386**	**502**	**743**	**1,097**	**871**
Fluoranthene	--	--	1,700	--	--	--	--	**310**	**500**	**700**	**360**	**600**	**250**	**93**	**120**	**180**	**220**
Pyrene	--	--	2,600	--	--	--	--	**390**	**440**	**450**	**270**	**510**	**200**	**97**	**150**	**270**	**180**
Benzo(a)anthracene	--	--	1,300	--	--	--	--	**160**	**220**	**220**	**140**	**270**	**120**	**45**	**73**	**100**	**87**
Chrysene	--	--	1,400	--	--	--	--	**260**	**370**	**300**	**200**	**460**	**230**	**76**	**100**	**170**	**120**
Benzo(b)fluoranthene	--	--	--	--	--	--	--	**170**	**230**	**370**	**220**	**520**	**210**	**52**	**66**	**110**	**86**
Benzo(k)fluoranthene	--	--	--	--	--	--	--	**190**	**260**	**290**	**150**	**340**	**140**	**43**	**80**	**100**	**64**
Benzo(a)pyrene	--	--	1,600	--	--	--	--	**140**	**210**	**240**	**150**	**260**	**120**	**41**	**65**	**82**	**53**
Indeno(1,2,3-c,d)pyrene	--	--	600	--	--	--	--	**57**	**87**	**54**	**41**	**59**	**32**	**24**	**35**	**39**	**28**
Dibenzo(a,h)anthracene	--	--	230	--	--	--	--	**31 J**	**20 J**	**42 J**	**37**	**51**	**58**	**8.6**	**20**	**8**	**7.3**
Benzo(g,h,i)perylene	--	--	670	--	--	--	--	**54**	**93**	**49**	**34**	**52**	**26**	**22**	**34**	**38**	**26**
Chlorinated Benzenes (ug/kg)																	
1,2-Dichlorobenzene	--	--	35	--	--	--	--	6.1 U	18 U	6 U	6.1 U	6 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U
1,4-Dichlorobenzene	--	--	110	--	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
1,2,4-Trichlorobenzene	--	--	31	--	--	--	--	6.1 U	18 U	6 U	6.1 U	6 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U
Hexachlorobenzene	--	--	22	--	--	--	--	6.1 U	18 U	6 U	6.1 U	6 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U
Phthalates (ug/kg)																	
Dimethyl phthalate	--	--	71	--	--	--	--	**12 J**	20 U	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
Diethyl phthalate	--	--	48	--	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
Di-n-butyl phthalate	--	--	1,400	--	--	--	--	20 U	**42**	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
Butylbenzyl phthalate	--	--	63	--	--	--	--	15 U	**76**	**50**	**67**	**81**	**79**	15 U	15 U	15 U	15 U
Bis(2-ethylhexyl) phthalate	--	--	1,300	--	--	--	--	**190**	**670**	**380**	**160**	**400**	**180**	**25**	**30**	**28**	**35**
Di-n-octyl phthalate	--	--	420	--	--	--	--	20 U	**39**	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
Miscellaneous (ug/kg)																	
Dibenzofuran	--	--	540	--	--	--	--	**46**	**32**	**22**	**22**	**27**	20 U	**12 J**	**16 J**	**22**	**13 J**
Hexachlorobutadiene	--	--	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	--	--	28	--	--	--	--	6.1 UJ	18 UJ	6 UJ	6.1 UJ	6 UJ	6.1 UJ	6.1 UJ	6.1 UJ	6.1 UJ	6.1 UJ
Dioxin Furans (ng/kg)																	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	**0.434 J**	**0.478 J**	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	**2.48 J**	**2.18 J**	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**8.76**	**7.98**	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**17.3**	**19.5**	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**9.37**	**9.77**	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	**307**	**391**	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	**2,200**	**3,230**	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	**10.4**	**7.96**	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	**1.44 J**	**1.43 J**	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	**2.54**	**3.16**	--	--	--	--	--	--	--	--	--	--	--	--

Table 7
Surface Sediment Chemical and Physical Testing Results

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	1B-01-SS	1C-01-SS	2C-01-SS	2C-02-SS	2C-03-SS	3A-01-SS	3A-02-SS	3A-03-SS	3A-04-SS	3A-05-SS	5B-01-SS	5B-02-SS	5B-03-SS	5B-04-SS
				Sample ID:	1B-01-SS	1C-01-SS	2C-01-SS	2C-02-SS	2C-03-SS	3A-01-SS	3A-02-SS	3A-03-SS	3A-04-SS	3A-05-SS	5B-01-SS	5B-02-SS	5B-03-SS	5B-04-SS
				Sample Date:	8/20/08	8/20/08	8/20/08	8/20/08	8/21/08	8/21/08	8/22/08	8/22/08	8/22/08	8/22/08	8/21/08	8/21/08	8/21/08	8/21/08
				Sample Depth:	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	**3.86**	**4.91**	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	**1.65 J**	**2.07 J**	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	**1.28 J**	**1.75 J**	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	**2.35 J**	**2.88**	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	**42.9**	**54.9**	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	**2.76**	**3.29**	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--	**158**	**176**	--	--	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (WHOI) ND=0	--	--	--	**13.5**	**14.8**	--	--	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--	**13.5**	**14.8**	--	--	--	--	--	--	--	--	--	--	--	--
Guaiacols (µg/kg)																		
2-Methoxyphenol (Guaiacol)	--	--	--	--	--	--	--	20 UJ	20 UJ	20 U	20 U	20 U	20 U	20 U	20 UJ	20 UJ	19 UJ	20 UJ
3,4,5-Trichloroguaiacol	--	--	--	--	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
4,5,6-Trichloroguaiacol	--	--	--	--	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
4,5-Dichloroguaiacol	--	--	--	--	--	--	--	20 U	20 U	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 U	20 U	19 U	20 U
Tetrachloroguaiacol	--	--	--	--	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
Semi-Volatile Organics (µg/kg)																		
1,3-Dichlorobenzene	--	--	170	--	--	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
1-Methylnaphthalene	--	--	--	--	--	--	--	--	**15 J**	**14 J**	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U
Hexachloroethane	--	--	--	--	--	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	19 U	20 U

Table 7
Surface Sediment Chemical and Physical Testing Results

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	5B-05-SS	5B-06-SS	5B-07-SS	5C-01-SS	5C-02-SS	6B-01-SS	6B-02-SS	6B-03-SS	6B-04-SS	6B-05-SS	6C-01-SS	6C-02-SS	REF-01-SS	REF-02-SS
				Sample ID:	5B-05-SS	5B-06-SS	5B-07-SS	5C-01-SS	5C-02-SS	6B-01-SS	6B-02-SS	6B-03-SS	6B-04-SS	6B-05-SS	6C-01-SS	6C-02-SS	REF-01-SS	REF-02-SS
				Sample Date:	8/21/08	8/21/08	8/21/08	8/20/08	8/21/08	8/22/08	8/22/08	8/22/08	8/22/08	8/20/08	8/22/08	8/22/08	8/20/08	8/20/08
				Sample Depth:	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm
Grain Size (pct)																		
Total Gravel	--	--	--		7.2	2.4	0.1	--	29.2	0.7	--	1.1	--	--	0.6	0.5	--	--
Total Sand	--	--	--		58.2	70.2	80.7	83.7	44.5	2.5	1.2	2	3.1	3.6	47.5	34.4	6.6	2.2
Total Silt	--	--	--		20.1	16.4	13.8	9.3	16.4	56.1	53.5	55.2	56.4	59	25.7	39.8	63.7	67.9
Total Clay	--	--	--		14.6	11	5.3	7	10	40.7	45.3	41.7	40.5	37.5	26	25.4	29.9	30
Total Fines (Silt + Clay)	--	--	--		34.7	27.4	19.1	16.3	26.4	96.8	98.8	96.9	96.9	96.5	51.7	65.2	93.6	97.9
Total Grain Size	--	--	--		100.1	100	99.9	100	100.1	100	100	100	100	100.1	99.8	100.1	100.2	100.1
Conventional Parameters																		
Ammonia (mg-N/kg)	--	--	--		6.72	9.02	4.94	4.15	7.97	16.9 J	22.3 J	16.6 J	16.9 J	33	10.9 J	9.66 J	25.4	11.4
Sulfate (mg/kg)	--	--	--		--	--	--	503 J	--	--	--	--	--	1,870 J	--	--	2,170 J	--
Sulfide (mg/kg)	--	--	--		631	512	323	121	623 J	2,950	2,540	1,960	2,680	2,530 J	1,160	990	413	486
Total organic carbon (pct)	--	--	--		3.64	4.73	2.24	2.39	2.84	2.30	2.21	3.06	2.98	2.65	2.58	2.26	2.15	2.60
Total solids (pct)	--	--	--		47.4	52.1	67.1	73.5	62.4	37.6	38.1	34.8	37.6	36.8	49.2	50.1	36.3	34.7
Total Solids (preserved) (pct)	--	--	--		49.4	52	66	72.4	64.1	36.6	37.1	35.6	36.8	36.1	49.4	51.2	33.1	34.4
Total volatile solids (pct)	--	--	--		--	--	--	1.97	--	--	--	--	--	7.52	--	--	6.89	--
Metals (mg/kg)																		
Antimony	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	57	93	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	5.1	6.7	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	260	270	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Copper	390	390	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	450	530	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	0.41	0.59	--		0.71	2.64	0.22	0.12	0.31	0.29	0.3	0.3	0.31	0.3	0.3	0.4	0.1 U	--
Nickel	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	6.1	6.1	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	410	960	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Methyl mercury	--	--	--		--	--	--	0.00039	--	--	--	--	--	0.0027	--	--	0.00042	--
Methyl mercury (pct of total mercury)	--	--	--		--	--	--	0.32	--	--	--	--	--	0.90	--	--	0.42	--
Butyltins (µg/kg)																		
Tributyltin (ion)	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aromatic Hydrocarbons (mg/kg-OC)																		
Total LPAH	370	780	--		2.2	2.1	2.8	1.1	12.2	10.6	1.2	2.6	8.0	54.9	19.1	7.5	--	--
Naphthalene	99	170	--		0.38 J	0.32 J	0.49 J	0.84 U	1.2	0.87 U	0.9 U	0.65 U	0.77	2.2	1.9	1.6	--	--
Acenaphthylene	66	66	--		0.55 U	0.42 U	0.89 U	0.84 U	0.7 U	0.87 U	0.9 U	0.65 U	0.67 U	1.1	0.85	0.88 U	--	--
Acenaphthene	16	57	--		0.55 U	0.42 U	0.89 U	0.84 U	0.39 J	0.87 U	0.9 U	0.65 U	0.67 U	1.9	1.1	0.88 U	--	--
Fluorene	23	79	--		0.55 U	0.23 J	0.89 U	0.84 U	0.95	1.3	0.9 U	0.65 U	0.87	3.3	1.8 J	0.88 U	--	--
Phenanthrene	100	480	--		1.3	0.95	1.4	1.1	3.0	6.1	1.2	1.9	4.4	41.5	9.7 J	4.4	--	--
Anthracene	220	1,200	--		0.55	0.57	0.89 J	0.84 U	6.7	3.2	0.9 U	0.69	2.0	4.9	3.8 J	1.5	--	--
2-Methylnaphthalene	38	64	--		0.55 U	0.23 J	0.89 U	0.84 U	0.92	0.87 U	0.9 U	0.65 U	0.67 U	1.8	0.81	0.88 U	--	--
Total HPAH	960	5,300	--		21.3	14.6	22.2	13.9	39.5	87.0	12.5	16.7	59.5	142	121 J	44.7	--	--
Fluoranthene	160	1,200	--		4.4	3.0	3.7	3.2	4.6	22.6	2.9	3.3	9.4	52.8	24 J	8.4	--	--
Pyrene	1,000	1,400	--		4.4	3.0	3.9	2.8	7.0	16.5	1.9	2.5	6.7	36.2	22.5 J	7.5	--	--
Benzo(a)anthracene	110	270	--		1.9	1.2	2.1	1.0	3.4	9.6	1.3	1.8	5.4	9.1	12.4 J	4.0	--	--
Chrysene	110	460	--		2.4	2.3	3.4	2.0	8.8	13.0	2.1	2.9	23.2	17.0	22.1 J	7.5	--	--
Benzo(b)fluoranthene	--	--	--		1.8	1.2	2.1	1.0	4.9	10.0	1.9	2.3	5.4	10.6	14.3 J	5.8	--	--
Benzo(k)fluoranthene	--	--	--		2.5	1.7	3.0	1.6	3.5	6.1	0.95	1.6	3.7	6.8	10.5 J	3.9	--	--
Total Benzofluoranthenes (b, j, k)	230	450	--		4.3	2.9	5.1	2.6	8.5	16.1	2.9	3.9	9.1	17.4	24.8 J	9.7	--	--
Benzo(a)pyrene	99	210	--		2.0	1.1	1.9	0.96	3.5	5.7	1.0	1.5	3.4	5.3	8.1 J	3.8	--	--
Indeno(1,2,3-c,d)pyrene	34	88	--		0.93	0.57	0.8 J	0.63 J	1.5	1.1	0.9 U	0.65 U	0.81	2.1	2.5 J	1.0	--	--
Dibenzo(a,h)anthracene	12	33	--		0.17 U	0.13 U	0.49 J	0.26 U	0.56 J	1.6 J	0.45 J	0.78 J	0.94 J	0.53	2.6 J	1.8 J	--	--
Benzo(g,h,i)perylene	31	78	--		0.93	0.55	0.8 J	0.71 J	1.6	0.91	0.9 U	0.65 U	0.67	2.1	2.2 J	0.97	--	--
Chlorinated Benzenes (mg/kg-OC)																		
1,2-Dichlorobenzene	2.3	2.3	--		0.17 U	0.13 U	0.27 U	0.26 U	0.21 U	0.27 U	0.27 U	0.2 U	0.2 U	0.23 U	0.24 U	0.27 U	--	--
1,4-Dichlorobenzene	3.1	9	--		0.17 U	0.13 U	0.27 U	0.26 U	0.21 U	0.27 U	0.27 U	0.2 U	0.2 U	0.23 U	0.24 U	0.27 U	--	--
1,2,4-Trichlorobenzene	0.81	1.8	--		0.17 U	0.13 U	0.27 U	0.26 U	0.21 U	0.27 U	0.27 U	0.2 U	0.2 U	0.23 U	0.24 U	0.27 U	--	--
Hexachlorobenzene	0.38	2.3	--		0.17 U	0.13	0.27 U	0.26 U	0.21 U	0.27 U	0.27 U	0.2 U	0.2 U	0.23 U	0.24 U	0.27 U	--	--
Phthalates (mg/kg-OC)																		
Dimethyl phthalate	53	53	--		0.55 U	0.42 U	0.89 U	0.84 U	0.7 U	0.87 U	0.9 U	0.65 U	0.67 U	0.75 U	0.78 U	0.88 U	--	--
Diethyl phthalate	61	110	--		0.55 U	0.42 U	0.89 U	0.84 U	0.7 U	0.87 U	0.9 U	0.65 U	0.67 U	0.75 U	0.78 U	0.88 U	--	--
Di-n-butyl phthalate	220	1,700	--		0.55 U	0.42 U	0.89 U	0.84 U	0.7 U	0.87 U	0.9 U	0.65 U	0.67 U	0.75 U	0.78 U	0.88 U	--	--

Table 7
Surface Sediment Chemical and Physical Testing Results

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID: 5B-05-SS	5B-06-SS	5B-07-SS	5C-01-SS	5C-02-SS	6B-01-SS	6B-02-SS	6B-03-SS	6B-04-SS	6B-05-SS	6C-01-SS	6C-02-SS	REF-01-SS	REF-02-SS
				Sample ID: 5B-05-SS	5B-06-SS	5B-07-SS	5C-01-SS	5C-02-SS	6B-01-SS	6B-02-SS	6B-03-SS	6B-04-SS	6B-05-SS	6C-01-SS	6C-02-SS	REF-01-SS	REF-02-SS
				Sample Date: 8/21/08	8/21/08	8/21/08	8/20/08	8/21/08	8/22/08	8/22/08	8/22/08	8/22/08	8/20/08	8/22/08	8/22/08	8/20/08	8/20/08
				Sample Depth: 0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm
Butylbenzyl phthalate	4.9	64	--	0.41 U	0.32 U	0.67 U	0.67 U	0.53 U	**0.91**	0.68 U	0.49 U	**0.54**	0.57 U	**0.81**	0.66 U	--	--
Bis(2-ethylhexyl) phthalate	47	78	--	**0.38 J**	**0.68**	**1.4**	**1.9**	**5.63**	0.87 U	0.9 U	0.65 U	**1.1**	**0.98**	0.78 U	**1.3**	--	--
Di-n-octyl phthalate	58	4,500	--	0.55 U	0.42 U	0.89 U	0.84 U	0.7 U	0.87 U	0.9 U	0.65 U	0.67 U	0.75 U	0.78 U	0.88 U	--	--
Miscellaneous (mg/kg-OC)																	
Dibenzofuran	15	58	--	0.55 U	**0.23 J**	0.89 U	0.84 U	**0.77**	**1**	0.9 U	0.65 U	**0.7**	**4.53**	**1.4 J**	0.88 U	--	--
Hexachlorobutadiene	3.9	6.2	--	0.17 U	0.13 U	0.27 U	0.26 U	0.21 U	0.27 U	0.27 U	0.2 U	0.2 U	0.23 U	0.24 U	0.27 U	--	--
N-Nitrosodiphenylamine	11	11	--	0.17 UJ	0.13 UJ	0.27 UJ	0.26 UJ	0.21 UJ	0.27 U	0.27 U	0.2 U	**0.22**	0.23 UJ	**0.39**	**0.38**	--	--
Ionizable Organic Compounds (µg/kg)																	
Phenol	420	1,200	420	**51**	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	**30**	--	--
2-Methylphenol (o-Cresol)	63	63	63	6.1 U	6.2 U	6.1 U	6.2 U	6 U	6.1 U	6 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	--	--
4-Methylphenol (p-Cresol)	670	670	670	**23**	**96**	**14 J**	**16 J**	**56**	**26**	20 U	20 U	**24**	**28**	**43**	**54**	--	--
2,4-Dimethylphenol	29	29	29	6.1 UJ	6.2 UJ	6.1 UJ	6.2 UJ	6 UJ	6.1 UJ	6 UJ	6.1 UJ	6.1 UJ	6.1 UJ	6.1 UJ	6.1 UJ	--	--
Pentachlorophenol	360	690	140	30 U	31 U	31 U	31 U	30 U	**34**	30 U	**56**	**86**	31 U	**40**	**32**	--	--
Benzyl alcohol	57	73	57	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	--	--
Benzoic acid	650	650	650	200 U	200 U	200 U	200 U	200 U	200 UJ	200 UJ	200 UJ	200 UJ	200 U	200 UJ	200 UJ	--	--
Aromatic Hydrocarbons (ug/kg)																	
Total LPAH	--	--	5,200	**83**	**98**	**63**	**27**	**346**	**244**	**26**	**78**	**239**	**1,453**	**493**	**170**	--	--
Naphthalene	--	--	2,100	**14 J**	**15 J**	**11 J**	20 U	**33**	20 U	20 U	20 U	**23**	**58**	**49**	**36**	--	--
Acenaphthylene	--	--	560	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	**28**	**22**	20 U	--	--
Acenaphthene	--	--	500	20 U	20 U	20 U	20 U	**11 J**	20 U	20 U	20 U	20 U	**50**	**28**	20 U	--	--
Fluorene	--	--	540	20 U	**11 J**	20 U	20 U	**27**	**31**	20 U	20 U	**26**	**87**	**47 J**	20 U	--	--
Phenanthrene	--	--	1,500	**49**	**45**	**32**	**27**	**85**	**140**	**26**	**57**	**130**	**1,100**	**250 J**	**100**	--	--
Anthracene	--	--	960	**20**	**27**	**20 J**	20 U	**190**	**73**	20 U	**21**	**60**	**130**	**97 J**	**34**	--	--
2-Methylnaphthalene	--	--	670	20 U	**11 J**	20 U	20 U	**26**	20 U	20 U	20 U	20 U	**48**	**21**	20 U	--	--
Total HPAH	--	--	12,000	**772**	**696**	**494**	**333**	**1,122**	**2,004**	**276**	**510**	**1,772**	**3,776**	**3,129 J**	**1,008**	--	--
Fluoranthene	--	--	1,700	**160**	**140**	**82**	**77**	**130**	**520**	**65**	**100**	**280**	**1,400**	**620 J**	**190**	--	--
Pyrene	--	--	2,600	**160**	**140**	**87**	**66**	**200**	**380**	**41**	**75**	**200**	**960**	**580 J**	**170**	--	--
Benzo(a)anthracene	--	--	1,300	**68**	**58**	**47**	**25**	**96**	**220**	**29**	**56**	**160**	**240**	**320 J**	**90**	--	--
Chrysene	--	--	1,400	**89**	**110**	**76**	**48**	**250**	**300**	**46**	**90**	**690**	**450**	**570 J**	**170**	--	--
Benzo(b)fluoranthene	--	--	--	**66**	**59**	**46**	**24**	**140**	**230**	**42**	**69**	**160**	**280**	**370 J**	**130**	--	--
Benzo(k)fluoranthene	--	--	--	**90**	**82**	**67**	**38**	**100**	**140**	**21**	**50**	**110**	**180**	**270 J**	**88**	--	--
Benzo(a)pyrene	--	--	1,600	**71**	**54**	**42**	**23**	**100**	**130**	**22**	**46**	**100**	**140**	**210 J**	**85**	--	--
Indeno(1,2,3-c,d)pyrene	--	--	600	**34**	**27**	**18 J**	**15 J**	**44**	**26**	20 U	20 U	**24**	**56**	**65 J**	**23**	--	--
Dibenzo(a,h)anthracene	--	--	230	6.1 U	6.2 U	**11 J**	6.2 U	**16 J**	**37 J**	**10 J**	**24 J**	**28 J**	**14**	**66 J**	**40 J**	--	--
Benzo(g,h,i)perylene	--	--	670	**34**	**26**	**18 J**	**17 J**	**46**	**21**	20 U	20 U	**20**	**56**	**58 J**	**22**	--	--
Chlorinated Benzenes (ug/kg)																	
1,2-Dichlorobenzene	--	--	35	6.1 U	6.2 U	6.1 U	6.2 U	6 U	6.1 U	6 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	--	--
1,4-Dichlorobenzene	--	--	110	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	--
1,2,4-Trichlorobenzene	--	--	31	6.1 U	6.2 U	6.1 U	6.2 U	6 U	6.1 U	6 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	--	--
Hexachlorobenzene	--	--	22	6.1 U	**6.2**	6.1 U	6.2 U	6 U	6.1 U	6 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	--	--
Phthalates (ug/kg)																	
Dimethyl phthalate	--	--	71	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	--
Diethyl phthalate	--	--	48	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	--
Di-n-butyl phthalate	--	--	1,400	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	--
Butylbenzyl phthalate	--	--	63	15 U	15 U	15 U	16 U	15 U	**21**	15 U	15 U	**16**	15 U	**21**	15 U	--	--
Bis(2-ethylhexyl) phthalate	--	--	1,300	**14 J**	**32**	**32**	**46**	**160**	20 U	20 U	20 U	**34**	**26**	20 U	**29**	--	--
Di-n-octyl phthalate	--	--	420	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	--
Miscellaneous (ug/kg)																	
Dibenzofuran	--	--	540	20 U	**11 J**	20 U	20 U	**22**	**23**	20 U	20 U	**21**	**120**	**36 J**	20 U	--	--
Hexachlorobutadiene	--	--	11	--	--	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	--	--	28	6.1 UJ	6.2 UJ	6.1 UJ	6.2 UJ	6 UJ	6.1 U	6 U	6.1 U	6.7 U	6.1 UJ	10 U	8.5 U	--	--
Dioxin Furans (ng/kg)																	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 7
Surface Sediment Chemical and Physical Testing Results

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	5B-05-SS	5B-06-SS	5B-07-SS	5C-01-SS	5C-02-SS	6B-01-SS	6B-02-SS	6B-03-SS	6B-04-SS	6B-05-SS	6C-01-SS	6C-02-SS	REF-01-SS	REF-02-SS
				Sample ID:	5B-05-SS	5B-06-SS	5B-07-SS	5C-01-SS	5C-02-SS	6B-01-SS	6B-02-SS	6B-03-SS	6B-04-SS	6B-05-SS	6C-01-SS	6C-02-SS	REF-01-SS	REF-02-SS
				Sample Date:	8/21/08	8/21/08	8/21/08	8/20/08	8/21/08	8/22/08	8/22/08	8/22/08	8/22/08	8/20/08	8/22/08	8/22/08	8/20/08	8/20/08
				Sample Depth:	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm	0 - 12 cm
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	--	--	--	--	--	--	--	--	5	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (WHOI) ND=0	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Guaiacols (µg/kg)																		
2-Methoxyphenol (Guaiacol)	--	--	--	20 UJ	20 UJ	20 UJ	20 UJ	20 UJ	20 U	20 U	20 U	20 U	20 U	20 UJ	20 U	20 U	--	--
3,4,5-Trichloroguaiacol	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	--
4,5,6-Trichloroguaiacol	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	--
4,5-Dichloroguaiacol	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 UJ	20 UJ	20 UJ	20 UJ	20 U	20 UJ	20 UJ	--	--
Tetrachloroguaiacol	--	--	--	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	--
Semi-Volatile Organics (µg/kg)																		
1,3-Dichlorobenzene	--	--	170	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	--
1-Methylnaphthalene	--	--	--	20 U	20 U	20 U	20 U	**10 J**	20 U	20 U	20 U	20 U	20 U	**21**	20 U	20 U	--	--
Hexachloroethane	--	--	--	20 U	20 U	20 U	20 U	20 UJ	20 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	--

Notes:

Detected concentration is greater than lowest SMS Sediment Quality Standards (SQS)

Detected concentration is greater than lowest SMS Cleanup Screening Level (CSL)

Detected concentration is greater than 1988 Puget Sound Estuary Program LAET screening level

Bold = Detected result

The site specific Bioaccumulaltion Screening Level (BSL) for mercury is 1.2 mg/kg. (Supplemental RI Report, RETEC 2006)

There are no numeric SMS criteria for dioxin/furans, see 6.1.2. See 7.1.1 for potentially applicable dredge material management criteria.

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

mg/kg-OC = milligrams per kilogram organic carbon normalized

pct = percent

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

Total LPAH (Low PAH) are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene. 2-Methylnapthalene is not included in the sum of LPAHs

Total HPAH (High PAH) are the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzofluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

Benzo(j)fluoranthene is included in the total of benzo(b&k)fluoranthenes

Totals are calculated for LPAH and HPAH as the sum of all detected results. If all are undetcted results, the highest reporting limit value is reported as the sum.

Toxic equivalency (TEQ) values were calculated for the validated dioxin/furan congeners using the 2005 World Health Organization's toxic equivalency factors for mammals. Undetected congeners were assigned a "0" (ND=0) and assigned a concentration equal to ½ the detection limit (ND=1/2).

-- Sample was not submitted for chemical analysis.

Non-organic carbon normalized samples with TOC results outside of the 0.5-3.5% range were screened against the 1988 Puget Sound Estuary Program LAET

Sample depth is reported as below mudline.

Table 8
Sediment Porewater Testing Results

	Location ID:	2C-01-PW	2C-02-PW	5B-01-PW	5B-02-PW	6B-01-PW	6C-01-PW
	Sample ID:	2C-01-PW	2C-02-PW	5B-01-PW	5B-02-PW	6B-01-PW	6C-01-PW
	Sample Date:	8/18/08	8/19/08	8/18/08	8/18/08	8/19/08	8/19/08
Analyte	Sample Depth (ft):	1	1	1	1	1	1
Conventional Parameters (mg/l)							
Total Suspended Solids	mg/l	**1.3**	4 U	**2.2**	1.1 U	1.1 U	**1.4**
Metals (ug/l)							
Mercury (dissolved)	ug/l	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U

Notes:
Bold = Detected result
Sample depth is reported as below mudline.
U = Compound analyzed, but not detected above detection limit
µg/l = micrograms per liter
mg/L = milligrams per liter

Table 9
SMS Biological Effects Criteria

Biological Test	SQS Biological Criteria	CSL Biological Criteria
Amphipod	The test sediment has a significantly higher (t-test, p = 0.05) mean mortality than the reference sediment, and the test sediment mean mortality exceeds 25 percent (M_T>25%)	The test sediment has a significantly higher (t-test, p = 0.05) mean mortality than the reference sediment, and the test sediment mean mortality is more than 30 percent greater (M_T-M_C > 30%) than the reference sediment mean mortality
Larval	The test sediment has a mean survivorship of normal larvae that is significantly less (t-test, p = 0.05) than the mean normal survivorship in the reference sediment, and the mean normal survivorship as a percentage of the negative control is less than 85%	The test sediment has a mean survivorship of normal larvae that is significantly less (t-test, p = 0.05) than the mean normal survivorship in the reference sediment, and the mean normal survivorship as a percentage of the negative control is less than 70%
Juvenile Polychaete	The mean individual growth rate in the test sediment is less than 70 percent of the mean individual growth rate in the reference sediment (MIG_T/MIG_R < 0.70), and the test sediment biomass is significantly different (t-test, p = 0.05) from the reference se	The mean individual growth rate in the test sediment is less than 50 percent of the mean individual growth rate in the reference sediment (MIG_T/MIG_R < 0.50), and the test sediment biomass is significantly different (t-test, p = 0.05) from the reference se

Notes:
Source: Ecology 2008

Table 10
Biological Test Results for the 10-day Acute Toxicity Test - *E. estuarius*

Treatment	Mean Percentage Survival	SD
Control	100	0.0
REF-01-SS	92	6.7
REF-02-SS	100	0.0
3A-01-SS	88	8.4
3A-02-SS	97	4.5
3A-03-SS	98	2.7
3A-04-SS	94	4.2
3A-05-SS	87	9.1
5B-01-SS	92	5.7
5B-02-SS	93	5.7
5B-03-SS	85	7.9
5B-04-SS	89	5.5
5B-05-SS	96	4.2
5B-07-SS	98	2.7
5C-01-SS	96	4.2
5C-02-SS	87	7.6
6B-01-SS	79	7.4
6B-02-SS	84.5	3.7
6B-03-SS	90	7.9
6B-04-SS	88	8.4
6B-05-SS	89	5.5
6C-01-SS	93	4.5
6C-02-SS	94	4.2

Table 11
Biological Test Results for the Larval Development Test - *D. excentricus*

Treatment	Survival (%)	SD
Control	91.6	8.7
REF-01-SS	92.7	7.5
REF-02-SS	91.8	6.6
3A-01-SS	87.1	10.4
3A-02-SS	90.7	7.4
3A-03-SS	96.3	4.4
3A-04-SS	98.8	2.1
3A-05-SS	91.6	6.8
5B-01-SS	99.3	1.5
5B-02-SS	94.8	5.3
5B-03-SS	94.8	6.3
5B-04-SS	94.8	3.9
5B-05-SS	94.9	4.8
5B-07-SS	89.2	5.0
5C-01-SS	92.3	7.7
5C-02-SS	88.9	6.5
6B-01-SS	89.7	5.9
6B-02-SS	96.2	4.2
6B-03-SS	100.0	0.0
6B-04-SS	94.8	7.7
6B-05-SS	94.5	7.1
6C-01-SS	97.9	3.0
6C-02-SS	97.3	4.8

Table 12
Biological Test Results for the 20-day Chronic Toxicity Test - *N. arenaceodentata*

Treatment	Survival (%)	Mean Individual Growth Rate (mg/ind/day)
Control	100	0.875 *
REF-01-SS	100	0.601
REF-02-SS	100	0.642
3A-01-SS	96	0.815
3A-02-SS	100	0.756
3A-03-SS	100	0.876
3A-04-SS	100	0.644
3A-05-SS	100	0.661
5B-01-SS	100	0.603
5B-02-SS	100	0.659
5B-03-SS	100	0.740
5B-04-SS	100	0.682
5B-05-SS	100	0.770
5B-07-SS	100	0.872
5C-01-SS	100	0.779
5C-02-SS	100	0.639
6B-01-SS	96	0.731
6B-02-SS	100	0.712
6B-03-SS	100	0.934
6B-04-SS	100	0.765
6B-05-SS	100	0.827
6C-01-SS	96	0.745
6C-02-SS	96	0.672

Notes:
* - High variability was observed

Table 13
Reference and Control Bioassay Performance Standards

Biological Test	Control Criteria	Pass/Fail?	Reference Criteria	Pass/Fail?
Amphipod (*E. estuarius*)	$M_C < 10\%$	*Pass (M_C = 0%)*	$M_R < 25\%$	*REF-01 - Pass (M_R = 8%)* *REF-02 - Pass (M_R = 0%)*
Larval (*D. excentricus*)	$N_C/I \geq 0.70$	*Pass (N_C = 91.6%)*	$N_R/N_C \geq 0.65$	*REF-01 - Pass (>100%)* *REF-02 - Pass (>100%)*
Juvenile Polychaete *(N. arenaceodentata)*	$M_C < 10\%$ and MIG ≥ 0.38 mg	*Pass (0.875 mg/ind/d)*	MIG_R and $MIG_C < 0.80$	*REF-01 - Fail (69%) ** *REF-02 - Fail (73%) **

Notes:
M = mortalilty, MIG = mean individual growth rate, N = normal counts, I = initial count
Subscripts: C = negative control, R = reference sediment
* - Control performance was well above minimum growth requirements, resulting in lower relative reference performance.

Table 14
Biological Testing Endpoint Evaluation

Station	Statistically Different?			Exceeds SQS Effect Criteria (Yes/No)			Exceeds CSL Effect Criteria (Yes/No)			SQS/CSL Biological Criteria (Pass/Fail)
	Control	REF-01-SS	REF-02-SS	Control	REF-01-SS	REF-02-SS	Control	REF-01-SS	REF-02-SS	
Amphipod				$M_T > 25\%$			$M_T - M_R > 30\%$			
3A-01-SS	NA	No	Yes	NA	No	No	NA	No	No	Pass
3A-02-SS	NA	No	No	NA	No	No	NA	No	No	Pass
3A-03-SS	NA	No	No	NA	No	No	NA	No	No	Pass
3A-04-SS	NA	No	Yes	NA	No	No	NA	No	No	Pass
3A-05-SS	NA	No	Yes	NA	No	No	NA	No	No	Pass
5B-01-SS	NA	No	Yes	NA	No	No	NA	No	No	Pass
5B-02-SS	NA	No	Yes	NA	No	No	NA	No	No	Pass
5B-03-SS	NA	No	Yes	NA	No	No	NA	No	No	Pass
5B-04-SS	NA	No	Yes	NA	No	No	NA	No	No	Pass
5B-05-SS	NA	No	Yes	NA	No	No	NA	No	No	Pass
5B-07-SS	NA	No	No	NA	No	No	NA	No	No	Pass
5C-01-SS	NA	No	Yes	NA	No	No	NA	No	No	Pass
5C-02-SS	NA	No	Yes	NA	No	No	NA	No	No	Pass
6B-01-SS	NA	Yes	Yes	NA	No	No	NA	No	No	Pass
6B-02-SS	NA	Yes	Yes	NA	No	No	NA	No	No	Pass
6B-03-SS	NA	No	Yes	NA	No	No	NA	No	No	Pass
6B-04-SS	NA	No	Yes	NA	No	No	NA	No	No	Pass
6B-05-SS	NA	No	Yes	NA	No	No	NA	No	No	Pass
6C-01-SS	NA	No	Yes	NA	No	No	NA	No	No	Pass
6C-02-SS	NA	No	Yes	NA	No	No	NA	No	No	Pass
Larval				$(N_T/N_R)<0.85$			$(N_T/N_R)<0.70$			
3A-01-SS	NA	No	No	NA	No	No	NA	No	No	Pass
3A-02-SS	NA	No	No	NA	No	No	NA	No	No	Pass
3A-03-SS	NA	No	No	NA	No	No	NA	No	No	Pass
3A-04-SS	NA	No	No	NA	No	No	NA	No	No	Pass
3A-05-SS	NA	No	No	NA	No	No	NA	No	No	Pass
5B-01-SS	NA	No	No	NA	No	No	NA	No	No	Pass
5B-02-SS	NA	No	No	NA	No	No	NA	No	No	Pass
5B-03-SS	NA	No	No	NA	No	No	NA	No	No	Pass
5B-04-SS	NA	No	No	NA	No	No	NA	No	No	Pass
5B-05-SS	NA	No	No	NA	No	No	NA	No	No	Pass
5B-07-SS	NA	No	No	NA	No	No	NA	No	No	Pass
5C-01-SS	NA	No	No	NA	No	No	NA	No	No	Pass
5C-02-SS	NA	No	No	NA	No	No	NA	No	No	Pass
6B-01-SS	NA	No	No	NA	No	No	NA	No	No	Pass
6B-02-SS	NA	No	No	NA	No	No	NA	No	No	Pass
6B-03-SS	NA	No	No	NA	No	No	NA	No	No	Pass
6B-04-SS	NA	No	No	NA	No	No	NA	No	No	Pass
6B-05-SS	NA	No	No	NA	No	No	NA	No	No	Pass
6C-01-SS	NA	No	No	NA	No	No	NA	No	No	Pass
6C-02-SS	NA	No	No	NA	No	No	NA	No	No	Pass

Table 14
Biological Testing Endpoint Evaluation

Station	Statistically Different?			Exceeds SQS Effect Criteria (Yes/No)			Exceeds CSL Effect Criteria (Yes/No)			SQS/CSL Biological Criteria (Pass/Fail)
	Control	REF-01-SS	REF-02-SS	Control	REF-01-SS	REF-02-SS	Control	REF-01-SS	REF-02-SS	
Juvenile Polychaete				$MIG_T / MIG_R < 0.70$			$MIG_T / MIG_R < 0.50$			
3A-01-SS	No	No	No	No	No	No	No	No	No	Pass
3A-02-SS	No	No	No	No	No	No	No	No	No	Pass
3A-03-SS	No	No	No	No	No	No	No	No	No	Pass
3A-04-SS	Yes	No	No	No	No	No	No	No	No	Pass
3A-05-SS	Yes	No	No	No	No	No	No	No	No	Pass
5B-01-SS	Yes	No	No	Yes	No	No	No	No	No	Pass*
5B-02-SS	No	No	No	No	No	No	No	No	No	Pass
5B-03-SS	No	No	No	No	No	No	No	No	No	Pass
5B-04-SS	No	No	No	No	No	No	No	No	No	Pass
5B-05-SS	No	No	No	No	No	No	No	No	No	Pass
5B-07-SS	No	No	No	No	No	No	No	No	No	Pass
5C-01-SS	No	No	No	No	No	No	No	No	No	Pass
5C-02-SS	Yes	No	No	No	No	No	No	No	No	Pass
6B-01-SS	No	No	No	No	No	No	No	No	No	Pass
6B-02-SS	No	No	No	No	No	No	No	No	No	Pass
6B-03-SS	No	No	No	No	No	No	No	No	No	Pass
6B-04-SS	No	No	No	No	No	No	No	No	No	Pass
6B-05-SS	No	No	No	No	No	No	No	No	No	Pass
6C-01-SS	No	No	No	No	No	No	No	No	No	Pass
6C-02-SS	No	No	No	No	No	No	No	No	No	Pass

Notes:

M = mortalilty, N = normal counts, MIG = mean individual growth rate

Subscripts: R = reference sediment, T = test sediment, C = negative control

* - MIG_T / MIG_C = 69% when compared to the control. Sample 5B-01-SS passes when compared to both references. See text for additional discussion.

Table 15a
Subsurface Sediment Chemical Testing Results - ASB Primary-Grid

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	8-01-VC	8-01-VC	8-02-VC	8-02-VC	8-02-VC	8-03-VC	8-03-VC	8-03-VC	8-04-VC	8-05-VC	8-05-VC
				Sample ID:	8-01-VC-1-2	8-01-VC-2-3	8-01-VC-3-4	8-02-VC-1-2	8-02-VC-2-3	8-02-VC-3-4	8-03-VC-1-2	8-03-VC-2-3	8-03-VC-3-4	8-04-VC-1-2	8-05-VC-1-2	8-05-VC-2-3
				Sample Date:	8/5/2008	8/5/2008	8/5/2008	8/5/2008	8/5/2008	8/5/2008	8/6/2008	8/6/2008	8/6/2008	8/6/2008	7/28/2008	7/28/2008
				In-Situ Depth[1] (ft):	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	1-2	2-3
Grain Size (pct)																
Total Gravel	--	--	--		--	**0.3**	--	--	**0.1**	--	**2.7**	**4.4**	**1.3**	**1.2**	**0.3**	**5**
Total Sand	--	--	--		**35.2**	**20**	**19.8**	**8.1**	**26.1**	**35.8**	**87.4**	**83.5**	**90.7**	**91.8**	**61.1**	**78.9**
Total Silt	--	--	--		**48.7**	**58**	**59.6**	**54.9**	**56.7**	**47.2**	**10**	**12**	**8.1**	**7**	**31.2**	**16.1**
Total Clay	--	--	--		**15.9**	**21.5**	**20.5**	**12.3**	**17.1**	**16.9**	--	--	--	--	**7.5**	--
Total Fines (Silt + Clay)	--	--	--		**64.6**	**79.5**	**80.1**	**67.2**	**73.8**	**64.1**	**10**	**12**	**8.1**	**7**	**38.7**	**16.1**
Total Grain Size	--	--	--		**99.8**	**99.8**	**99.9**	**75.3**	**100**	**99.9**	**100.1**	**99.9**	**100.1**	**100**	**100.1**	**100**
Physical Parameters																
Atterberg Classification	--	--	--		**CL**	**CH**	**CL**	**CL**	**CL**	**CL**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**
Specific gravity (su)	--	--	--		**2.68**	**2.73**	**2.7**	**2.73**	**2.73**	**2.65**	**2.71**	**2.67**	**2.69**	**2.69**	**2.71**	**2.69**
Liquid Limit (pct)	--	--	--		**46.8**	**58.1**	**47.9**	**28.1**	**39.4**	**35.5**	--	--	--	--	--	--
Plastic Limit (pct)	--	--	--		**23.2**	**25**	**22.2**	**21.5**	**22.1**	**19**	--	--	--	--	--	--
Plasticity Index (pct)	--	--	--		**23.6**	**33.1**	**25.8**	**6.6**	**17.3**	**16.6**	--	--	--	--	--	--
Moisture (water) Content (pct)	--	--	--		**50.41**	**51.53**	**47.81**	**35.37**	**37.93**	**33.69**	**18.97**	**21.94**	**20.86**	**26.32**	**26.78**	**29.73**
Conventional Parameters																
Total organic carbon (pct)	--	--	--		**1.80**	**1.23**	**0.86**	**0.74**	**0.82**	**0.74**	**0.72**	**2.54**	**3.76**	**1.65**	**0.38 J**	**0.72 J**
Total solids (pct)	--	--	--		**65.4 J**	**66.5 J**	**67.7 J**	**73.6 J**	**72 J**	**74.8 J**	**83.4**	**74.4**	**84.9**	**78.4**	**82.5**	**77.9**
Metals (mg/kg)																
Cadmium	5.1	6.7	--		**0.7**	--	--	**0.6**	--	--	**0.4**	--	--	**0.3**	0.2 U	--
Chromium	260	270	--		**47.6 J**	--	--	**36.8 J**	--	--	**18.4 J**	--	--	**23.3 J**	**26.1**	--
Mercury	0.41	0.59	--		**0.09**	0.06 U	0.07 U	0.06 U	0.06 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.06 U
Zinc	410	960	--		**53**	--	--	**43**	--	--	**25**	--	--	**26**	**32**	--
Aromatic Hydrocarbons (mg/kg-OC)																
Total LPAH	370	780	--		1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	**0.61**	5.3 U	--
Naphthalene	99	170	--		1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--
Acenaphthylene	66	66	--		1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--
Acenaphthene	16	57	--		1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--
Fluorene	23	79	--		1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--
Phenanthrene	100	480	--		1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	**0.61 J**	5.3 U	--
Anthracene	220	1,200	--		1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--
2-Methylnaphthalene	38	64	--		1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--
Total HPAH	960	5,300	--		**1.3**	--	--	2.7 U	--	--	2.8 U	--	--	**1.8**	5.3 U	--
Fluoranthene	160	1,200	--		**0.61 J**	--	--	2.7 U	--	--	2.8 U	--	--	**0.85 J**	5.3 U	--
Pyrene	1,000	1,400	--		**0.67 J**	--	--	2.7 U	--	--	2.8 U	--	--	**0.97 J**	5.3 U	--
Benzo(a)anthracene	110	270	--		1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--
Chrysene	110	460	--		1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--
Benzo(b)fluoranthene	--	--	--		1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--
Benzo(k)fluoranthene	--	--	--		1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--
Total Benzofluoranthenes (b, j, k)	230	450	--		1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--
Benzo(a)pyrene	99	210	--		1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--
Indeno(1,2,3-c,d)pyrene	34	88	--		1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--
Dibenzo(a,h)anthracene	12	33	--		0.34 U	--	--	0.83 U	--	--	0.81 U	--	--	0.37 U	1.6 U	--
Benzo(g,h,i)perylene	31	78	--		1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--

Table 15a
Subsurface Sediment Chemical Testing Results - ASB Primary-Grid

				Location ID:	8-01-VC	8-01-VC	8-01-VC	8-02-VC	8-02-VC	8-02-VC	8-03-VC	8-03-VC	8-03-VC	8-04-VC	8-05-VC	8-05-VC
				Sample ID:	8-01-VC-1-2	8-01-VC-2-3	8-01-VC-3-4	8-02-VC-1-2	8-02-VC-2-3	8-02-VC-3-4	8-03-VC-1-2	8-03-VC-2-3	8-03-VC-3-4	8-04-VC-1-2	8-05-VC-1-2	8-05-VC-2-3
				Sample Date:	8/5/2008	8/5/2008	8/5/2008	8/5/2008	8/5/2008	8/5/2008	8/6/2008	8/6/2008	8/6/2008	8/6/2008	7/28/2008	7/28/2008
				In-Situ Depth[1] (ft):	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	1-2	2-3
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**													
Chlorinated Benzenes (mg/kg-OC)																
1,2-Dichlorobenzene	2.3	2.3	--	0.34 U	--	--	0.83 U	--	--	0.81 U	--	--	0.37 U	1.6 UJ	--	
1,4-Dichlorobenzene	3.1	9	--	0.34 U	--	--	0.83 U	--	--	0.81 U	--	--	0.37 U	1.6 U	--	
1,2,4-Trichlorobenzene	0.81	1.8	--	0.34 U	--	--	0.83 U	--	--	0.81 U	--	--	0.37 U	1.6 U	--	
Hexachlorobenzene	0.38	2.3	--	0.34 U	--	--	0.83 U	--	--	0.81 U	--	--	0.37 U	1.6 U	--	
Phthalates (mg/kg-OC)																
Dimethyl phthalate	53	53	--	1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--	
Diethyl phthalate	61	110	--	1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--	
Di-n-butyl phthalate	220	1,700	--	1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	**5.9**	--	
Butylbenzyl phthalate	4.9	64	--	0.83 U	--	--	2 U	--	--	2.1 U	--	--	0.91 U	4 UJ	--	
Bis(2-ethylhexyl) phthalate	47	78	--	1.1 U	--	--	**1.9 J**	--	--	**4.3**	--	--	1.2 U	5.3 U	--	
Di-n-octyl phthalate	58	4,500	--	1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--	
Miscellaneous (mg/kg-OC)																
Dibenzofuran	15	58	--	1.1 U	--	--	2.7 U	--	--	2.8 U	--	--	1.2 U	5.3 U	--	
Hexachlorobutadiene	3.9	6.2	--	0.34 UJ	--	--	0.83 UJ	--	--	0.81 U	--	--	0.37 U	1.6 UJ	--	
N-Nitrosodiphenylamine	11	11	--	0.34 U	--	--	0.83 U	--	--	0.81 U	--	--	0.37 U	1.6 UJ	--	
Ionizable Organic Compounds (ug/kg)																
Phenol	420	1,200	420	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
2-Methylphenol (o-Cresol)	63	63	63	6.1 U	--	--	6.1 U	--	--	5.8 U	--	--	6.1 U	6 UJ	--	
4-Methylphenol (p-Cresol)	670	670	670	**25**	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
2,4-Dimethylphenol	29	29	29	6.1 UJ	--	--	6.1 UJ	--	--	5.8 UJ	--	--	6.1 UJ	6 UJ	--	
Pentachlorophenol	360	690	140	30 U	--	--	30 U	--	--	29 U	--	--	30 U	30 U	--	
Benzyl alcohol	57	73	57	20 U	--	--	20 U	--	--	20 U	--	--	20 U	30 UJ	--	
Benzoic acid	650	650	650	200 U	--	--	200 U	--	--	200 U	--	--	200 U	200 U	--	
Aromatic Hydrocarbons (ug/kg)																
Total LPAH	--	--	5,200	20 U	--	--	20 U	--	--	20 U	--	--	**10**	20 U	--	
Naphthalene	--	--	2,100	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
Acenaphthylene	--	--	560	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
Acenaphthene	--	--	500	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
Fluorene	--	--	540	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
Phenanthrene	--	--	1,500	20 U	--	--	20 U	--	--	20 U	--	--	**10 J**	20 U	--	
Anthracene	--	--	960	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
2-Methylnaphthalene	--	--	670	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
Total HPAH	--	--	12,000	**23**	--	--	20 U	--	--	20 U	--	--	**30**	20 U	--	
Fluoranthene	--	--	1,700	**11 J**	--	--	20 U	--	--	20 U	--	--	**14 J**	20 U	--	
Pyrene	--	--	2,600	**12 J**	--	--	20 U	--	--	20 U	--	--	**16 J**	20 U	--	
Benzo(a)anthracene	--	--	1,300	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
Chrysene	--	--	1,400	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
Benzo(b)fluoranthene	--	--	--	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
Benzo(k)fluoranthene	--	--	--	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
Total Benzofluoranthenes (b, j, k)	--	--	3,200	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
Benzo(a)pyrene	--	--	1,600	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
Indeno(1,2,3-c,d)pyrene	--	--	600	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
Dibenzo(a,h)anthracene	--	--	230	6.1 U	--	--	6.1 U	--	--	5.8 U	--	--	6.1 U	6 U	--	
Benzo(g,h,i)perylene	--	--	670	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
Chlorinated Benzenes (ug/kg)																
1,2-Dichlorobenzene	--	--	35	6.1 U	--	--	6.1 U	--	--	5.8 U	--	--	6.1 U	6 UJ	--	
1,4-Dichlorobenzene	--	--	110	6.1 U	--	--	6.1 U	--	--	5.8 U	--	--	6.1 U	6 U	--	
1,2,4-Trichlorobenzene	--	--	31	6.1 U	--	--	6.1 U	--	--	5.8 U	--	--	6.1 U	6 U	--	
Hexachlorobenzene	--	--	22	6.1 U	--	--	6.1 U	--	--	5.8 U	--	--	6.1 U	6 U	--	
Miscellaneous (ug/kg)																
Dibenzofuran	--	--	540	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
Hexachlorobutadiene	--	--	11	6.1 UJ	--	--	6.1 UJ	--	--	5.8 U	--	--	6.1 U	6 UJ	--	
N-Nitrosodiphenylamine	--	--	28	6.1 U	--	--	6.1 U	--	--	5.8 U	--	--	6.1 U	6 UJ	--	
Phthalates (ug/kg)																
Dimethyl phthalate	--	--	71	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
Diethyl phthalate	--	--	48	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	
Di-n-butyl phthalate	--	--	1,400	20 U	--	--	20 U	--	--	20 U	--	--	20 U	**22**	--	
Butylbenzyl phthalate	--	--	63	15 U	--	--	15 U	--	--	15 U	--	--	15 U	15 UJ	--	
Bis(2-ethylhexyl) phthalate	--	--	1,300	20 U	--	--	**14 J**	--	--	**31**	--	--	20 U	20 U	--	
Di-n-octyl phthalate	--	--	420	20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--	

Table 15a
Subsurface Sediment Chemical Testing Results - ASB Primary-Grid

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	8-01-VC	8-01-VC	8-01-VC	8-02-VC	8-02-VC	8-02-VC	8-03-VC	8-03-VC	8-03-VC	8-04-VC	8-05-VC	8-05-VC
				Sample ID:	8-01-VC-1-2	8-01-VC-2-3	8-01-VC-3-4	8-02-VC-1-2	8-02-VC-2-3	8-02-VC-3-4	8-03-VC-1-2	8-03-VC-2-3	8-03-VC-3-4	8-04-VC-1-2	8-05-VC-1-2	8-05-VC-2-3
				Sample Date:	8/5/2008	8/5/2008	8/5/2008	8/5/2008	8/5/2008	8/5/2008	8/6/2008	8/6/2008	8/6/2008	8/6/2008	7/28/2008	7/28/2008
				In-Situ Depth[1] (ft):	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	1-2	2-3
Dioxin Furans (ng/kg)																
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--		**1.48**	**0.449 J**	0.0497 U	0.34 U	--	--	0.163 U	--	--	0.141 U	0.107 U	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--		**5.17**	**1.56 J**	0.0488 U	0.261 U	--	--	0.0762 U	--	--	**0.314 J**	0.384 U	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--		**10.8**	**3.22**	0.0879 U	1.18 U	--	--	**0.537 J**	--	--	0.161 U	0.463 U	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--		**25.5**	**7.78**	0.0976 U	1.23 U	--	--	**2.12 J**	--	--	**2.7**	0.584 U	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--		**17.8**	**5**	0.0984 U	1.2 U	--	--	**0.697 J**	--	--	**1.19 J**	0.554 U	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--		**194**	**57.4**	**0.889 J**	**1.83 J**	--	--	**54.5**	--	--	**34.6**	**1.03 J**	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--		**211**	**62.5**	**7.01**	**9.85**	--	--	**550**	--	--	**304**	**5.54**	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--		**61.5**	**20.1**	0.0373 U	0.285 U	--	--	**2.3**	--	--	**3.32**	0.176 U	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--		**3.45**	**1.01 J**	0.158 U	0.177 U	--	--	0.111 U	--	--	0.174 U	0.353 U	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--		**5.25**	**1.68 J**	0.144 U	0.134 U	--	--	**0.497 J**	--	--	**0.412 J**	0.347 U	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--		**2.81**	**0.682 J**	0.0256 U	0.173 U	--	--	**0.846 J**	--	--	**0.52 J**	0.129 U	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--		**2.83**	**0.754 J**	0.0238 U	0.172 U	--	--	**0.346 J**	--	--	0.261 U	0.124 U	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--		**1.48 J**	0.0672 U	0.0329 U	0.188 U	--	--	**0.297 J**	--	--	0.314 U	0.162 U	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--		**3.64**	**1.06 J**	0.0256 U	0.173 U	--	--	**0.675 J**	--	--	**0.434 J**	0.14 U	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--		**6.78**	**1.92 J**	0.0316 U	0.123 U	--	--	**11.3**	--	--	**8.79**	0.0993 U	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--		**1.61 J**	**0.296 J**	0.0425 U	0.142 U	--	--	**0.904 J**	--	--	**0.707 J**	0.13 U	--
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--		**4.12 J**	**1.1 J**	0.312 U	0.452 U	--	--	**31.3**	--	--	**23.7**	0.282 U	--
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--		**618 J**	**177 J**	**1.05 J**	**4.26 J**	--	--	**12.3 J**	--	--	**57.9**	**2.93 J**	--
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--		**723**	**216 J**	**1.08 J**	**4.41 J**	--	--	**12.7 J**	--	--	**52.9 J**	**3.17**	--
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--		**1120**	**332 J**	**2.22 J**	**5.36 J**	--	--	**29.1**	--	--	**65.4**	0.532 U	--
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--		**334**	**97.8**	**2.12**	**3.73**	--	--	**121**	--	--	**75.6**	**2.1**	--
Total Tetrachlorodibenzofuran (TCDF)	--	--	--		**201**	**62.3**	**0.429 J**	0.285 U	--	--	**7.17 J**	--	--	**11.1 J**	**0.153**	--
Total Pentachlorodibenzofuran (PeCDF)	--	--	--		**54**	**17 J**	**0.0791 J**	0.154 U	--	--	**4.05 J**	--	--	**3.57 J**	0.35 U	--
Total Hexachlorodibenzofuran (HxCDF)	--	--	--		**35.3**	**9.37 J**	0.0267 U	0.176 U	--	--	**20.2 J**	--	--	**12.4**	0.138 U	--
Total Heptachlorodibenzofuran (HpCDF)	--	--	--		**15.9**	**4.55**	**0.102 J**	0.131 U	--	--	**38.8**	--	--	**31.1**	**0.238**	--
Total Dioxin/Furan TEQ (WHO) ND=0	--	--	--		**23.1**	**7.02**	**0.0110**	**0.0213**	--	--	**1.77**	--	--	**1.79**	**0.0120**	--
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--		**23.1**	**7.02**	**0.106**	**0.576**	--	--	**1.89**	--	--	**1.90**	**0.433**	--
Guaiacols (ug/kg)																
2-Methoxyphenol (Guaiacol)	--	--	--		20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--
3,4,5-Trichloroguaiacol	--	--	--		20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--
4,5-Dichloroguaiacol	--	--	--		20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--
4,5,6-Trichloroguaiacol	--	--	--		20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--
Tetrachloroguaiacol	--	--	--		20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--
Semi-Volatile Organics (ug/kg)																
1,3-Dichlorobenzene	--	--	170		20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--
1-Methylnaphthalene	--	--	--		20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--
Hexachloroethane	--	--	--		20 U	--	--	20 U	--	--	20 U	--	--	20 U	20 U	--

Table 15a
Subsurface Sediment Chemical Testing Results - ASB Primary-Grid

				Location ID:	8-05-VC	8-06-VC	8-06-VC	8-06-VC	8-07-VC	8-07-VC	8-07-VC	8-08-VC	8-08-VC	8-08-VC	8-09-VC	8-09-VC	8-09-VC
				Sample ID:	8-05-VC-3-4	8-06-VC-1-2	8-06-VC-2-3	8-06-VC-3-4	8-07-VC-1-2	8-07-VC-2-3	8-07-VC-3-4	8-08-VC-1-2	8-08-VC-2-3	8-08-VC-3-4	8-09-VC-1-2	8-09-VC-2-3	8-09-VC-3-4
				Sample Date:	7/28/2008	8/7/2008	8/7/2008	8/7/2008	7/28/2008	7/28/2008	7/28/2008	8/8/2008	8/8/2008	8/8/2008	8/5/2008	8/5/2008	8/5/2008
				In-Situ Depth[1] (ft):	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**														
Grain Size (pct)																	
Total Gravel	--	--	--		**1**	**0.4**	**0.9**	**0.6**	**2.1**	**1.6**	**1.2**	**0.5**	**0.2**	--	**0.5**	--	**0.1**
Total Sand	--	--	--		**83.7**	**85.2**	**93.6**	**92.5**	**72.3**	**75**	**83.1**	**90.4**	**91.4**	**89.7**	**74.1**	**71.3**	**75.4**
Total Silt	--	--	--		**15.4**	**8.9**	**5.5**	**7.1**	**25.6**	**23.3**	**15.7**	**9.2**	**8.4**	**10.3**	**21.4**	**23.3**	**20.8**
Total Clay	--	--	--		--	**5.5**	--	--	--	--	--	--	--	--	**4.2**	**5.4**	**3.8**
Total Fines (Silt + Clay)	--	--	--		**15.4**	**14.4**	**5.5**	**7.1**	**25.6**	**23.3**	**15.7**	**9.2**	**8.4**	**10.3**	**25.6**	**28.7**	**24.6**
Total Grain Size	--	--	--		**100.1**	**100**	**100**	**100.2**	**100**	**99.9**	**100**	**100.1**	**100**	**100**	**100.2**	**100**	**100.1**
Physical Parameters																	
Atterberg Classification	--	--	--		**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**
Specific gravity (su)	--	--	--		**2.7**	**2.69**	**2.72**	**2.73**	**2.67**	**2.72**	**2.7**	**2.71**	**2.73**	**2.71**	**2.66**	**2.71**	**2.72**
Liquid Limit (pct)	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--
Plastic Limit (pct)	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--
Plasticity Index (pct)	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--
Moisture (water) Content (pct)	--	--	--		**23.79**	**18.13**	**21.1**	**21.82**	**30.58**	**21.12**	**18.77**	**22.25**	**21.94**	**19.94**	**34.85**	**24.6**	**22.36**
Conventional Parameters																	
Total organic carbon (pct)	--	--	--		**0.60 J**	**0.50**	**0.23**	**0.14**	**1.19 J**	**0.489 J**	**0.498 J**	**0.55**	**0.52**	**0.48**	**2.17**	**0.50**	**0.54**
Total solids (pct)	--	--	--		**81.1**	**83.8**	**83.2**	**81**	**77.7**	**82.4**	**83.2**	**81.8**	**82.6**	**82.8**	**70.9 J**	**80.5 J**	**80.8 J**
Metals (mg/kg)																	
Cadmium	5.1	6.7	--		--	**0.5**	--	--	**0.4**	--	--	**0.3**	--	--	**0.5**	**0.4**	--
Chromium	260	270	--		--	**17.6**	--	--	**23.8**	--	--	**19.4**	--	--	**25.8 J**	**21.9 J**	--
Mercury	0.41	0.59	--		0.04 U	0.05 UJ	0.04 U	0.05 U	**0.06**	0.05 U	0.05 U	0.04 U	0.05 U	0.04 U	**0.19**	0.05 U	0.04 U
Zinc	410	960	--		--	**22**	--	--	**30**	--	--	**27**	--	--	**35**	**26**	--
Aromatic Hydrocarbons (mg/kg-OC)																	
Total LPAH	370	780	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	**1.9**	4 U	--
Naphthalene	99	170	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	**0.69 J**	4 U	--
Acenaphthylene	66	66	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	0.92 U	4 U	--
Acenaphthene	16	57	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	0.92 U	4 U	--
Fluorene	23	79	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	0.92 U	4 U	--
Phenanthrene	100	480	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	**1.2**	4 U	--
Anthracene	220	1,200	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	0.92 U	4 U	--
2-Methylnaphthalene	38	64	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	0.92 U	4 U	--
Total HPAH	960	5,300	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	**5.6**	4 U	--
Fluoranthene	160	1,200	--		--	4 UJ	--	--	1.7 U	--	--	3.4 UJ	--	--	**1.8**	4 U	--
Pyrene	1,000	1,400	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	**2.2**	4 U	--
Benzo(a)anthracene	110	270	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	**0.46 J**	4 U	--
Chrysene	110	460	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	**0.60 J**	4 U	--
Benzo(b)fluoranthene	--	--	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	**0.55 J**	4 U	--
Benzo(k)fluoranthene	--	--	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	0.92 U	4 U	--
Total Benzofluoranthenes (b, j, k)	230	450	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	**0.55**	4 U	--
Benzo(a)pyrene	99	210	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	0.92 U	4 U	--
Indeno(1,2,3-c,d)pyrene	34	88	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	0.92 U	4 U	--
Dibenzo(a,h)anthracene	12	33	--		--	1.2 U	--	--	0.5 U	--	--	1.1 U	--	--	0.28 U	1.2 U	--
Benzo(g,h,i)perylene	31	78	--		--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	0.92 U	4 U	--

Table 15a
Subsurface Sediment Chemical Testing Results - ASB Primary-Grid

				Location ID:	8-05-VC	8-06-VC	8-06-VC	8-06-VC	8-07-VC	8-07-VC	8-07-VC	8-08-VC	8-08-VC	8-08-VC	8-09-VC	8-09-VC	8-09-VC
				Sample ID:	8-05-VC-3-4	8-06-VC-1-2	8-06-VC-2-3	8-06-VC-3-4	8-07-VC-1-2	8-07-VC-2-3	8-07-VC-3-4	8-08-VC-1-2	8-08-VC-2-3	8-08-VC-3-4	8-09-VC-1-2	8-09-VC-2-3	8-09-VC-3-4
				Sample Date:	7/28/2008	8/7/2008	8/7/2008	8/7/2008	7/28/2008	7/28/2008	7/28/2008	8/8/2008	8/8/2008	8/8/2008	8/5/2008	8/5/2008	8/5/2008
				In-Situ Depth[1] (ft):	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**														
Chlorinated Benzenes (mg/kg-OC)																	
1,2-Dichlorobenzene	2.3	2.3	--	--	1.2 U	--	--	0.5 UJ	--	--	1.1 U	--	--	0.28 U	1.2 U	--	
1,4-Dichlorobenzene	3.1	9	--	--	1.2 U	--	--	0.5 U	--	--	1.1 U	--	--	0.28 U	1.2 U	--	
1,2,4-Trichlorobenzene	0.81	1.8	--	--	1.2 U	--	--	0.5 U	--	--	1.1 U	--	--	0.28 U	1.2 U	--	
Hexachlorobenzene	0.38	2.3	--	--	1.2 U	--	--	0.5 U	--	--	1.1 U	--	--	0.28 U	1.2 U	--	
Phthalates (mg/kg-OC)																	
Dimethyl phthalate	53	53	--	--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	0.92 U	4 U	--	
Diethyl phthalate	61	110	--	--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	0.92 U	4 U	--	
Di-n-butyl phthalate	220	1,700	--	--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	0.92 U	4 U	--	
Butylbenzyl phthalate	4.9	64	--	--	3 U	--	--	1.3 UJ	--	--	2.7 U	--	--	**0.83**	3 U	--	
Bis(2-ethylhexyl) phthalate	47	78	--	--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	**1.4**	4 U	--	
Di-n-octyl phthalate	58	4,500	--	--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	0.92 U	4 U	--	
Miscellaneous (mg/kg-OC)																	
Dibenzofuran	15	58	--	--	4 U	--	--	1.7 U	--	--	3.4 U	--	--	0.92 U	4 U	--	
Hexachlorobutadiene	3.9	6.2	--	--	1.2 U	--	--	0.5 UJ	--	--	1.1 U	--	--	0.28 UJ	1.2 UJ	--	
N-Nitrosodiphenylamine	11	11	--	--	1.2 UJ	--	--	0.5 UJ	--	--	1.1 UJ	--	--	0.28 U	1.2 U	--	
Ionizable Organic Compounds (ug/kg)																	
Phenol	420	1,200	420	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
2-Methylphenol (o-Cresol)	63	63	63	--	5.8 UJ	--	--	6 UJ	--	--	6 UJ	--	--	6.1 U	6.1 U	--	
4-Methylphenol (p-Cresol)	670	670	670	--	20 U	--	--	20 U	--	--	19 U	--	--	**22**	20 U	--	
2,4-Dimethylphenol	29	29	29	--	5.8 UJ	--	--	6 UJ	--	--	6 UJ	--	--	6.1 UJ	6.1 UJ	--	
Pentachlorophenol	360	690	140	--	29 U	--	--	30 U	--	--	30 U	--	--	30 U	30 U	--	
Benzyl alcohol	57	73	57	--	20 UJ	--	--	30 UJ	--	--	19 UJ	--	--	20 U	20 U	--	
Benzoic acid	650	650	650	--	200 U	--	--	200 U	--	--	190 U	--	--	200 U	200 U	--	
Aromatic Hydrocarbons (ug/kg)																	
Total LPAH	--	--	5,200	--	20 U	--	--	20 U	--	--	19 U	--	--	**41**	20 U	--	
Naphthalene	--	--	2,100	--	20 U	--	--	20 U	--	--	19 U	--	--	**15 J**	20 U	--	
Acenaphthylene	--	--	560	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
Acenaphthene	--	--	500	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
Fluorene	--	--	540	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
Phenanthrene	--	--	1,500	--	20 U	--	--	20 U	--	--	19 U	--	--	**26**	20 U	--	
Anthracene	--	--	960	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
2-Methylnaphthalene	--	--	670	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
Total HPAH	--	--	12,000	--	20 U	--	--	20 U	--	--	19 U	--	--	**122**	20 U	--	
Fluoranthene	--	--	1,700	--	20 UJ	--	--	20 U	--	--	19 UJ	--	--	**40**	20 U	--	
Pyrene	--	--	2,600	--	20 U	--	--	20 U	--	--	19 U	--	--	**47**	20 U	--	
Benzo(a)anthracene	--	--	1,300	--	20 U	--	--	20 U	--	--	19 U	--	--	**10 J**	20 U	--	
Chrysene	--	--	1,400	--	20 U	--	--	20 U	--	--	19 U	--	--	**13 J**	20 U	--	
Benzo(b)fluoranthene	--	--	--	--	20 U	--	--	20 U	--	--	19 U	--	--	**12 J**	20 U	--	
Benzo(k)fluoranthene	--	--	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
Total Benzofluoranthenes (b, j, k)	--	--	3,200	--	20 U	--	--	20 U	--	--	19 U	--	--	**12**	20 U	--	
Benzo(a)pyrene	--	--	1,600	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
Indeno(1,2,3-c,d)pyrene	--	--	600	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
Dibenzo(a,h)anthracene	--	--	230	--	5.8 U	--	--	6 U	--	--	6 U	--	--	6.1 U	6.1 U	--	
Benzo(g,h,i)perylene	--	--	670	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
Chlorinated Benzenes (ug/kg)																	
1,2-Dichlorobenzene	--	--	35	--	5.8 U	--	--	6 UJ	--	--	6 U	--	--	6.1 U	6.1 U	--	
1,4-Dichlorobenzene	--	--	110	--	5.8 U	--	--	6 U	--	--	6 U	--	--	6.1 U	6.1 U	--	
1,2,4-Trichlorobenzene	--	--	31	--	5.8 U	--	--	6 U	--	--	6 U	--	--	6.1 U	6.1 U	--	
Hexachlorobenzene	--	--	22	--	5.8 U	--	--	6 U	--	--	6 U	--	--	6.1 U	6.1 U	--	
Miscellaneous (ug/kg)																	
Dibenzofuran	--	--	540	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
Hexachlorobutadiene	--	--	11	--	5.8 U	--	--	6 UJ	--	--	6 U	--	--	6.1 UJ	6.1 UJ	--	
N-Nitrosodiphenylamine	--	--	28	--	5.8 UJ	--	--	6 UJ	--	--	6 UJ	--	--	6.1 U	6.1 U	--	
Phthalates (ug/kg)																	
Dimethyl phthalate	--	--	71	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
Diethyl phthalate	--	--	48	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
Di-n-butyl phthalate	--	--	1,400	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
Butylbenzyl phthalate	--	--	63	--	15 U	--	--	15 UJ	--	--	15 U	--	--	**18**	15 U	--	
Bis(2-ethylhexyl) phthalate	--	--	1,300	--	20 U	--	--	20 U	--	--	19 U	--	--	**30**	20 U	--	
Di-n-octyl phthalate	--	--	420	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	

Table 15a
Subsurface Sediment Chemical Testing Results - ASB Primary-Grid

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	8-05-VC	8-06-VC	8-06-VC	8-06-VC	8-07-VC	8-07-VC	8-07-VC	8-08-VC	8-08-VC	8-08-VC	8-09-VC	8-09-VC	8-09-VC
				Sample ID:	8-05-VC-3-4	8-06-VC-1-2	8-06-VC-2-3	8-06-VC-3-4	8-07-VC-1-2	8-07-VC-2-3	8-07-VC-3-4	8-08-VC-1-2	8-08-VC-2-3	8-08-VC-3-4	8-09-VC-1-2	8-09-VC-2-3	8-09-VC-3-4
				Sample Date:	7/28/2008	8/7/2008	8/7/2008	8/7/2008	7/28/2008	7/28/2008	7/28/2008	8/8/2008	8/8/2008	8/8/2008	8/5/2008	8/5/2008	8/5/2008
				In-Situ Depth[1] (ft):	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4
Dioxin Furans (ng/kg)																	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	0.51 U	--	--	0.135 U	--	--	0.0762 U	--	--	**0.868**	0.399 U	--	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	0.4 U	--	--	0.18 U	--	--	0.135 U	--	--	0.391 U	0.328 U	--	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	0.272 U	--	--	**0.791 J**	--	--	0.148 U	--	--	**1.48 J**	0.293 U	--	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	0.262 U	--	--	**1.64 J**	--	--	0.141 U	--	--	**12.4**	0.318 U	--	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	0.252 U	--	--	**0.98 J**	--	--	0.154 U	--	--	**3.08**	0.31 U	--	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	**1.12 J**	--	--	**25.6**	--	--	**1.05 J**	--	--	**405**	**1.72 J**	--	
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	--	**3.78 J**	--	--	**263**	--	--	**8.01**	--	--	**6380**	**15.5**	--	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	--	0.305 U	--	--	**1.5**	--	--	**0.0836 J**	--	--	**9.09**	0.135 U	--	
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	0.274 U	--	--	0.222 U	--	--	0.14 U	--	--	**1.56 J**	0.229 U	--	
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	0.228 U	--	--	**0.335 J**	--	--	0.138 U	--	--	**3.48**	0.184 U	--	
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	0.334 U	--	--	**0.483 J**	--	--	0.0452 U	--	--	**5.61**	0.165 U	--	
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	0.301 U	--	--	0.0898 U	--	--	0.0434 U	--	--	**2.06 J**	0.161 U	--	
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	0.316 U	--	--	0.116 U	--	--	0.0502 U	--	--	**2.04 J**	0.215 U	--	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	0.324 U	--	--	**0.483 J**	--	--	0.0464 U	--	--	**3.31**	0.176 U	--	
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	0.231 U	--	--	**4.77**	--	--	0.0783 U	--	--	**60.5**	0.226 U	--	
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	0.245 U	--	--	0.34 U	--	--	0.0946 U	--	--	**3.45**	0.281 U	--	
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--	--	0.565 U	--	--	**12.2**	--	--	0.458 U	--	--	**115**	0.891 U	--	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	**3.29 J**	--	--	**32.5**	--	--	**3.07 J**	--	--	**27**	**1.3**	--	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	**3.84**	--	--	**33.8**	--	--	**3.61 J**	--	--	**26.8**	**1.49 J**	--	
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**3.39**	--	--	**44.8**	--	--	**3.26 J**	--	--	**109 J**	**2.51 J**	--	
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	**2.02**	--	--	**53.9**	--	--	**2.32**	--	--	**1110**	**4.79**	--	
Total Tetrachlorodibenzofuran (TCDF)	--	--	--	--	0.305 U	--	--	**6.49 J**	--	--	**0.191 J**	--	--	**29.5 J**	**0.523 J**	--	
Total Pentachlorodibenzofuran (PeCDF)	--	--	--	--	0.25 U	--	--	**2.35 J**	--	--	0.139 U	--	--	**24.6**	0.205 U	--	
Total Hexachlorodibenzofuran (HxCDF)	--	--	--	--	0.318 U	--	--	**8.37 J**	--	--	**0.293**	--	--	**104**	**0.367**	--	
Total Heptachlorodibenzofuran (HpCDF)	--	--	--	--	0.238 U	--	--	**15.7**	--	--	**0.48 J**	--	--	**192**	**0.612**	--	
Total Dioxin/Furan TEQ (WHO) ND=0	--	--	--	--	**0.0123**	--	--	**1.07**	--	--	**0.0213**	--	--	**12.5**	**0.0219**	--	
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--	--	**0.626**	--	--	**1.25**	--	--	**0.182**	--	--	**12.7**	**0.508**	--	
Guaiacols (ug/kg)																	
2-Methoxyphenol (Guaiacol)	--	--	--	--	20 UJ	--	--	20 U	--	--	19 UJ	--	--	20 U	20 U	--	
3,4,5-Trichloroguaiacol	--	--	--	--	20 UJ	--	--	20 U	--	--	19 UJ	--	--	20 U	20 U	--	
4,5-Dichloroguaiacol	--	--	--	--	20 UJ	--	--	20 U	--	--	19 UJ	--	--	20 U	20 U	--	
4,5,6-Trichloroguaiacol	--	--	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
Tetrachloroguaiacol	--	--	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
Semi-Volatile Organics (ug/kg)																	
1,3-Dichlorobenzene	--	--	170	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
1-Methylnaphthalene	--	--	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	
Hexachloroethane	--	--	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	20 U	--	

Notes:

Detected concentration is greater than SMS SQS screening level

Detected concentration is greater than SMS CSL screening level

Detected concentration is greater than 1988 Puget Sound Estuary Program LAET screening level

There are no numeric SMS criteria for dioxin/furans, see 6.1.2. See 7.1.1 for potentially applicable dredge material management criteria.

The site specific Bioaccumulaltion Screening Level (BSL) for mercury is 1.2 mg/kg. (Supplemental RI Report, RETEC 2006)

1. Sample depth is reported as below ASB solids/sand (hard bottom) interface.

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

Total LPAH (Low PAH) are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene. 2-Methylnapthalene is not included in the sum of LPAHs.

Total HPAH (High PAH) are the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzofluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene.

Benzo(j)fluoranthene is included in the total of benzo(b&k)fluoranthenes.

Totals are calculated for LPAH and HPAH as the sum of all detected results. If all are undetcted results, the highest reporting limit value is reported as the sum.

Toxic equivalency (TEQ) values were calculated for the validated dioxin/furan congeners using the 2005 World Health Organization's toxic equivalency factors for mammals. Undetected congeners were assigned a "0" (ND=0) and assigned a concentration equal to half the detection limit (ND=1/2).

-- Sample was not submitted for chemical analysis.

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

mg/kg-OC = milligrams per kilogram organic carbon normalized

ng/kg = nanogram per kilogram

pct = percent

Non-organic carbon normalized samples with TOC results outside of the 0.5-3.5% range were screened against the 1988 Puget Sound Estuary Program LAET

Table 15b
Subsurface Sediment Chemical Testing Results - ASB Secondary-Grid

Analyte	SMS SQS	SMS CSL	Location ID:	8-10-VC	8-10-VC	8-11-VC	8-11-VC	8-11-VC	8-12-VC	8-12-VC	8-12-VC	8-13-VC	8-13-VC	8-13-VC
			Sample ID:	8-10-VC-1-2	8-10-VC-2-3	8-10-VC-3-4	8-11-VC-1-2	8-11-VC-2-3	8-11-VC-3-4	8-12-VC-1-2	8-12-VC-2-3	8-12-VC-3-4	8-13-VC-1-2	8-13-VC-2-3	8-13-VC-3-4
			Sample Date:	8/6/2008	8/6/2008	8/6/2008	8/7/2008	8/7/2008	8/7/2008	8/6/2008	8/6/2008	8/6/2008	8/5/2008	8/5/2008	8/5/2008
			In-Situ Depth[1] (ft):	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4
Conventional Parameters (pct)															
Total organic carbon	--	--		**1.09**	**0.842**	**0.747**	**1.00**	**0.568**	**0.563**	**1.14**	**0.819**	**0.976**	**0.88**	**0.828**	**0.629**
Total solids	--	--		**69.8**	**73.4**	**70.5**	**78**	**79.1**	**78.4**	**71.8**	**62.6**	**72.9**	**73.3 J**	**73.9 J**	**72.7 J**
Metals (mg/kg)															
Mercury	0.41	0.59		**0.09**	0.07 U	0.06 U	0.06 UJ	0.06 UJ	0.05 UJ	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U	0.06 U
Dioxin Furans (ng/kg)															
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--		**0.431 J**	**0.135 J**	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--		**0.472 J**	**0.274 J**	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		**1.18 J**	**0.759 J**	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		**4.33**	**1.8 J**	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		**1.6 J**	**0.942 J**	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--		**90.7**	**31.1**	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--		**892**	**267**	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--		**7.56**	**2.47**	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--		**0.427 J**	0.0509 U	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--		**1.03 J**	**0.394 J**	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--		**1.49 J**	**0.728 J**	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--		**0.623 J**	**0.413 J**	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--		**0.487 J**	0.0662 U	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--		**1.04 J**	**0.391 J**	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--		**23.7**	**9.93**	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--		**1.24 J**	**0.564 J**	--	--	--	--	--	--	--	--	--	--
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--		**58.8**	**22.3**	--	--	--	--	--	--	--	--	--	--
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--		**43.8 J**	**43.2 J**	--	--	--	--	--	--	--	--	--	--
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--		**52.7 J**	**48.7 J**	--	--	--	--	--	--	--	--	--	--
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		**78.4**	**60.9 J**	--	--	--	--	--	--	--	--	--	--
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--		**215**	**69.9**	--	--	--	--	--	--	--	--	--	--
Total Tetrachlorodibenzofuran (TCDF)	--	--		**20.7 J**	**7.79 J**	--	--	--	--	--	--	--	--	--	--
Total Pentachlorodibenzofuran (PeCDF)	--	--		**10.5 J**	**3.89 J**	--	--	--	--	--	--	--	--	--	--
Total Hexachlorodibenzofuran (HxCDF)	--	--		**32.5**	**10.8 J**	--	--	--	--	--	--	--	--	--	--
Total Heptachlorodibenzofuran (HpCDF)	--	--		**83.8**	**30 J**	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (WHO) ND=0	--	--		**4.50**	**1.78**	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--		**4.50**	**1.78**	--	--	--	--	--	--	--	--	--	--

Table 15b
Subsurface Sediment Chemical Testing Results - ASB Secondary-Grid

Analyte	SMS SQS	SMS CSL	Location ID:	8-14-VC	8-14-VC	8-15-VC	8-15-VC	8-15-VC	8-16-VC	8-16-VC	8-16-VC	8-17-VC	8-17-VC	8-17-VC
			Sample ID:	8-14-VC-1-2	8-14-VC-2-3	8-14-VC-3-4	8-15-VC-1-2	8-15-VC-2-3	8-15-VC-3-4	8-16-VC-1-2	8-16-VC-2-3	8-16-VC-3-4	8-17-VC-1-2	8-17-VC-2-3	8-17-VC-3-4
			Sample Date:	7/29/2008	7/29/2008	7/29/2008	8/7/2008	8/7/2008	8/7/2008	8/5/2008	8/5/2008	8/5/2008	8/8/2008	8/8/2008	8/8/2008
			In-Situ Depth[1] (ft):	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4
Conventional Parameters (pct)															
Total organic carbon	--	--		**0.461**	**0.52**	**0.617**	**0.551**	**0.445**	**0.482**	**0.52**	**0.653**	**0.252**	**0.436**	**0.521**	**0.644**
Total solids	--	--		**73.9**	**74.3**	**73.1**	**75.4**	**74.9**	**77.5**	**80.6 J**	**80.4 J**	**81.4 J**	**80.1**	**79.2**	**78**
Metals (mg/kg)															
Mercury	0.41	0.59		0.06 U	0.06 U	0.06 U	0.05 U	0.06 U	0.06 U	0.05 U	0.05 U	0.06 U	0.05 U	0.06 U	0.06 U
Dioxin Furans (ng/kg)															
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
Total Tetrachlorodibenzofuran (TCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
Total Pentachlorodibenzofuran (PeCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
Total Hexachlorodibenzofuran (HxCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
Total Heptachlorodibenzofuran (HpCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (WHO) ND=0	--	--		--	--	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--		--	--	--	--	--	--	--	--	--	--	--	--

Table 15b
Subsurface Sediment Chemical Testing Results - ASB Secondary-Grid

Analyte	SMS SQS	SMS CSL	Location ID:	8-18-VC	8-18-VC	8-19-VC	8-19-VC	8-20-VC	8-20-VC	8-20-VC	8-21-VC	8-21-VC	8-21-VC
			Sample ID:	8-18-VC-1-2	8-18-VC-2-3	8-18-VC-3-4	8-19-VC-1-2	8-19-VC-2-3	8-20-VC-1-2	8-20-VC-2-3	8-20-VC-3-4	8-21-VC-1-2	8-21-VC-2-3	8-21-VC-3-4
			Sample Date:	7/28/2008	7/28/2008	7/28/2008	7/28/2008	7/28/2008	8/8/2008	8/8/2008	8/8/2008	7/28/2008	7/28/2008	7/28/2008
			In-Situ Depth[1] (ft):	1-2	2-3	3-4	1-2	2-3	1-2	2-3	3-4	1-2	2-3	3-4
Conventional Parameters (pct)														
Total organic carbon	--	--		**0.359 J**	**0.298 J**	**0.359 J**	**2.81 J**	**0.63 J**	**0.668**	**0.564**	**0.459**	**0.256 J**	**0.257 J**	**0.255 J**
Total solids	--	--		**75.6**	**79.5**	**80.6**	**78.5**	**77.2**	**82**	**82.9**	**83.7**	**84.9**	**81.7**	**81.7**
Metals (mg/kg)														
Mercury	0.41	0.59		0.06 U	0.06 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.06 U	0.05 U
Dioxin Furans (ng/kg)														
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--		--	--	--	--	--	--	--	--	--	--	--
Total Tetrachlorodibenzofuran (TCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--
Total Pentachlorodibenzofuran (PeCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--
Total Hexachlorodibenzofuran (HxCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--
Total Heptachlorodibenzofuran (HpCDF)	--	--		--	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (WHO) ND=0	--	--		--	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--		--	--	--	--	--	--	--	--	--	--	--

Table 15b
Subsurface Sediment Chemical Testing Results - ASB Secondary-Grid

Analyte	SMS SQS	SMS CSL	Location ID:	8-22-VC	8-22-VC	8-22-VC	8-23-VC	8-23-VC	8-23-VC	8-24-VC	8-24-VC	8-24-VC	8-25-VC	8-25-VC	8-25-VC
			Sample ID:	8-22-VC-1-2	8-22-VC-2-3	8-22-VC-3-4	8-23-VC-1-2	8-23-VC-2-3	8-23-VC-3-4	8-24-VC-1-2	8-24-VC-2-3	8-24-VC-3-4	8-25-VC-1-2	8-25-VC-2-3	8-25-VC-3-4
			Sample Date:	8/7/2008	8/7/2008	8/7/2008	8/7/2008	8/7/2008	8/7/2008	8/8/2008	8/8/2008	8/8/2008	8/7/2008	8/7/2008	8/7/2008
			In-Situ Depth[1] (ft):	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4
Conventional Parameters (pct)															
Total organic carbon	--	--		**0.482**	**0.472**	**0.59**	**0.428**	**0.443**	**0.491**	**0.593**	**0.495**	**0.753**	**1.09**	**0.807**	**0.522**
Total solids	--	--		**84.1**	**82.9**	**80.9**	**80.6**	**80.3**	**79.6**	**82.9**	**82.4**	**81.6**	**80.8**	**82.7**	**82.5**
Metals (mg/kg)															
Mercury	0.41	0.59		0.05 UJ	0.05 UJ	0.06 UJ	0.06 UJ	0.05 UJ	0.05 UJ	0.05 U	0.05 U	0.05 U	**0.1 J**	0.05 UJ	0.05 UJ
Dioxin Furans (ng/kg)															
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--		--	--	--	--	--	--	--	--	--	**0.243 J**	0.037 U	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--		--	--	--	--	--	--	--	--	--	**0.346 J**	0.309 U	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		--	--	--	--	--	--	--	--	--	**0.42 J**	0.0809 U	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		--	--	--	--	--	--	--	--	--	**4.58**	0.0882 U	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		--	--	--	--	--	--	--	--	--	**1.02 J**	0.0921 U	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--		--	--	--	--	--	--	--	--	--	**125**	**2.15 J**	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--		--	--	--	--	--	--	--	--	--	**1840**	**23.4**	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--		--	--	--	--	--	--	--	--	--	**2.54**	**0.0922 J**	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--		--	--	--	--	--	--	--	--	--	**0.442 J**	0.104 U	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--		--	--	--	--	--	--	--	--	--	**1.41 J**	0.0883 U	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--		--	--	--	--	--	--	--	--	--	**1.98 J**	0.0281 U	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--		--	--	--	--	--	--	--	--	--	**0.809 J**	0.0269 U	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--		--	--	--	--	--	--	--	--	--	**0.73 J**	0.0371 U	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--		--	--	--	--	--	--	--	--	--	**1.2 J**	0.0274 U	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--		--	--	--	--	--	--	--	--	--	**27.4**	**0.31 J**	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--		--	--	--	--	--	--	--	--	--	**1.15 J**	0.0577 U	--
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--		--	--	--	--	--	--	--	--	--	**71.5**	**0.587 J**	--
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--		--	--	--	--	--	--	--	--	--	**9.11 J**	**1.7 J**	--
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--		--	--	--	--	--	--	--	--	--	**11.3 J**	**1.94 J**	--
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--		--	--	--	--	--	--	--	--	--	**34.9**	**3.05 J**	--
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--		--	--	--	--	--	--	--	--	--	**324**	**6.23**	--
Total Tetrachlorodibenzofuran (TCDF)	--	--		--	--	--	--	--	--	--	--	--	**10.4 J**	**0.219 J**	--
Total Pentachlorodibenzofuran (PeCDF)	--	--		--	--	--	--	--	--	--	--	--	**12.7 J**	**0.244 J**	--
Total Hexachlorodibenzofuran (HxCDF)	--	--		--	--	--	--	--	--	--	--	--	**42.1**	**0.632 J**	--
Total Heptachlorodibenzofuran (HpCDF)	--	--		--	--	--	--	--	--	--	--	--	**106 J**	**1.16**	--
Total Dioxin/Furan TEQ (WHO) ND=0	--	--		--	--	--	--	--	--	--	--	--	**4.46**	**0.0410**	--
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--		--	--	--	--	--	--	--	--	--	**4.46**	**0.248**	--

Notes:

Detected concentration is greater than SMS SQS screening level

Detected concentration is greater than SMS CSL screening level

1. Sample depth is reported as below ASB solids/sand (hardbottom) interface.

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

Toxic equivalency (TEQ) values were calculated for the validated dioxin/furan congeners using the 2005 World Health Organization's toxic equivalency factors for mammals. Undetected congeners were assigned a "0" (ND=0) and assigned a concentration equal to ½ the detection limit (ND=1/2).

-- Sample was not submitted for chemical analysis.

mg/kg = milligrams per kilogram

ng/kg = nanogram per kilogram

pct = percent

There are no numeric SMS criteria for dioxin/furans, see 6.1.2. See 7.1.1 for potentially applicable dredge material management criteria.

The site specific Bioaccumulaltion Screening Level (BSL) for mercury is 1.2 mg/kg. (Supplemental RI Report, RETEC 2006)

Table 15c
Subsurface Sediment Chemical Testing Results - ASB Interior Sloping Berm

			Location ID:	8-101B-VC	8-101B-VC	8-101C-VC	8-101C-VC	8-101C-VC	8-102B-VC	8-102B-VC	8-102B-VC	8-102C-VC	8-102C-VC	8-102C-VC	8-103B-VC	8-103B-VC
			Sample ID:	8-101B-VC-1-2	8-101B-VC-2-3	8-101B-VC-3-4	8-101C-VC-1-2	8-101C-VC-2-3	8-101C-VC-3-4	8-102B-VC-1-2	8-102B-VC-2-3	8-102B-VC-3-4	8-102C-VC-1-2	8-102C-VC-2-3	8-102C-VC-3-4	8-103B-VC-1-2	8-103B-VC-2-3
			Sample Date:	7/30/2008	7/30/2008	7/30/2008	7/29/2008	7/29/2008	7/29/2008	7/30/2008	7/30/2008	7/30/2008	7/29/2008	7/29/2008	7/29/2008	7/31/2008	7/31/2008
			In-Situ Depth[1] (ft):	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**														
Conventional Parameters (pct)																	
Total organic carbon	--	--	--	**0.4**	**0.109**	**0.108**	**0.937**	**0.391**	**0.321**	**0.457**	**0.273**	**0.208**	**1.07**	**0.635**	**0.635**	**0.269**	**0.117**
Total solids	--	--	--	**92.8**	**91.6**	**89.4**	**83.5**	**93.2**	**86.8**	**93.2**	**88.7**	**90.8**	**85**	**81.7**	**81.2**	**96.4 J**	**96.3 J**
Metals (mg/kg)																	
Cadmium	5.1	6.7	--	0.2 U	--	--	**0.3**	--	--	**0.4**	--	--	**0.3**	--	--	0.2 U	--
Chromium	260	270	--	**18.6**	--	--	**19.2**	--	--	**33**	--	--	**23.6**	--	--	**22.6**	--
Mercury	0.41	0.59	--	0.04 U	0.04 U	0.05 U	0.05 U	0.05 U	0.04 U	**0.09**	0.04 U	0.05 U	**0.05**	0.05 U	0.04 U	0.05 U	0.04 U
Zinc	410	960	--	**46**	--	--	**27**	--	--	**78**	--	--	**31**	--	--	**38**	--
Aromatic Hydrocarbons (mg/kg-OC)																	
Total LPAH	370	780	--	**5.3**	--	--	2 U	--	--	4.4 U	--	--	**3.0**	--	--	**4.5**	--
Naphthalene	99	170	--	**2.5 J**	--	--	2 U	--	--	4.4 U	--	--	**1.0 J**	--	--	7.1 U	--
Acenaphthylene	66	66	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
Acenaphthene	16	57	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
Fluorene	23	79	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
Phenanthrene	100	480	--	**2.8 J**	--	--	2 U	--	--	4.4 U	--	--	**2.0**	--	--	**4.5 J**	--
Anthracene	220	1,200	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
2-Methylnaphthalene	38	64	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
Total HPAH	960	5,300	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	**6.7**	--	--	7.1 U	--
Fluoranthene	160	1,200	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	**2.6**	--	--	7.1 U	--
Pyrene	1,000	1,400	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	**2.2**	--	--	7.1 U	--
Benzo(a)anthracene	110	270	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
Chrysene	110	460	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	**0.93 J**	--	--	7.1 U	--
Benzo(b)fluoranthene	--	--	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
Benzo(k)fluoranthene	--	--	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
Total Benzofluoranthenes (b, j, k)	230	450	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
Benzo(a)pyrene	99	210	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	**1 J**	--	--	7.1 U	--
Indeno(1,2,3-c,d)pyrene	34	88	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
Dibenzo(a,h)anthracene	12	33	--	1.5 U	--	--	0.66 U	--	--	1.3 U	--	--	0.56 U	--	--	2.2 U	--
Benzo(g,h,i)perylene	31	78	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
Chlorinated Benzenes (mg/kg-OC)																	
1,2-Dichlorobenzene	2.3	2.3	--	1.5 U	--	--	0.66 U	--	--	1.3 U	--	--	0.56 U	--	--	2.2 U	--
1,4-Dichlorobenzene	3.1	9	--	1.5 U	--	--	0.66 U	--	--	1.3 U	--	--	0.56 U	--	--	2.2 U	--
1,2,4-Trichlorobenzene	0.81	1.8	--	1.5 U	--	--	0.66 U	--	--	1.3 U	--	--	0.56 U	--	--	2.2 U	--
Hexachlorobenzene	0.38	2.3	--	1.5 U	--	--	0.66 U	--	--	1.3 U	--	--	0.56 U	--	--	2.2 U	--
Phthalates (mg/kg-OC)																	
Dimethyl phthalate	53	53	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
Diethyl phthalate	61	110	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
Di-n-butyl phthalate	220	1,700	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
Butylbenzyl phthalate	4.9	64	--	3.8 U	--	--	1.7 U	--	--	3.3 U	--	--	1.4 U	--	--	5.6 U	--
Bis(2-ethylhexyl) phthalate	47	78	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
Di-n-octyl phthalate	58	4,500	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
Miscellaneous (mg/kg-OC)																	
Dibenzofuran	15	58	--	4.8 U	--	--	2 U	--	--	4.4 U	--	--	1.8 U	--	--	7.1 U	--
Hexachlorobutadiene	3.9	6.2	--	1.5 UJ	--	--	0.66 UJ	--	--	1.3 UJ	--	--	0.56 UJ	--	--	2.2 UJ	--
N-Nitrosodiphenylamine	11	11	--	1.5 UJ	--	--	0.66 UJ	--	--	1.3 UJ	--	--	0.56 UJ	--	--	2.2 UJ	--
Ionizable Organic Compounds (ug/kg)																	
Phenol	420	1,200	420	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
2-Methylphenol (o-Cresol)	63	63	63	6 UJ	--	--	6.2 UJ	--	--	6 UJ	--	--	6 UJ	--	--	6 UJ	--
4-Methylphenol (p-Cresol)	670	670	670	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
2,4-Dimethylphenol	29	29	29	6 UJ	--	--	6.2 UJ	--	--	6 UJ	--	--	6 UJ	--	--	6 UJ	--
Pentachlorophenol	360	690	140	30 U	--	--	31 U	--	--	30 U	--	--	30 U	--	--	30 U	--
Benzyl alcohol	57	73	57	30 UJ	--	--	31 UJ	--	--	30 UJ	--	--	30 UJ	--	--	30 UJ	--
Benzoic acid	650	650	650	190 U	--	--	190 U	--	--	200 U	--	--	190 U	--	--	190 U	--

Table 15c
Subsurface Sediment Chemical Testing Results - ASB Interior Sloping Berm

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	8-101B-VC	8-101B-VC	8-101C-VC	8-101C-VC	8-101C-VC	8-102B-VC	8-102B-VC	8-102B-VC	8-102C-VC	8-102C-VC	8-102C-VC	8-103B-VC	8-103B-VC
				Sample ID:	8-101B-VC-1-2	8-101B-VC-2-3	8-101B-VC-3-4	8-101C-VC-1-2	8-101C-VC-2-3	8-101C-VC-3-4	8-102B-VC-1-2	8-102B-VC-2-3	8-102B-VC-3-4	8-102C-VC-1-2	8-102C-VC-2-3	8-102C-VC-3-4	8-103B-VC-1-2	8-103B-VC-2-3
				Sample Date:	7/30/2008	7/30/2008	7/30/2008	7/29/2008	7/29/2008	7/29/2008	7/30/2008	7/30/2008	7/30/2008	7/29/2008	7/29/2008	7/29/2008	7/31/2008	7/31/2008
				In-Situ Depth[1] (ft):	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3
Aromatic Hydrocarbons (ug/kg)																		
Total LPAH	--	--	5,200	**21**	--	--	19 U	--	--	20 U	--	--	**32**	--	--	**12**	--
Naphthalene	--	--	2,100	**10 J**	--	--	19 U	--	--	20 U	--	--	**11 J**	--	--	19 U	--
Acenaphthylene	--	--	560	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Acenaphthene	--	--	500	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Fluorene	--	--	540	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Phenanthrene	--	--	1,500	**11 J**	--	--	19 U	--	--	20 U	--	--	**21**	--	--	**12 J**	--
Anthracene	--	--	960	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
2-Methylnaphthalene	--	--	670	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Total HPAH	--	--	12,000	19 U	--	--	19 U	--	--	20 U	--	--	**73**	--	--	19 U	--
Fluoranthene	--	--	1,700	19 U	--	--	19 U	--	--	20 U	--	--	**28**	--	--	19 U	--
Pyrene	--	--	2,600	19 U	--	--	19 U	--	--	20 U	--	--	**24**	--	--	19 U	--
Benzo(a)anthracene	--	--	1,300	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Chrysene	--	--	1,400	19 U	--	--	19 U	--	--	20 U	--	--	**10 J**	--	--	19 U	--
Benzo(b)fluoranthene	--	--	--	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Benzo(k)fluoranthene	--	--	--	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Total Benzofluoranthenes (b, j, k)	--	--	3,200	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Benzo(a)pyrene	--	--	1,600	19 U	--	--	19 U	--	--	20 U	--	--	**11 J**	--	--	19 U	--
Indeno(1,2,3-c,d)pyrene	--	--	600	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Dibenzo(a,h)anthracene	--	--	230	6 U	--	--	6.2 U	--	--	6 U	--	--	6 U	--	--	6 U	--
Benzo(g,h,i)perylene	--	--	670	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Chlorinated Benzenes (ug/kg)																		
1,2-Dichlorobenzene	--	--	35	6 U	--	--	6.2 U	--	--	6 U	--	--	6 U	--	--	6 U	--
1,4-Dichlorobenzene	--	--	110	6 U	--	--	6.2 U	--	--	6 U	--	--	6 U	--	--	6 U	--
1,2,4-Trichlorobenzene	--	--	31	6 U	--	--	6.2 U	--	--	6 U	--	--	6 U	--	--	6 U	--
Hexachlorobenzene	--	--	22	6 U	--	--	6.2 U	--	--	6 U	--	--	6 U	--	--	6 U	--
Miscellaneous (ug/kg)																		
Dibenzofuran	--	--	540	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Hexachlorobutadiene	--	--	11	6 UJ	--	--	6.2 UJ	--	--	6 UJ	--	--	6 UJ	--	--	6 UJ	--
N-Nitrosodiphenylamine	--	--	28	6 UJ	--	--	6.2 UJ	--	--	6 UJ	--	--	6 UJ	--	--	6 UJ	--
Phthalates (ug/kg)																		
Dimethyl phthalate	--	--	71	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Diethyl phthalate	--	--	48	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Di-n-butyl phthalate	--	--	1,400	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Butylbenzyl phthalate	--	--	63	15 U	--	--	16 U	--	--	15 U	--	--	15 U	--	--	15 U	--
Bis(2-ethylhexyl) phthalate	--	--	1,300	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Di-n-octyl phthalate	--	--	420	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Dioxin Furans (ng/kg)																		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	0.393 U	--	--	0.265 U	--	--	**0.178 J**	--	--	**0.398 J**	--	--	**0.0637 J**	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	0.804 U	--	--	0.32 U	--	--	**1 J**	--	--	**0.293 J**	--	--	0.111 U	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**0.801 J**	--	--	0.233 U	--	--	**3.27**	--	--	**0.569 J**	--	--	0.0907 U	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**1.13 J**	--	--	0.286 U	--	--	**5.04**	--	--	**3.83**	--	--	**0.308 J**	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**0.766 J**	--	--	0.29 U	--	--	**3.49**	--	--	**1.19 J**	--	--	0.0874 U	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	**8.01**	--	--	**1.07 J**	--	--	**32.6**	--	--	**113**	--	--	**2.05 J**	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	**16.6**	--	--	**3.33 J**	--	--	**46.4**	--	--	**1,510**	--	--	**6.84**	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	**0.587**	--	--	**0.0963 J**	--	--	**3.92**	--	--	**1.07**	--	--	**0.289 J**	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	0.246 U	--	--	0.102 U	--	--	**0.44 J**	--	--	**0.385 J**	--	--	0.0748 U	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	0.239 U	--	--	0.0901 U	--	--	**0.588 J**	--	--	**1.19 J**	--	--	0.0572 U	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	0.416 U	--	--	0.114 U	--	--	**0.385 J**	--	--	**1.68 J**	--	--	0.0412 U	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	0.389 U	--	--	0.106 U	--	--	**0.348 J**	--	--	**0.673 J**	--	--	0.0393 U	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	0.497 U	--	--	0.126 U	--	--	0.0836 U	--	--	**0.711 J**	--	--	0.047 U	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	0.454 U	--	--	0.108 U	--	--	**0.444 J**	--	--	**0.995 J**	--	--	0.0422 U	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	**0.321 J**	--	--	0.0674 U	--	--	**1.85 J**	--	--	**16.9**	--	--	**1.02 J**	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	0.318 U	--	--	0.0824 U	--	--	0.0298 U	--	--	**0.995 J**	--	--	0.122 U	--
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--	1.41 U	--	--	0.0748 U	--	--	**1.68 J**	--	--	**38.8**	--	--	**0.611 J**	--
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	**40.4 J**	--	--	**4.42**	--	--	**182 J**	--	--	**10.2 J**	--	--	**3.79 J**	--
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	**43.3 J**	--	--	**3.98 J**	--	--	**185**	--	--	**6.82 J**	--	--	**3.2 J**	--
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**47**	--	--	**4.15 J**	--	--	**196**	--	--	**32.3**	--	--	**4.14 J**	--
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	**13.2**	--	--	**1.91**	--	--	**52.7**	--	--	**281**	--	--	**3.7**	--
Total Tetrachlorodibenzofuran (TCDF)	--	--	--	**3.78 J**	--	--	**0.611 J**	--	--	**18.6 J**	--	--	**10.3 J**	--	--	**1.62 J**	--
Total Pentachlorodibenzofuran (PeCDF)	--	--	--	0.243 U	--	--	**0.234 J**	--	--	**6.38**	--	--	**8.05 J**	--	--	**1.46 J**	--
Total Hexachlorodibenzofuran (HxCDF)	--	--	--	**0.898 J**	--	--	**0.559**	--	--	**6.09 J**	--	--	**33.5**	--	--	**2.57**	--
Total Heptachlorodibenzofuran (HpCDF)	--	--	--	**0.969**	--	--	0.074 U	--	--	**5.13**	--	--	**58**	--	--	**2.71**	--
Total Dioxin/Furan TEQ (WHO) ND=0	--	--	--	**0.417**	--	--	**0.0213**	--	--	**3.42**	--	--	**3.90**	--	--	**0.156**	--
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--	**1.14**	--	--	**0.393**	--	--	**3.42**	--	--	**3.90**	--	--	**0.240**	--

Table 15c
Subsurface Sediment Chemical Testing Results - ASB Interior Sloping Berm

			Location ID:	8-101B-VC	8-101B-VC	8-101B-VC	8-101C-VC	8-101C-VC	8-101C-VC	8-102B-VC	8-102B-VC	8-102B-VC	8-102C-VC	8-102C-VC	8-102C-VC	8-103B-VC	8-103B-VC
			Sample ID:	8-101B-VC-1-2	8-101B-VC-2-3	8-101B-VC-3-4	8-101C-VC-1-2	8-101C-VC-2-3	8-101C-VC-3-4	8-102B-VC-1-2	8-102B-VC-2-3	8-102B-VC-3-4	8-102C-VC-1-2	8-102C-VC-2-3	8-102C-VC-3-4	8-103B-VC-1-2	8-103B-VC-2-3
			Sample Date:	7/30/2008	7/30/2008	7/30/2008	7/29/2008	7/29/2008	7/29/2008	7/30/2008	7/30/2008	7/30/2008	7/29/2008	7/29/2008	7/29/2008	7/31/2008	7/31/2008
			In-Situ Depth[1] (ft):	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**														
Guaiacols (ug/kg)																	
2-Methoxyphenol (Guaiacol)	--	--	--	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
3,4,5-Trichloroguaiacol	--	--	--	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
4,5-Dichloroguaiacol	--	--	--	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
4,5,6-Trichloroguaiacol	--	--	--	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Tetrachloroguaiacol	--	--	--	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Semi-Volatile Organics (ug/kg)																	
1,3-Dichlorobenzene	--	--	170	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
1-Methylnaphthalene	--	--	--	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--
Hexachloroethane	--	--	--	19 U	--	--	19 U	--	--	20 U	--	--	19 U	--	--	19 U	--

Table 15c
Subsurface Sediment Chemical Testing Results - ASB Interior Sloping Berm

			Location ID:	8-103B-VC	8-103C-VC	8-103C-VC	8-103C-VC	8-104B-VC	8-104B-VC	8-104B-VC	8-104C-VC	8-104C-VC	8-104C-VC	8-105B-VC	8-105B-VC	8-105B-VC	8-105C-VC
			Sample ID:	8-103B-VC-3-4	8-103C-VC-1-2	8-103C-VC-2-3	8-103C-VC-3-4	8-104B-VC-1-2	8-104B-VC-2-3	8-104B-VC-3-4	8-104C-VC-1-2	8-104C-VC-2-3	8-104C-VC-3-4	8-105B-VC-1-2	8-105B-VC-2-3	8-105B-VC-3-4	8-105C-VC-1-2
			Sample Date:	7/31/2008	7/29/2008	7/29/2008	7/29/2008	7/31/2008	7/31/2008	7/31/2008	8/4/2008	8/4/2008	8/4/2008	7/31/2008	7/31/2008	7/31/2008	8/4/2008
			In-Situ Depth[1] (ft):	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**														
Conventional Parameters (pct)																	
Total organic carbon	--	--	--	**0.169**	**3.78**	**0.637**	**0.421**	**0.238**	**0.225**	**0.139**	**1.13**	**1.34**	**1.11**	**0.134**	**0.162**	**0.139**	**0.53**
Total solids	--	--	--	**96.5 J**	**77.8**	**83.6**	**84.6**	**96.9 J**	**97.1 J**	**96.7 J**	**78.2**	**79.8**	**72.9**	**96.4 J**	**96.1 J**	**96.1 J**	**85.1**
Metals (mg/kg)																	
Cadmium	5.1	6.7	--	--	**0.4**	--	--	0.2 U	--	--	**0.3**	--	--	0.2 U	--	--	0.2 U
Chromium	260	270	--	--	**22.8**	--	--	**18**	--	--	**17.4**	--	--	**21**	--	--	**10.9**
Mercury	0.41	0.59	--	0.04 U	**0.17**	0.05 U	0.05 U	0.05 U	0.04 U	0.04 U	0.04 U	0.05 U	0.05 U	0.04 U	0.05 U	0.05 U	0.05 U
Zinc	410	960	--	--	**33**	--	--	**36**	--	--	**25**	--	--	**37**	--	--	**19**
Aromatic Hydrocarbons (mg/kg-OC)																	
Total LPAH	370	780	--	--	**1.2**	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Naphthalene	99	170	--	--	**0.61**	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Acenaphthylene	66	66	--	--	0.53 U	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Acenaphthene	16	57	--	--	0.53 U	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Fluorene	23	79	--	--	0.53 U	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Phenanthrene	100	480	--	--	**0.56**	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Anthracene	220	1,200	--	--	0.53 U	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
2-Methylnaphthalene	38	64	--	--	**0.37 J**	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Total HPAH	960	5,300	--	--	**3.6**	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Fluoranthene	160	1,200	--	--	**1.2**	--	--	8.4 U	--	--	1.8 UJ	--	--	14 U	--	--	3.8 UJ
Pyrene	1,000	1,400	--	--	**1.1**	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Benzo(a)anthracene	110	270	--	--	**0.32 J**	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Chrysene	110	460	--	--	**0.37 J**	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Benzo(b)fluoranthene	--	--	--	--	**0.29 J**	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Benzo(k)fluoranthene	--	--	--	--	0.53 U	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Total Benzofluoranthenes (b, j, k)	230	450	--	--	**0.29**	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Benzo(a)pyrene	99	210	--	--	**0.29 J**	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Indeno(1,2,3-c,d)pyrene	34	88	--	--	0.53 U	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Dibenzo(a,h)anthracene	12	33	--	--	0.16 U	--	--	2.6 U	--	--	0.55 UJ	--	--	4.6 U	--	--	1.2 U
Benzo(g,h,i)perylene	31	78	--	--	0.53 U	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Chlorinated Benzenes (mg/kg-OC)																	
1,2-Dichlorobenzene	2.3	2.3	--	--	0.16 U	--	--	2.6 U	--	--	0.55 U	--	--	4.6 U	--	--	1.2 U
1,4-Dichlorobenzene	3.1	9	--	--	0.16 U	--	--	2.6 U	--	--	0.55 U	--	--	4.6 U	--	--	1.2 U
1,2,4-Trichlorobenzene	0.81	1.8	--	--	0.16 U	--	--	2.6 U	--	--	0.55 U	--	--	4.6 U	--	--	1.2 U
Hexachlorobenzene	0.38	2.3	--	--	0.16 U	--	--	2.6 U	--	--	0.55 U	--	--	4.6 U	--	--	1.2 U
Phthalates (mg/kg-OC)																	
Dimethyl phthalate	53	53	--	--	0.53 U	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Diethyl phthalate	61	110	--	--	0.53 U	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Di-n-butyl phthalate	220	1,700	--	--	0.53 U	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Butylbenzyl phthalate	4.9	64	--	--	0.4 U	--	--	6.3 U	--	--	1.4 U	--	--	11 U	--	--	2.8 U
Bis(2-ethylhexyl) phthalate	47	78	--	--	0.53 U	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Di-n-octyl phthalate	58	4,500	--	--	0.53 U	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Miscellaneous (mg/kg-OC)																	
Dibenzofuran	15	58	--	--	0.53 U	--	--	8.4 U	--	--	1.8 U	--	--	14 U	--	--	3.8 U
Hexachlorobutadiene	3.9	6.2	--	--	0.16 UJ	--	--	2.6 UJ	--	--	0.55 U	--	--	4.6 UJ	--	--	1.2 U
N-Nitrosodiphenylamine	11	11	--	--	0.16 UJ	--	--	2.6 UJ	--	--	0.55 UJ	--	--	4.6 UJ	--	--	1.2 UJ
Ionizable Organic Compounds (ug/kg)																	
Phenol	420	1,200	420	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U
2-Methylphenol (o-Cresol)	63	63	63	--	6 UJ	--	--	6.1 UJ	--	--	6.2 UJ	--	--	6.1 UJ	--	--	6.1 UJ
4-Methylphenol (p-Cresol)	670	670	670	--	**64**	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U
2,4-Dimethylphenol	29	29	29	--	6 UJ	--	--	6.1 UJ	--	--	6.2 UJ	--	--	6.1 UJ	--	--	6.1 UJ
Pentachlorophenol	360	690	140	--	30 U	--	--	30 U	--	--	31 U	--	--	30 U	--	--	31 U
Benzyl alcohol	57	73	57	--	30 UJ	--	--	30 UJ	--	--	20 UJ	--	--	30 UJ	--	--	20 UJ
Benzoic acid	650	650	650	--	200 U	--	--	200 U	--	--	200 U	--	--	190 U	--	--	200 U

Table 15c
Subsurface Sediment Chemical Testing Results - ASB Interior Sloping Berm

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	8-103B-VC	8-103C-VC	8-103C-VC	8-103C-VC	8-104B-VC	8-104B-VC	8-104B-VC	8-104C-VC	8-104C-VC	8-104C-VC	8-105B-VC	8-105B-VC	8-105B-VC	8-105C-VC
				Sample ID:	8-103B-VC-3-4	8-103C-VC-1-2	8-103C-VC-2-3	8-103C-VC-3-4	8-104B-VC-1-2	8-104B-VC-2-3	8-104B-VC-3-4	8-104C-VC-1-2	8-104C-VC-2-3	8-104C-VC-3-4	8-105B-VC-1-2	8-105B-VC-2-3	8-105B-VC-3-4	8-105C-VC-1-2
				Sample Date:	7/31/2008	7/29/2008	7/29/2008	7/29/2008	7/31/2008	7/31/2008	7/31/2008	8/4/2008	8/4/2008	8/4/2008	7/31/2008	7/31/2008	7/31/2008	8/4/2008
				In-Situ Depth[1] (ft):	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2
Aromatic Hydrocarbons (ug/kg)																		
Total LPAH	--	--	5,200	--	**44**	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Naphthalene	--	--	2,100	--	**23**	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Acenaphthylene	--	--	560	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Acenaphthene	--	--	500	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Fluorene	--	--	540	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Phenanthrene	--	--	1,500	--	**21**	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Anthracene	--	--	960	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
2-Methylnaphthalene	--	--	670	--	**14 J**	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Total HPAH	--	--	12,000	--	**138**	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Fluoranthene	--	--	1,700	--	**47**	--	--	20 U	--	--	20 UJ	--	--	19 U	--	--	20 UJ	
Pyrene	--	--	2,600	--	**43**	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Benzo(a)anthracene	--	--	1,300	--	**12 J**	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Chrysene	--	--	1,400	--	**14 J**	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Benzo(b)fluoranthene	--	--	--	--	**11 J**	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Benzo(k)fluoranthene	--	--	--	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Total Benzofluoranthenes (b, j, k)	--	--	3,200	--	**11**	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Benzo(a)pyrene	--	--	1,600	--	**11 J**	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Indeno(1,2,3-c,d)pyrene	--	--	600	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Dibenzo(a,h)anthracene	--	--	230	--	6 U	--	--	6.1 U	--	--	6.2 UJ	--	--	6.1 U	--	--	6.1 U	
Benzo(g,h,i)perylene	--	--	670	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Chlorinated Benzenes (ug/kg)																		
1,2-Dichlorobenzene	--	--	35	--	6 U	--	--	6.1 U	--	--	6.2 U	--	--	6.1 U	--	--	6.1 U	
1,4-Dichlorobenzene	--	--	110	--	6 U	--	--	6.1 U	--	--	6.2 U	--	--	6.1 U	--	--	6.1 U	
1,2,4-Trichlorobenzene	--	--	31	--	6 U	--	--	6.1 U	--	--	6.2 U	--	--	6.1 U	--	--	6.1 U	
Hexachlorobenzene	--	--	22	--	6 U	--	--	6.1 U	--	--	6.2 U	--	--	6.1 U	--	--	6.1 U	
Miscellaneous (ug/kg)																		
Dibenzofuran	--	--	540	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Hexachlorobutadiene	--	--	11	--	6 UJ	--	--	6.1 UJ	--	--	6.2 U	--	--	6.1 UJ	--	--	6.1 U	
N-Nitrosodiphenylamine	--	--	28	--	6 UJ	--	--	6.1 UJ	--	--	6.2 UJ	--	--	6.1 UJ	--	--	6.1 UJ	
Phthalates (ug/kg)																		
Dimethyl phthalate	--	--	71	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Diethyl phthalate	--	--	48	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Di-n-butyl phthalate	--	--	1,400	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Butylbenzyl phthalate	--	--	63	--	15 U	--	--	15 U	--	--	16 U	--	--	15 U	--	--	15 U	
Bis(2-ethylhexyl) phthalate	--	--	1,300	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Di-n-octyl phthalate	--	--	420	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U	
Dioxin Furans (ng/kg)																		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	**0.284 J**	--	--	0.0741 U	--	--	0.157 U	--	--	0.23 U	--	--	0.329 U	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	**0.536 J**	--	--	0.123 U	--	--	0.161 U	--	--	0.179 U	--	--	0.241 U	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**0.581 J**	--	--	0.0989 U	--	--	**0.452 J**	--	--	0.195 U	--	--	**0.756 J**	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**5.26**	--	--	**0.781 J**	--	--	**0.643 J**	--	--	**0.253 J**	--	--	**1.01 J**	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**1.52 J**	--	--	**0.501 J**	--	--	**0.498 J**	--	--	0.187 U	--	--	**0.63 J**	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	**149**	--	--	**4.86**	--	--	**4.06**	--	--	**1.51 J**	--	--	**10.1**	
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	--	**2,510**	--	--	**9.61**	--	--	**6.34**	--	--	**7.86**	--	--	**57.9**	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	--	**3.33**	--	--	**0.431 J**	--	--	**1.07**	--	--	**0.113 J**	--	--	**1.01**	
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	**0.572 J**	--	--	0.0864 U	--	--	0.103 U	--	--	0.234 U	--	--	0.159 U	
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	**1.6 J**	--	--	0.0781 U	--	--	0.0927 U	--	--	0.188 U	--	--	0.142 U	
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**1.77 J**	--	--	0.0458 U	--	--	0.0824 U	--	--	0.0589 U	--	--	0.0891 U	
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**1.1 J**	--	--	0.0474 U	--	--	0.079 U	--	--	0.0586 U	--	--	0.0889 U	
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**0.59 J**	--	--	0.0519 U	--	--	0.0888 U	--	--	0.062	--	--	0.0968 U	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**1.24 J**	--	--	**0.236 J**	--	--	0.0868 U	--	--	0.0682	--	--	**0.254 J**	
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	**15.6**	--	--	**1.8 J**	--	--	0.0679 U	--	--	**0.731 J**	--	--	**1.34 J**	
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	**0.917 J**	--	--	0.147 U	--	--	0.0879 U	--	--	0.09 U	--	--	0.235 U	
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--	--	**20.6**	--	--	**1.24 J**	--	--	0.224 U	--	--	**0.536 J**	--	--	**2.41 J**	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	**7.97 J**	--	--	**12.7 J**	--	--	**26.9**	--	--	**1.25**	--	--	**28.7 J**	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	**10.2**	--	--	**14**	--	--	**26.8**	--	--	**1.16**	--	--	**30.3**	
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**65.1 J**	--	--	**18.8 J**	--	--	**28.7 J**	--	--	**2.28**	--	--	**35.2**	
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	**470**	--	--	**7.93**	--	--	**7.03**	--	--	**2.93**	--	--	**18.7**	
Total Tetrachlorodibenzofuran (TCDF)	--	--	--	--	**12 J**	--	--	**2.38 J**	--	--	**3.3 J**	--	--	**0.l97**	--	--	**2.58 J**	
Total Pentachlorodibenzofuran (PeCDF)	--	--	--	--	**11 J**	--	--	**1.21 J**	--	--	**1.11 J**	--	--	**0.368**	--	--	**0.737 J**	
Total Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**35.4 J**	--	--	**4.04 J**	--	--	**0.553**	--	--	**1.39**	--	--	**2.38 J**	
Total Heptachlorodibenzofuran (HpCDF)	--	--	--	--	**41.4 J**	--	--	**4.84**	--	--	**0.593**	--	--	**1.85**	--	--	**3.95**	
Total Dioxin/Furan TEQ (WHO) ND=0	--	--	--	--	**5.27**	--	--	**0.265**	--	--	**0.309**	--	--	**0.0615**	--	--	**0.498**	
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--	--	**5.27**	--	--	**0.389**	--	--	**0.501**	--	--	**0.330**	--	--	**0.822**	

Table 15c
Subsurface Sediment Chemical Testing Results - ASB Interior Sloping Berm

			Location ID:	8-103B-VC	8-103C-VC	8-103C-VC	8-103C-VC	8-104B-VC	8-104B-VC	8-104B-VC	8-104C-VC	8-104C-VC	8-104C-VC	8-105B-VC	8-105B-VC	8-105B-VC	8-105C-VC
			Sample ID:	8-103B-VC-3-4	8-103C-VC-1-2	8-103C-VC-2-3	8-103C-VC-3-4	8-104B-VC-1-2	8-104B-VC-2-3	8-104B-VC-3-4	8-104C-VC-1-2	8-104C-VC-2-3	8-104C-VC-3-4	8-105B-VC-1-2	8-105B-VC-2-3	8-105B-VC-3-4	8-105C-VC-1-2
			Sample Date:	7/31/2008	7/29/2008	7/29/2008	7/29/2008	7/31/2008	7/31/2008	7/31/2008	8/4/2008	8/4/2008	8/4/2008	7/31/2008	7/31/2008	7/31/2008	8/4/2008
			In-Situ Depth[1] (ft):	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**														
Guaiacols (ug/kg)																	
2-Methoxyphenol (Guaiacol)	--	--	--	--	20 U	--	--	20 U	--	--	20 UJ	--	--	19 U	--	--	20 UJ
3,4,5-Trichloroguaiacol	--	--	--	--	20 U	--	--	20 U	--	--	20 UJ	--	--	19 U	--	--	20 UJ
4,5-Dichloroguaiacol	--	--	--	--	20 U	--	--	20 U	--	--	20 UJ	--	--	19 U	--	--	20 UJ
4,5,6-Trichloroguaiacol	--	--	--	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U
Tetrachloroguaiacol	--	--	--	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U
Semi-Volatile Organics (ug/kg)																	
1,3-Dichlorobenzene	--	--	170	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U
1-Methylnaphthalene	--	--	--	--	**11 J**	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U
Hexachloroethane	--	--	--	--	20 U	--	--	20 U	--	--	20 U	--	--	19 U	--	--	20 U

Table 15c
Subsurface Sediment Chemical Testing Results - ASB Interior Sloping Berm

			Location ID:	8-105C-VC	8-105C-VC	8-106B-VC	8-106B-VC	8-106B-VC	8-106C-VC	8-106C-VC	8-106C-VC	8-107B-VC	8-107B-VC	8-107B-VC	8-107C-VC	8-107C-VC	8-108B-VC
			Sample ID:	8-105C-VC-2-3	8-105C-VC-3-4	8-106B-VC-1-2	8-106B-VC-2-3	8-106B-VC-3-4	8-106C-VC-1-2	8-106C-VC-2-3	8-106C-VC-3-4	8-107B-VC-1-2	8-107B-VC-2-3	8-107B-VC-3-4	8-107C-VC-1-2	8-107C-VC-2-3	8-108B-VC-1-2
			Sample Date:	8/4/2008	8/4/2008	8/1/2008	8/1/2008	8/1/2008	8/4/2008	8/4/2008	8/4/2008	8/1/2008	8/1/2008	8/1/2008	8/4/2008	8/4/2008	8/1/2008
			In-Situ Depth[1] (ft):	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	1-2
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**														
Conventional Parameters (pct)																	
Total organic carbon	--	--	--	**0.919**	**0.597**	**0.215 J**	**0.141 J**	**0.121 J**	**1.26**	**0.566**	**0.505**	**0.986 J**	**0.151 J**	**0.179 J**	**1.69**	**2.11**	**1.25 J**
Total solids	--	--	--	**80.9**	**80.1**	**95.8**	**95.6**	**96.3**	**83.9**	**73.4**	**81.2**	**93.9**	**96.2**	**96**	**81.7**	**85.3**	**95.7**
Metals (mg/kg)																	
Cadmium	5.1	6.7	--	--	--	0.2 U	--	--	0.2 U	--	--	0.2 U	--	--	**0.4**	--	0.2 U
Chromium	260	270	--	--	--	**13.5**	--	--	**17.9**	--	--	**19.2**	--	--	**15**	--	**17.7**
Mercury	0.41	0.59	--	0.06 U	0.06 U	0.04 U	0.04 U	0.04 U	0.05 U	0.05 U	0.06 U	**0.05**	0.04 U	0.04 U	**0.05**	0.05 U	0.04 U
Zinc	410	960	--	--	--	**37**	--	--	**25**	--	--	**43**	--	--	**22**	--	**37**
Aromatic Hydrocarbons (mg/kg-OC)																	
Total LPAH	370	780	--	--	--	8.8 U	--	--	1.6 U	--	--	**8.9**	--	--	**6.0**	--	**1.8**
Naphthalene	99	170	--	--	--	8.8 U	--	--	1.6 U	--	--	**3.7**	--	--	**0.65 J**	--	1.5 U
Acenaphthylene	66	66	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	**0.83 J**	--	1.5 U
Acenaphthene	16	57	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	1.2 U	--	1.5 U
Fluorene	23	79	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	1.2 U	--	1.5 U
Phenanthrene	100	480	--	--	--	8.8 U	--	--	1.6 U	--	--	**5.2**	--	--	**3.1**	--	**1.8**
Anthracene	220	1,200	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	**1.4**	--	1.5 U
2-Methylnaphthalene	38	64	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	1.2 U	--	1.5 U
Total HPAH	960	5,300	--	--	--	8.8 U	--	--	1.6 U	--	--	**9.1**	--	--	**27.8**	--	**3.3**
Fluoranthene	160	1,200	--	--	--	8.8 U	--	--	1.6 UJ	--	--	**5.2**	--	--	**5 J**	--	**1.9**
Pyrene	1,000	1,400	--	--	--	8.8 U	--	--	1.6 U	--	--	**3.9**	--	--	**7.1**	--	**1.4 J**
Benzo(a)anthracene	110	270	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	**3.1**	--	1.5 U
Chrysene	110	460	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	**3.3**	--	1.5 U
Benzo(b)fluoranthene	--	--	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	**1.7**	--	1.5 U
Benzo(k)fluoranthene	--	--	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	**2.2**	--	1.5 U
Total Benzofluoranthenes (b, j, k)	230	450	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	**3.9**	--	1.5 U
Benzo(a)pyrene	99	210	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	**3.1**	--	1.5 U
Indeno(1,2,3-c,d)pyrene	34	88	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	**0.95 J**	--	1.5 U
Dibenzo(a,h)anthracene	12	33	--	--	--	2.8 U	--	--	0.47 U	--	--	0.61 U	--	--	0.36 U	--	0.47 U
Benzo(g,h,i)perylene	31	78	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	**1.3**	--	1.5 U
Chlorinated Benzenes (mg/kg-OC)																	
1,2-Dichlorobenzene	2.3	2.3	--	--	--	2.8 U	--	--	0.47 U	--	--	0.61 U	--	--	0.36 U	--	0.47 UJ
1,4-Dichlorobenzene	3.1	9	--	--	--	2.8 U	--	--	0.47 U	--	--	0.61 U	--	--	0.36 U	--	0.47 U
1,2,4-Trichlorobenzene	0.81	1.8	--	--	--	2.8 U	--	--	0.47 U	--	--	0.61 U	--	--	0.36 U	--	0.47 U
Hexachlorobenzene	0.38	2.3	--	--	--	2.8 U	--	--	0.47 U	--	--	0.61 U	--	--	0.36 U	--	0.47 U
Phthalates (mg/kg-OC)																	
Dimethyl phthalate	53	53	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	1.2 U	--	1.5 U
Diethyl phthalate	61	110	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	1.2 U	--	1.5 U
Di-n-butyl phthalate	220	1,700	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	1.2 U	--	1.5 U
Butylbenzyl phthalate	4.9	64	--	--	--	7 U	--	--	1.2 U	--	--	1.5 U	--	--	0.89 U	--	1.2 UJ
Bis(2-ethylhexyl) phthalate	47	78	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	1.2 U	--	1.5 U
Di-n-octyl phthalate	58	4,500	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	1.2 U	--	1.5 U
Miscellaneous (mg/kg-OC)																	
Dibenzofuran	15	58	--	--	--	8.8 U	--	--	1.6 U	--	--	3.5 U	--	--	1.2 U	--	1.5 U
Hexachlorobutadiene	3.9	6.2	--	--	--	2.8 UJ	--	--	0.47 U	--	--	0.61 UJ	--	--	0.36 U	--	0.47 UJ
N-Nitrosodiphenylamine	11	11	--	--	--	2.8 UJ	--	--	0.47 UJ	--	--	0.61 UJ	--	--	0.36 UJ	--	0.47 UJ
Ionizable Organic Compounds (ug/kg)																	
Phenol	420	1,200	420	--	--	19 UJ	--	--	20 U	--	--	35 U	--	--	20 U	--	19 U
2-Methylphenol (o-Cresol)	63	63	63	--	--	6 UJ	--	--	5.9 UJ	--	--	6 UJ	--	--	6 UJ	--	5.9 U
4-Methylphenol (p-Cresol)	670	670	670	--	--	19 U	--	--	20 U	--	--	**23 J**	--	--	**20**	--	19 U
2,4-Dimethylphenol	29	29	29	--	--	6 UJ	--	--	5.9 UJ	--	--	6 UJ	--	--	6 UJ	--	5.9 UJ
Pentachlorophenol	360	690	140	--	--	30 U	--	--	30 U	--	--	30 U	--	--	30 U	--	30 U
Benzyl alcohol	57	73	57	--	--	30 UJ	--	--	20 UJ	--	--	30 UJ	--	--	20 UJ	--	19 UJ
Benzoic acid	650	650	650	--	--	190 UJ	--	--	200 U	--	--	350 U	--	--	200 UJ	--	190 U

Table 15c
Subsurface Sediment Chemical Testing Results - ASB Interior Sloping Berm

			Location ID:	8-105C-VC	8-105C-VC	8-106B-VC	8-106B-VC	8-106B-VC	8-106C-VC	8-106C-VC	8-106C-VC	8-107B-VC	8-107B-VC	8-107B-VC	8-107C-VC	8-107C-VC	8-108B-VC
			Sample ID:	8-105C-VC-2-3	8-105C-VC-3-4	8-106B-VC-1-2	8-106B-VC-2-3	8-106B-VC-3-4	8-106C-VC-1-2	8-106C-VC-2-3	8-106C-VC-3-4	8-107B-VC-1-2	8-107B-VC-2-3	8-107B-VC-3-4	8-107C-VC-1-2	8-107C-VC-2-3	8-108B-VC-1-2
			Sample Date:	8/4/2008	8/4/2008	8/1/2008	8/1/2008	8/1/2008	8/4/2008	8/4/2008	8/4/2008	8/1/2008	8/1/2008	8/1/2008	8/4/2008	8/4/2008	8/1/2008
			In-Situ Depth[1] (ft):	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	1-2
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**														
Aromatic Hydrocarbons (ug/kg)																	
Total LPAH	--	--	5,200	--	--	19 U	--	--	20 U	--	--	**87**	--	--	**101**	--	**22**
Naphthalene	--	--	2,100	--	--	19 U	--	--	20 U	--	--	**36**	--	--	**11 J**	--	19 U
Acenaphthylene	--	--	560	--	--	19 U	--	--	20 U	--	--	35 U	--	--	**14 J**	--	19 U
Acenaphthene	--	--	500	--	--	19 U	--	--	20 U	--	--	35 U	--	--	20 U	--	19 U
Fluorene	--	--	540	--	--	19 U	--	--	20 U	--	--	35 U	--	--	20 U	--	19 U
Phenanthrene	--	--	1,500	--	--	19 U	--	--	20 U	--	--	**51**	--	--	**52**	--	**22**
Anthracene	--	--	960	--	--	19 U	--	--	20 U	--	--	35 U	--	--	**24**	--	19 U
2-Methylnaphthalene	--	--	670	--	--	19 U	--	--	20 U	--	--	35 U	--	--	20 U	--	19 U
Total HPAH	--	--	12,000	--	--	19 U	--	--	20 U	--	--	**89**	--	--	**471**	--	**41**
Fluoranthene	--	--	1,700	--	--	19 U	--	--	20 UJ	--	--	**51**	--	--	**85 J**	--	**24**
Pyrene	--	--	2,600	--	--	19 U	--	--	20 U	--	--	**38**	--	--	**120**	--	**17 J**
Benzo(a)anthracene	--	--	1,300	--	--	19 U	--	--	20 U	--	--	35 U	--	--	**53**	--	19 U
Chrysene	--	--	1,400	--	--	19 U	--	--	20 U	--	--	35 U	--	--	**55**	--	19 U
Benzo(b)fluoranthene	--	--	--	--	--	19 U	--	--	20 U	--	--	35 U	--	--	**29**	--	19 U
Benzo(k)fluoranthene	--	--	--	--	--	19 U	--	--	20 U	--	--	35 U	--	--	**38**	--	19 U
Total Benzofluoranthenes (b, j, k)	--	--	3,200	--	--	19 U	--	--	20 U	--	--	35 U	--	--	**67**	--	19 U
Benzo(a)pyrene	--	--	1,600	--	--	19 U	--	--	20 U	--	--	35 U	--	--	**53**	--	19 U
Indeno(1,2,3-c,d)pyrene	--	--	600	--	--	19 U	--	--	20 U	--	--	35 U	--	--	**16 J**	--	19 U
Dibenzo(a,h)anthracene	--	--	230	--	--	6 U	--	--	5.9 U	--	--	6 U	--	--	6 U	--	5.9 U
Benzo(g,h,i)perylene	--	--	670	--	--	19 U	--	--	20 U	--	--	35 U	--	--	**22**	--	19 U
Chlorinated Benzenes (ug/kg)																	
1,2-Dichlorobenzene	--	--	35	--	--	6 U	--	--	5.9 U	--	--	6 U	--	--	6 U	--	5.9 UJ
1,4-Dichlorobenzene	--	--	110	--	--	6 U	--	--	5.9 U	--	--	6 U	--	--	6 U	--	5.9 U
1,2,4-Trichlorobenzene	--	--	31	--	--	6 U	--	--	5.9 U	--	--	6 U	--	--	6 U	--	5.9 U
Hexachlorobenzene	--	--	22	--	--	6 U	--	--	5.9 U	--	--	6 U	--	--	6 U	--	5.9 U
Miscellaneous (ug/kg)																	
Dibenzofuran	--	--	540	--	--	19 U	--	--	20 U	--	--	35 U	--	--	20 U	--	19 U
Hexachlorobutadiene	--	--	11	--	--	6 UJ	--	--	5.9 U	--	--	6 UJ	--	--	6 U	--	5.9 UJ
N-Nitrosodiphenylamine	--	--	28	--	--	6 UJ	--	--	5.9 UJ	--	--	6 UJ	--	--	6 UJ	--	5.9 UJ
Phthalates (ug/kg)																	
Dimethyl phthalate	--	--	71	--	--	19 U	--	--	20 U	--	--	35 U	--	--	20 U	--	19 U
Diethyl phthalate	--	--	48	--	--	19 U	--	--	20 U	--	--	35 U	--	--	20 U	--	19 U
Di-n-butyl phthalate	--	--	1,400	--	--	19 U	--	--	20 U	--	--	35 U	--	--	20 U	--	19 U
Butylbenzyl phthalate	--	--	63	--	--	15 U	--	--	15 U	--	--	15 U	--	--	15 U	--	15 UJ
Bis(2-ethylhexyl) phthalate	--	--	1,300	--	--	19 U	--	--	20 U	--	--	35 U	--	--	20 U	--	19 U
Di-n-octyl phthalate	--	--	420	--	--	19 U	--	--	20 U	--	--	35 U	--	--	20 U	--	19 U
Dioxin Furans (ng/kg)																	
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	--	0.133 U	--	--	0.184 U	--	--	**1.18**	0.0825 U	--	0.119 U	--	**0.4 J**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	--	0.157 U	--	--	0.266 U	--	--	**4.54**	0.269 U	--	0.183 U	--	**1.09 J**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	0.304 U	--	--	**0.245 J**	--	--	**13.7**	0.201 U	--	0.21 U	--	**3.32**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	**0.407 J**	--	--	0.367 U	--	--	**25.4**	0.225 U	--	**0.246 J**	--	**7.03**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	0.284 U	--	--	0.371 U	--	--	**18.4**	0.212 U	--	0.213 U	--	**4.8**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	--	**1.71 J**	--	--	**1.47 J**	--	--	**186**	**1.68 J**	--	**1.49 J**	--	**56.1**
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	--	--	**6.97**	--	--	**3.44 J**	--	--	**219**	**8.64**	--	**3.88 J**	--	**73**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	--	--	**0.149 J**	--	--	**0.304 J**	--	--	**13.4**	0.02 U	--	**0.551**	--	**3.77**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	0.0896 U	--	--	0.1 U	--	--	**2.45**	0.15 U	--	0.0861 U	--	**0.575 J**
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	0.0765 U	--	--	0.085 U	--	--	**3.31**	0.132 U	--	0.0721 U	--	**0.809 J**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	0.106 U	--	--	0.0771 U	--	--	**2.4 J**	0.105 U	--	0.0437 U	--	**0.709 J**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	0.0982 U	--	--	0.0775 U	--	--	**2.26 J**	0.101 U	--	0.0417 U	--	**0.664 J**
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	0.126 U	--	--	0.0853 U	--	--	**1.01 J**	0.133 U	--	0.0481 U	--	**0.283 J**
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	0.11 U	--	--	0.081 U	--	--	**3.01**	0.102 U	--	0.0454 U	--	**0.861 J**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	**0.952 J**	--	--	0.181 U	--	--	**13.4**	**0.764 J**	--	0.0631 U	--	**6.05**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	0.147 U	--	--	0.205 U	--	--	**1.08 J**	0.0764 U	--	0.0751 U	--	**0.333 J**
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--	--	--	**0.568 J**	--	--	0.176 U	--	--	**8.79**	0.434 U	--	0.116 U	--	**3.66 J**
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	--	**1.95 J**	--	--	**8.3 J**	--	--	**655 J**	**0.37 J**	--	**11.4 J**	--	**150 J**
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	--	**1.22**	--	--	**7.77 J**	--	--	**751 J**	**0.472 J**	--	**9.06 J**	--	**190**
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	**3.01**	--	--	**9.14 J**	--	--	**1,000**	**1.43 J**	--	**8.26 J**	--	**269**
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	--	**3.44**	--	--	**2.64**	--	--	**299**	**3.86**	--	**2.51**	--	**88.7**
Total Tetrachlorodibenzofuran (TCDF)	--	--	--	--	--	**0.371 J**	--	--	**0.943 J**	--	--	**87.9 J**	**0.0722**	--	**4.63 J**	--	**19.8 J**
Total Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	**0.381**	--	--	0.0924 U	--	--	**37.6 J**	**0.183**	--	**1.17 J**	--	**8.83 J**
Total Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	**2.01**	--	--	**0.408 J**	--	--	**35.1 J**	**1.09 J**	--	**0.607 J**	--	**13.9 J**
Total Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	**2.43**	--	--	**0.585**	--	--	**33.6**	**1.71**	--	**0.469**	--	**15.8**
Total Dioxin/Furan TEQ (WHO) ND=0	--	--	--	--	--	**0.0845**	--	--	**0.0706**	--	--	**16.8**	**0.0270**	--	**0.0958**	--	**4.54**
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--	--	--	**0.294**	--	--	**0.365**	--	--	**16.8**	**0.280**	--	**0.290**	--	**4.54**

Table 15c
Subsurface Sediment Chemical Testing Results - ASB Interior Sloping Berm

			Location ID:	8-105C-VC	8-105C-VC	8-106B-VC	8-106B-VC	8-106B-VC	8-106C-VC	8-106C-VC	8-106C-VC	8-107B-VC	8-107B-VC	8-107B-VC	8-107C-VC	8-107C-VC	8-108B-VC
			Sample ID:	8-105C-VC-2-3	8-105C-VC-3-4	8-106B-VC-1-2	8-106B-VC-2-3	8-106B-VC-3-4	8-106C-VC-1-2	8-106C-VC-2-3	8-106C-VC-3-4	8-107B-VC-1-2	8-107B-VC-2-3	8-107B-VC-3-4	8-107C-VC-1-2	8-107C-VC-2-3	8-108B-VC-1-2
			Sample Date:	8/4/2008	8/4/2008	8/1/2008	8/1/2008	8/1/2008	8/4/2008	8/4/2008	8/4/2008	8/1/2008	8/1/2008	8/1/2008	8/4/2008	8/4/2008	8/1/2008
			In-Situ Depth[1] (ft):	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	1-2
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**														
Guaiacols (ug/kg)																	
2-Methoxyphenol (Guaiacol)	--	--	--	--	--	19 UJ	--	--	20 UJ	--	--	35 U	--	--	20 UJ	--	19 U
3,4,5-Trichloroguaiacol	--	--	--	--	--	19 U	--	--	20 UJ	--	--	35 U	--	--	20 UJ	--	19 U
4,5-Dichloroguaiacol	--	--	--	--	--	19 UJ	--	--	20 UJ	--	--	35 U	--	--	20 UJ	--	19 U
4,5,6-Trichloroguaiacol	--	--	--	--	--	19 U	--	--	20 U	--	--	35 U	--	--	20 U	--	19 U
Tetrachloroguaiacol	--	--	--	--	--	19 U	--	--	20 U	--	--	35 U	--	--	20 U	--	19 U
Semi-Volatile Organics (ug/kg)																	
1,3-Dichlorobenzene	--	--	170	--	--	19 U	--	--	20 U	--	--	35 U	--	--	20 U	--	19 U
1-Methylnaphthalene	--	--	--	--	--	19 U	--	--	20 U	--	--	35 U	--	--	20 U	--	19 U
Hexachloroethane	--	--	--	--	--	19 U	--	--	20 U	--	--	35 U	--	--	20 U	--	19 U

Table 15c
Subsurface Sediment Chemical Testing Results - ASB Interior Sloping Berm

			Location ID:	8-108B-VC	8-108B-VC	8-108C-VC	8-108C-VC	8-109B-VC	8-109B-VC	8-109B-VC	8-109C-VC	8-109C-VC	8-109C-VC	8-110B-VC	8-110B-VC	8-110C-VC	8-110C-VC
			Sample ID:	8-108B-VC-2-3	8-108B-VC-3-4	8-108C-VC-1-2	8-108C-VC-2-3	8-109B-VC-1-2	8-109B-VC-2-3	8-109B-VC-3-4	8-109C-VC-1-2	8-109C-VC-2-3	8-109C-VC-3-4	8-110B-VC-1-2	8-110B-VC-2-3	8-110C-VC-1-2	8-110C-VC-2-3
			Sample Date:	8/1/2008	8/1/2008	8/1/2008	8/1/2008	7/30/2008	7/30/2008	7/30/2008	8/1/2008	8/1/2008	8/1/2008	7/31/2008	7/31/2008	7/29/2008	7/29/2008
			In-Situ Depth[1] (ft):	2-3	3-4	1-2	2-3	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	1-2	2-3
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**														
Conventional Parameters (pct)																	
Total organic carbon	--	--	--	**0.236 J**	**0.188 J**	**0.239**	**0.72**	**0.151**	**0.137**	**0.113**	**0.26**	**0.519**	**0.5**	**0.127**	**0.145**	**0.986**	**0.61**
Total solids	--	--	--	**95.5**	**95.2**	**89.9 J**	**86.4 J**	**91**	**94.3**	**93.8**	**90.4 J**	**91.2 J**	**85.7 J**	**96.9 J**	**96.4 J**	**85.5**	**84.8**
Metals (mg/kg)																	
Cadmium	5.1	6.7	--	--	--	0.2 U	--	0.2 U	--	--	**0.3**	--	--	0.2 U	--	**0.3**	--
Chromium	260	270	--	--	--	**23.6 J**	--	**17.8**	--	--	**20.7 J**	--	--	**20.7**	--	**16.3**	--
Mercury	0.41	0.59	--	0.05 U	0.04 U	0.05 U	0.05 U	0.05 U	0.04 U	0.04 U	0.04 U	0.05 U	0.04 U	0.05 U	0.04 U	0.05 U	0.04 U
Zinc	410	960	--	--	--	**36**	--	**36**	--	--	**24**	--	--	**37**	--	**25**	--
Aromatic Hydrocarbons (mg/kg-OC)																	
Total LPAH	370	780	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Naphthalene	99	170	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Acenaphthylene	66	66	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Acenaphthene	16	57	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Fluorene	23	79	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Phenanthrene	100	480	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Anthracene	220	1,200	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
2-Methylnaphthalene	38	64	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Total HPAH	960	5,300	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Fluoranthene	160	1,200	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Pyrene	1,000	1,400	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Benzo(a)anthracene	110	270	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Chrysene	110	460	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Benzo(b)fluoranthene	--	--	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Benzo(k)fluoranthene	--	--	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Total Benzofluoranthenes (b, j, k)	230	450	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Benzo(a)pyrene	99	210	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Indeno(1,2,3-c,d)pyrene	34	88	--	--	--	8.4 U	--	13 U	--	--	7.3 UJ	--	--	16 U	--	1.9 U	--
Dibenzo(a,h)anthracene	12	33	--	--	--	2.6 U	--	4 U	--	--	2.3 U	--	--	4.8 U	--	0.62 U	--
Benzo(g,h,i)perylene	31	78	--	--	--	8.4 U	--	13 U	--	--	7.3 UJ	--	--	16 U	--	1.9 U	--
Chlorinated Benzenes (mg/kg-OC)																	
1,2-Dichlorobenzene	2.3	2.3	--	--	--	2.6 U	--	4 U	--	--	2.3 U	--	--	4.8 U	--	0.62 U	--
1,4-Dichlorobenzene	3.1	9	--	--	--	2.6 U	--	4 U	--	--	2.3 U	--	--	4.8 U	--	0.62 U	--
1,2,4-Trichlorobenzene	0.81	1.8	--	--	--	2.6 U	--	4 U	--	--	2.3 U	--	--	4.8 U	--	0.62 U	--
Hexachlorobenzene	0.38	2.3	--	--	--	2.6 U	--	4 U	--	--	2.3 U	--	--	4.8 U	--	0.62 U	--
Phthalates (mg/kg-OC)																	
Dimethyl phthalate	53	53	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Diethyl phthalate	61	110	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Di-n-butyl phthalate	220	1,700	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Butylbenzyl phthalate	4.9	64	--	--	--	6.3 U	--	9.9 U	--	--	5.8 U	--	--	12 U	--	1.5 U	--
Bis(2-ethylhexyl) phthalate	47	78	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Di-n-octyl phthalate	58	4,500	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Miscellaneous (mg/kg-OC)																	
Dibenzofuran	15	58	--	--	--	8.4 U	--	13 U	--	--	7.3 U	--	--	16 U	--	1.9 U	--
Hexachlorobutadiene	3.9	6.2	--	--	--	2.6 UJ	--	4 UJ	--	--	2.3 UJ	--	--	4.8 UJ	--	0.62 UJ	--
N-Nitrosodiphenylamine	11	11	--	--	--	2.6 U	--	4 UJ	--	--	2.3 U	--	--	4.8 UJ	--	0.62 UJ	--
Ionizable Organic Compounds (ug/kg)																	
Phenol	420	1,200	420	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
2-Methylphenol (o-Cresol)	63	63	63	--	--	6.1 U	--	6 UJ	--	--	6 U	--	--	6.1 UJ	--	6.1 UJ	--
4-Methylphenol (p-Cresol)	670	670	670	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
2,4-Dimethylphenol	29	29	29	--	--	6.1 UJ	--	6 UJ	--	--	6 UJ	--	--	6.1 UJ	--	6.1 UJ	--
Pentachlorophenol	360	690	140	--	--	30 U	--	30 U	--	--	30 U	--	--	30 U	--	30 U	--
Benzyl alcohol	57	73	57	--	--	20 U	--	30 UJ	--	--	19 UJ	--	--	30 UJ	--	30 UJ	--
Benzoic acid	650	650	650	--	--	200 U	--	190 U	--	--	190 U	--	--	200 U	--	190 U	--

Table 15c
Subsurface Sediment Chemical Testing Results - ASB Interior Sloping Berm

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	8-108B-VC	8-108C-VC	8-108C-VC	8-109B-VC	8-109B-VC	8-109B-VC	8-109C-VC	8-109C-VC	8-109C-VC	8-110B-VC	8-110B-VC	8-110C-VC	8-110C-VC
				Sample ID:	8-108B-VC-2-3	8-108B-VC-3-4	8-108C-VC-1-2	8-108C-VC-2-3	8-109B-VC-1-2	8-109B-VC-2-3	8-109B-VC-3-4	8-109C-VC-1-2	8-109C-VC-2-3	8-109C-VC-3-4	8-110B-VC-1-2	8-110B-VC-2-3	8-110C-VC-1-2	8-110C-VC-2-3
				Sample Date:	8/1/2008	8/1/2008	8/1/2008	8/1/2008	7/30/2008	7/30/2008	7/30/2008	8/1/2008	8/1/2008	8/1/2008	7/31/2008	7/31/2008	7/29/2008	7/29/2008
				In-Situ Depth[1] (ft):	2-3	3-4	1-2	2-3	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	1-2	2-3
Aromatic Hydrocarbons (ug/kg)																		
Total LPAH	--	--	5,200	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Naphthalene	--	--	2,100	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Acenaphthylene	--	--	560	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Acenaphthene	--	--	500	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Fluorene	--	--	540	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Phenanthrene	--	--	1,500	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Anthracene	--	--	960	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
2-Methylnaphthalene	--	--	670	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Total HPAH	--	--	12,000	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Fluoranthene	--	--	1,700	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Pyrene	--	--	2,600	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Benzo(a)anthracene	--	--	1,300	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Chrysene	--	--	1,400	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Benzo(b)fluoranthene	--	--	--	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Benzo(k)fluoranthene	--	--	--	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Total Benzofluoranthenes (b, j, k)	--	--	3,200	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Benzo(a)pyrene	--	--	1,600	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Indeno(1,2,3-c,d)pyrene	--	--	600	--	--	20 U	--	19 U	--	--	19 UJ	--	--	20 U	--	19 U	--
Dibenzo(a,h)anthracene	--	--	230	--	--	6.1 U	--	6 U	--	--	6 U	--	--	6.1 U	--	6.1 U	--
Benzo(g,h,i)perylene	--	--	670	--	--	20 U	--	19 U	--	--	19 UJ	--	--	20 U	--	19 U	--
Chlorinated Benzenes (ug/kg)																		
1,2-Dichlorobenzene	--	--	35	--	--	6.1 U	--	6 U	--	--	6 U	--	--	6.1 U	--	6.1 U	--
1,4-Dichlorobenzene	--	--	110	--	--	6.1 U	--	6 U	--	--	6 U	--	--	6.1 U	--	6.1 U	--
1,2,4-Trichlorobenzene	--	--	31	--	--	6.1 U	--	6 U	--	--	6 U	--	--	6.1 U	--	6.1 U	--
Hexachlorobenzene	--	--	22	--	--	6.1 U	--	6 U	--	--	6 U	--	--	6.1 U	--	6.1 U	--
Miscellaneous (ug/kg)																		
Dibenzofuran	--	--	540	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Hexachlorobutadiene	--	--	11	--	--	6.1 UJ	--	6 UJ	--	--	6 UJ	--	--	6.1 UJ	--	6.1 UJ	--
N-Nitrosodiphenylamine	--	--	28	--	--	6.1 U	--	6 UJ	--	--	6 U	--	--	6.1 UJ	--	6.1 UJ	--
Phthalates (ug/kg)																		
Dimethyl phthalate	--	--	71	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Diethyl phthalate	--	--	48	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Di-n-butyl phthalate	--	--	1,400	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Butylbenzyl phthalate	--	--	63	--	--	15 U	--	15 U	--	--	15 U	--	--	15 U	--	15 U	--
Bis(2-ethylhexyl) phthalate	--	--	1,300	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Di-n-octyl phthalate	--	--	420	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Dioxin Furans (ng/kg)																		
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	--	0.303 U	--	0.199 U	--	--	0.155 U	--	--	0.137 U	--	0.255 U	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	--	0.289 U	--	0.539 U	--	--	0.236 U	--	--	0.175 U	--	0.339 U	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	0.209 U	--	**1.4 J**	--	--	**0.584 J**	--	--	**0.284 J**	--	0.158 U	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	**0.511 J**	--	**2.21 J**	--	--	**0.881 J**	--	--	**0.251 J**	--	**0.362 J**	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	0.234 U	--	**1.46 J**	--	--	**0.516 J**	--	--	0.233 U	--	0.174 U	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	--	**7.98**	--	**14**	--	--	**5.06**	--	--	**1.48 J**	--	**3.11**	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	--	--	**74.5**	--	**25.8**	--	--	**13.6**	--	--	**2.56 J**	--	**13.4**	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	--	--	**1.25**	--	**0.862**	--	--	**0.898**	--	--	**0.179 J**	--	**0.239 J**	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	0.204 U	--	0.299 U	--	--	0.16 U	--	--	0.146 U	--	0.127 U	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	0.164 U	--	0.286 U	--	--	0.129 U	--	--	0.136 U	--	0.118 U	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	0.145 U	--	0.316 U	--	--	0.155 U	--	--	0.0498 U	--	0.0832 U	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	0.148 U	--	0.334 U	--	--	0.163 U	--	--	0.0473 U	--	0.0829 U	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	0.178 U	--	0.357 U	--	--	0.183 U	--	--	0.0583 U	--	0.0987 U	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	0.158 U	--	0.349 U	--	--	0.161 U	--	--	0.0491 U	--	0.0852 U	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	**2.09 J**	--	**1.24 J**	--	--	**0.808 J**	--	--	0.0533 U	--	**1.15 J**	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	0.356 U	--	0.325 U	--	--	0.219 U	--	--	0.0697 U	--	0.281 U	--
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--	--	--	**5.69**	--	**0.901 J**	--	--	**0.872 J**	--	--	0.206 U	--	**1.6 J**	--
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	--	**2.38 J**	--	**70.3 J**	--	--	**19.3 J**	--	--	**11.6 J**	--	**7.21 J**	--
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	--	**1.99 J**	--	**74.1**	--	--	**21**	--	--	**11.5**	--	**6.51 J**	--
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	**4.54**	--	**88.5 J**	--	--	**26.3 J**	--	--	**9.87 J**	--	**9.65 J**	--
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	--	**16.9**	--	**23.7**	--	--	**9.51**	--	--	**2.68**	--	**7.59**	--
Total Tetrachlorodibenzofuran (TCDF)	--	--	--	--	--	**2.21 J**	--	**6 J**	--	--	**2.74 J**	--	--	**0.63 J**	--	**1.37 J**	--
Total Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	**0.678 J**	--	**2.59 J**	--	--	0.143 U	--	--	**0.324 J**	--	**0.705 J**	--
Total Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	**3.01 J**	--	**3.31**	--	--	**1.45 J**	--	--	**0.605 J**	--	**1.03 J**	--
Total Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	**6.85**	--	**3.31**	--	--	**1.87**	--	--	**0.689**	--	**2.79**	--
Total Dioxin/Furan TEQ (WHO) ND=0	--	--	--	--	--	**0.301**	--	**0.754**	--	--	**0.351**	--	--	**0.0870**	--	**0.107**	--
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--	--	--	**0.680**	--	**1.24**	--	--	**0.602**	--	--	**0.288**	--	**0.459**	--

Table 15c
Subsurface Sediment Chemical Testing Results - ASB Interior Sloping Berm

			Location ID:	8-108B-VC	8-108B-VC	8-108C-VC	8-108C-VC	8-109B-VC	8-109B-VC	8-109B-VC	8-109C-VC	8-109C-VC	8-109C-VC	8-110B-VC	8-110B-VC	8-110C-VC	8-110C-VC
			Sample ID:	8-108B-VC-2-3	8-108B-VC-3-4	8-108C-VC-1-2	8-108C-VC-2-3	8-109B-VC-1-2	8-109B-VC-2-3	8-109B-VC-3-4	8-109C-VC-1-2	8-109C-VC-2-3	8-109C-VC-3-4	8-110B-VC-1-2	8-110B-VC-2-3	8-110C-VC-1-2	8-110C-VC-2-3
			Sample Date:	8/1/2008	8/1/2008	8/1/2008	8/1/2008	7/30/2008	7/30/2008	7/30/2008	8/1/2008	8/1/2008	8/1/2008	7/31/2008	7/31/2008	7/29/2008	7/29/2008
			In-Situ Depth[1] (ft):	2-3	3-4	1-2	2-3	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	1-2	2-3
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**														
Guaiacols (ug/kg)																	
2-Methoxyphenol (Guaiacol)	--	--	--	--	--	20 U	--	19 U	--	--	**(19 U) R**	--	--	20 U	--	19 U	--
3,4,5-Trichloroguaiacol	--	--	--	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
4,5-Dichloroguaiacol	--	--	--	--	--	20 U	--	19 U	--	--	19 UJ	--	--	20 U	--	19 U	--
4,5,6-Trichloroguaiacol	--	--	--	--	--	20 U	--	19 U	--	--	19 UJ	--	--	20 U	--	19 U	--
Tetrachloroguaiacol	--	--	--	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Semi-Volatile Organics (ug/kg)																	
1,3-Dichlorobenzene	--	--	170	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
1-Methylnaphthalene	--	--	--	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--
Hexachloroethane	--	--	--	--	--	20 U	--	19 U	--	--	19 U	--	--	20 U	--	19 U	--

Table 15c
Subsurface Sediment Chemical Testing Results - ASB Interior Sloping Berm

				Location ID:	8-110C-VC	8-111B-VC	8-111B-VC	8-111B-VC	8-111C-VC	8-111C-VC	8-111C-VC	8-112B-VC	8-112B-VC	8-112B-VC	8-112C-VC	8-112C-VC	8-112C-VC
				Sample ID:	8-110C-VC-3-4	8-111B-VC-1-2	8-111B-VC-2-3	8-111B-VC-3-4	8-111C-VC-1-2	8-111C-VC-2-3	8-111C-VC-3-4	8-112B-VC-1-2	8-112B-VC-2-3	8-112B-VC-3-4	8-112C-VC-1-2	8-112C-VC-2-3	8-112C-VC-3-4
				Sample Date:	7/29/2008	7/31/2008	7/31/2008	7/31/2008	8/1/2008	8/1/2008	8/1/2008	7/31/2008	7/31/2008	7/31/2008	7/30/2008	7/30/2008	7/30/2008
				In-Situ Depth[2] (ft):	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**														
Conventional Parameters (pct)																	
Total organic carbon	--	--	--	**0.592**	**0.28**	**0.216**	**0.195**	**5.5 J**	**3.06**	**0.562**	**1.51**	**0.13**	**0.131**	**1.3**	**0.776**	**0.801**
Total solids	--	--	--	**83.5**	**95.2 J**	**95.8 J**	**95.7 J**	**74.3**	**84.9 J**	**84.7 J**	**95.9 J**	**97 J**	**96.9 J**	**82.4**	**84.9**	**80.8**
Metals (mg/kg)																	
Cadmium	5.1	6.7	--	--	0.2 U	--	--	**0.4**	--	--	**0.2**	0.2 U	--	**0.4**	--	--
Chromium	260	270	--	**16.2**	--	--	**29**	--	--	**25.3**	**15.3**	--	**16.3**	--	--	
Mercury	0.41	0.59	--	0.05 U	0.05 U	0.05 U	0.05 U	**0.08**	0.05 U	0.04 U	**0.27**	0.04 U	0.04 U	0.06 U	0.05 U	0.05 U
Zinc	410	960	--	--	**32**	--	--	**52**	--	--	**41**	**35**	--	**24**	--	--
Aromatic Hydrocarbons (mg/kg-OC)																	
Total LPAH	370	780	--	--	**15.7**	--	--	**3.6**	--	--	**25.7**	15 U	--	**1.4**	--	--
Naphthalene	99	170	--	--	**6.4 J**	--	--	**1**	--	--	**8.6**	15 U	--	**1.4 J**	--	--
Acenaphthylene	66	66	--	--	6.8 U	--	--	0.36 U	--	--	**1.5**	15 U	--	1.5 U	--	--
Acenaphthene	16	57	--	--	6.8 U	--	--	**0.49**	--	--	1.3 U	15 U	--	1.5 U	--	--
Fluorene	23	79	--	--	6.8 U	--	--	**0.42**	--	--	**0.73 J**	15 U	--	1.5 U	--	--
Phenanthrene	100	480	--	--	**9.3**	--	--	**1.4**	--	--	**13.2**	15 U	--	1.5 U	--	--
Anthracene	220	1,200	--	--	6.8 U	--	--	**0.33 J**	--	--	**1.7**	15 U	--	1.5 U	--	--
2-Methylnaphthalene	38	64	--	--	6.8 U	--	--	**0.69**	--	--	**0.73 J**	15 U	--	1.5 U	--	--
Total HPAH	960	5,300	--	--	**19.1**	--	--	**4.9**	--	--	**60.8**	15 U	--	1.5 U	--	--
Fluoranthene	160	1,200	--	--	**12**	--	--	**1.6**	--	--	**19.2**	15 U	--	1.5 U	--	--
Pyrene	1,000	1,400	--	--	**7.1**	--	--	**1.4**	--	--	**15.2**	15 U	--	1.5 U	--	--
Benzo(a)anthracene	110	270	--	--	6.8 U	--	--	**0.4**	--	--	**2.8**	15 U	--	1.5 U	--	--
Chrysene	110	460	--	--	6.8 U	--	--	**0.49**	--	--	**3.8**	15 U	--	1.5 U	--	--
Benzo(b)fluoranthene	--	--	--	--	6.8 U	--	--	**0.33 J**	--	--	**4.4**	15 U	--	1.5 U	--	--
Benzo(k)fluoranthene	--	--	--	--	6.8 U	--	--	**0.33 J**	--	--	**4.4**	15 U	--	1.5 U	--	--
Total Benzofluoranthenes (b, j, k)	230	450	--	--	6.8 U	--	--	**0.66 J**	--	--	**8.8**	15 U	--	1.5 U	--	--
Benzo(a)pyrene	99	210	--	--	6.8 U	--	--	**0.36**	--	--	**3.8**	15 U	--	1.5 U	--	--
Indeno(1,2,3-c,d)pyrene	34	88	--	--	6.8 U	--	--	0.36 U	--	--	**2.6**	15 U	--	1.5 U	--	--
Dibenzo(a,h)anthracene	12	33	--	--	2.2 U	--	--	0.11 U	--	--	0.4 U	4.6 U	--	0.46 U	--	--
Benzo(g,h,i)perylene	31	78	--	--	6.8 U	--	--	0.36 U	--	--	**4.6**	15 U	--	1.5 U	--	--
Chlorinated Benzenes (mg/kg-OC)																	
1,2-Dichlorobenzene	2.3	2.3	--	--	2.2 U	--	--	0.11 UJ	--	--	0.4 U	4.6 U	--	0.46 U	--	--
1,4-Dichlorobenzene	3.1	9	--	--	2.2 U	--	--	0.11 U	--	--	0.4 U	4.6 U	--	0.46 U	--	--
1,2,4-Trichlorobenzene	0.81	1.8	--	--	2.2 U	--	--	0.11 U	--	--	0.4 U	4.6 U	--	0.46 U	--	--
Hexachlorobenzene	0.38	2.3	--	--	2.2 U	--	--	0.11 U	--	--	0.4 U	4.6 U	--	0.46 U	--	--
Phthalates (mg/kg-OC)																	
Dimethyl phthalate	53	53	--	--	6.8 U	--	--	0.36 U	--	--	1.3 U	15 U	--	1.5 U	--	--
Diethyl phthalate	61	110	--	--	6.8 U	--	--	0.36 U	--	--	1.3 U	15 U	--	1.5 U	--	--
Di-n-butyl phthalate	220	1,700	--	--	6.8 U	--	--	0.36 U	--	--	1.3 U	15 U	--	1.5 U	--	--
Butylbenzyl phthalate	4.9	64	--	--	5.4 U	--	--	0.27 UJ	--	--	0.99 U	12 U	--	1.2 U	--	--
Bis(2-ethylhexyl) phthalate	47	78	--	--	6.8 U	--	--	**0.55**	--	--	1.3 U	15 U	--	1.5 U	--	--
Di-n-octyl phthalate	58	4,500	--	--	6.8 U	--	--	0.36 U	--	--	1.3 U	15 U	--	1.5 U	--	--
Miscellaneous (mg/kg-OC)																	
Dibenzofuran	15	58	--	--	6.8 U	--	--	**0.38**	--	--	**2.4**	15 U	--	1.5 U	--	--
Hexachlorobutadiene	3.9	6.2	--	--	2.2 UJ	--	--	0.11 UJ	--	--	0.4 UJ	4.6 UJ	--	0.46 UJ	--	--
N-Nitrosodiphenylamine	11	11	--	--	2.2 UJ	--	--	0.11 UJ	--	--	0.4 UJ	4.6 UJ	--	0.46 UJ	--	--
Ionizable Organic Compounds (ug/kg)																	
Phenol	420	1,200	420	--	19 U	--	--	20 U	--	--	19 U	19 U	--	19 U	--	--
2-Methylphenol (o-Cresol)	63	63	63	--	6.2 UJ	--	--	**8.3 J**	--	--	6.1 UJ	6 UJ	--	6 UJ	--	--
4-Methylphenol (p-Cresol)	670	670	670	--	19 U	--	--	**19 J**	--	--	**52**	19 U	--	**13 J**	--	--
2,4-Dimethylphenol	29	29	29	--	6.2 UJ	--	--	6 UJ	--	--	6.1 UJ	6 UJ	--	6 UJ	--	--
Pentachlorophenol	360	690	140	--	31 U	--	--	30 U	--	--	30 U	30 U	--	30 U	--	--
Benzyl alcohol	57	73	57	--	31 UJ	--	--	30 UJ	--	--	30 UJ	30 UJ	--	30 UJ	--	--
Benzoic acid	650	650	650	--	190 U	--	--	200 U	--	--	190 U	190 U	--	190 U	--	--

Table 15c
Subsurface Sediment Chemical Testing Results - ASB Interior Sloping Berm

			Location ID:	8-110C-VC	8-111B-VC	8-111B-VC	8-111B-VC	8-111C-VC	8-111C-VC	8-111C-VC	8-112B-VC	8-112B-VC	8-112B-VC	8-112C-VC	8-112C-VC	8-112C-VC
			Sample ID:	8-110C-VC-3-4	8-111B-VC-1-2	8-111B-VC-2-3	8-111B-VC-3-4	8-111C-VC-1-2	8-111C-VC-2-3	8-111C-VC-3-4	8-112B-VC-1-2	8-112B-VC-2-3	8-112B-VC-3-4	8-112C-VC-1-2	8-112C-VC-2-3	8-112C-VC-3-4
			Sample Date:	7/29/2008	7/31/2008	7/31/2008	7/31/2008	8/1/2008	8/1/2008	8/1/2008	7/31/2008	7/31/2008	7/31/2008	7/30/2008	7/30/2008	7/30/2008
			In-Situ Depth[2] (ft):	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**													
Aromatic Hydrocarbons (ug/kg)																
Total LPAH	--	--	5,200	--	**44**	--	--	**200**	--	--	**389**	19 U	--	**18**	--	--
Naphthalene	--	--	2,100	--	**18 J**	--	--	**57**	--	--	**130**	19 U	--	**18 J**	--	--
Acenaphthylene	--	--	560	--	19 U	--	--	20 U	--	--	**22**	19 U	--	19 U	--	--
Acenaphthene	--	--	500	--	19 U	--	--	**27**	--	--	19 U	19 U	--	19 U	--	--
Fluorene	--	--	540	--	19 U	--	--	**23**	--	--	**11 J**	19 U	--	19 U	--	--
Phenanthrene	--	--	1,500	--	**26**	--	--	**75**	--	--	**200**	19 U	--	19 U	--	--
Anthracene	--	--	960	--	19 U	--	--	**18 J**	--	--	**26**	19 U	--	19 U	--	--
2-Methylnaphthalene	--	--	670	--	19 U	--	--	**38**	--	--	**11 J**	19 U	--	19 U	--	--
Total HPAH	--	--	12,000	--	**53**	--	--	**269**	--	--	**918**	19 U	--	19 U	--	--
Fluoranthene	--	--	1,700	--	**33**	--	--	**89**	--	--	**290**	19 U	--	19 U	--	--
Pyrene	--	--	2,600	--	**20**	--	--	**75**	--	--	**230**	19 U	--	19 U	--	--
Benzo(a)anthracene	--	--	1,300	--	19 U	--	--	**22**	--	--	**42**	19 U	--	19 U	--	--
Chrysene	--	--	1,400	--	19 U	--	--	**27**	--	--	**58**	19 U	--	19 U	--	--
Benzo(b)fluoranthene	--	--	--	--	19 U	--	--	**18 J**	--	--	**66**	19 U	--	19 U	--	--
Benzo(k)fluoranthene	--	--	--	--	19 U	--	--	**18 J**	--	--	**66**	19 U	--	19 U	--	--
Total Benzofluoranthenes (b, j, k)	--	--	3,200	--	19 U	--	--	**36 J**	--	--	**132**	19 U	--	19 U	--	--
Benzo(a)pyrene	--	--	1,600	--	19 U	--	--	**20**	--	--	**57**	19 U	--	19 U	--	--
Indeno(1,2,3-c,d)pyrene	--	--	600	--	19 U	--	--	20 U	--	--	**40**	19 U	--	19 U	--	--
Dibenzo(a,h)anthracene	--	--	230	--	6.2 U	--	--	6 U	--	--	6.1 U	6 U	--	6 U	--	--
Benzo(g,h,i)perylene	--	--	670	--	19 U	--	--	20 U	--	--	**69**	19 U	--	19 U	--	--
Chlorinated Benzenes (ug/kg)																
1,2-Dichlorobenzene	--	--	35	--	6.2 U	--	--	6 UJ	--	--	6.1 U	6 U	--	6 U	--	--
1,4-Dichlorobenzene	--	--	110	--	6.2 U	--	--	6 U	--	--	6.1 U	6 U	--	6 U	--	--
1,2,4-Trichlorobenzene	--	--	31	--	6.2 U	--	--	6 U	--	--	6.1 U	6 U	--	6 U	--	--
Hexachlorobenzene	--	--	22	--	6.2 U	--	--	6 U	--	--	6.1 U	6 U	--	6 U	--	--
Miscellaneous (ug/kg)																
Dibenzofuran	--	--	540	--	19 U	--	--	**21**	--	--	**36**	19 U	--	19 U	--	--
Hexachlorobutadiene	--	--	11	--	6.2 UJ	--	--	6 UJ	--	--	6.1 UJ	6 UJ	--	6 UJ	--	--
N-Nitrosodiphenylamine	--	--	28	--	6.2 UJ	--	--	6 UJ	--	--	6.1 UJ	6 UJ	--	6 UJ	--	--
Phthalates (ug/kg)																
Dimethyl phthalate	--	--	71	--	19 U	--	--	20 U	--	--	19 U	19 U	--	19 U	--	--
Diethyl phthalate	--	--	48	--	19 U	--	--	20 U	--	--	19 U	19 U	--	19 U	--	--
Di-n-butyl phthalate	--	--	1,400	--	19 U	--	--	20 U	--	--	19 U	19 U	--	19 U	--	--
Butylbenzyl phthalate	--	--	63	--	15 U	--	--	15 UJ	--	--	15 U	15 U	--	15 U	--	--
Bis(2-ethylhexyl) phthalate	--	--	1,300	--	19 U	--	--	**30**	--	--	19 U	19 U	--	19 U	--	--
Di-n-octyl phthalate	--	--	420	--	19 U	--	--	20 U	--	--	19 U	19 U	--	19 U	--	--
Dioxin Furans (ng/kg)																
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	**0.102 J**	--	--	**0.642**	**0.176 J**	--	**0.949**	0.298 U	--	0.328 U	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	**0.804 J**	--	--	**1.95 J**	**0.595 J**	--	**6.81**	0.328 U	--	0.532 U	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**2.81**	--	--	**2.42**	**0.773 J**	--	**24.9**	0.277 U	--	**1.01 J**	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**3.14**	--	--	**14.8**	**4.36**	--	**39.9**	**0.293 J**	--	**1.23 J**	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**2.5**	--	--	**5.34**	**1.43 J**	--	**30.9**	0.285 U	--	**1.11 J**	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	**20**	--	--	**353**	**92.2**	--	**311**	**1.76 J**	--	**9.16**	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	--	**20.5**	--	--	**3,260**	**828**	--	**325**	**2.97 J**	--	**9.43**	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	--	**0.742**	--	--	**3.14**	**1.65**	--	**14.4**	**0.308 J**	--	**0.76**	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	0.0933 U	--	--	**0.919 J**	**0.255 J**	--	**3.03**	0.149 U	--	0.213 U	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	0.0789 U	--	--	**3.73**	**1.16 J**	--	**4.06**	0.13 U	--	0.183 U	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**0.274 J**	--	--	**4.82**	**1.11 J**	--	**1.58 J**	0.0602 U	--	0.175 U	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	0.0597 U	--	--	**2.64**	**0.662 J**	--	**1.78 J**	0.0571 U	--	0.181 U	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	0.0662 U	--	--	**1.45 J**	**0.303 J**	--	**0.716 J**	0.0729 U	--	0.216 U	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	0.0581 U	--	--	**4.9**	**1.47 J**	--	**1.96 J**	0.0563 U	--	0.186 U	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	**0.832 J**	--	--	**131**	**40**	--	**2.69**	0.0932 U	--	0.417 U	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	0.0501 U	--	--	**6.72**	**1.88 J**	--	**0.547 J**	0.107 U	--	0.583 U	--	--
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--	--	**0.647 J**	--	--	**410**	**126**	--	**3.1 J**	0.235 U	--	**0.839 J**	--	--
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	**179**	--	--	**35.7 J**	**15.5 J**	--	**1390**	**6.96 J**	--	**57.1 J**	--	--
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	**193**	--	--	**40.9**	**20.5 J**	--	**1670**	**9.1**	--	**54.8**	--	--
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**166**	--	--	**171**	**55.5 J**	--	**2280**	**10.7 J**	--	**65.7 J**	--	--
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	**31.7**	--	--	**1,080**	**292**	--	**496**	**3.28**	--	**14.6**	--	--
Total Tetrachlorodibenzofuran (TCDF)	--	--	--	--	**5.96 J**	--	--	**37.4 J**	**14.4 J**	--	**120 J**	**0.897 J**	--	**2.87 J**	--	--
Total Pentachlorodibenzofuran (PeCDF)	--	--	--	--	**2.28 J**	--	--	**43.3**	**17.2 J**	--	**46.8 J**	**0.086 J**	--	**0.25 J**	--	--
Total Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**2.67 J**	--	--	**148**	**41.9 J**	--	**19.8 J**	**0.225**	--	**0.402**	--	--
Total Heptachlorodibenzofuran (HpCDF)	--	--	--	--	**2.36**	--	--	**480**	**159**	--	**6.89**	**0.218 J**	--	0.488 U	--	--
Total Dioxin/Furan TEQ (WHO) ND=0	--	--	--	--	**2.07**	--	--	**13.7**	**3.93**	--	**23.9**	**0.0786**	--	**0.506**	--	--
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--	--	**2.09**	--	--	**13.7**	**3.93**	--	**23.9**	**0.455**	--	**1.01**	--	--

Table 15c
Subsurface Sediment Chemical Testing Results - ASB Interior Sloping Berm

			Location ID:	8-110C-VC	8-111B-VC	8-111B-VC	8-111B-VC	8-111C-VC	8-111C-VC	8-111C-VC	8-112B-VC	8-112B-VC	8-112B-VC	8-112C-VC	8-112C-VC	8-112C-VC
			Sample ID:	8-110C-VC-3-4	8-111B-VC-1-2	8-111B-VC-2-3	8-111B-VC-3-4	8-111C-VC-1-2	8-111C-VC-2-3	8-111C-VC-3-4	8-112B-VC-1-2	8-112B-VC-2-3	8-112B-VC-3-4	8-112C-VC-1-2	8-112C-VC-2-3	8-112C-VC-3-4
			Sample Date:	7/29/2008	7/31/2008	7/31/2008	7/31/2008	8/1/2008	8/1/2008	8/1/2008	7/31/2008	7/31/2008	7/31/2008	7/30/2008	7/30/2008	7/30/2008
			In-Situ Depth[1] (ft):	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4	1-2	2-3	3-4
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**													
Guaiacols (ug/kg)																
2-Methoxyphenol (Guaiacol)	--	--	--	--	19 U	--	--	20 U	--	--	19 U	19 U	--	19 U	--	--
3,4,5-Trichloroguaiacol	--	--	--	--	19 U	--	--	20 U	--	--	19 U	19 U	--	19 U	--	--
4,5-Dichloroguaiacol	--	--	--	--	19 U	--	--	20 U	--	--	19 U	19 U	--	19 U	--	--
4,5,6-Trichloroguaiacol	--	--	--	--	19 U	--	--	20 U	--	--	19 U	19 U	--	19 U	--	--
Tetrachloroguaiacol	--	--	--	--	19 U	--	--	20 U	--	--	19 U	19 U	--	19 U	--	--
Semi-Volatile Organics (ug/kg)																
1,3-Dichlorobenzene	--	--	170	--	19 U	--	--	20 U	--	--	19 U	19 U	--	19 U	--	--
1-Methylnaphthalene	--	--	--	--	19 U	--	--	**45**	--	--	19 U	19 U	--	19 U	--	--
Hexachloroethane	--	--	--	--	19 U	--	--	20 U	--	--	19 U	19 U	--	19 U	--	--

Notes:

Detected concentration is greater than SMS SQS screening level

Detected concentration is greater than SMS CSL screening level

Detected concentration is greater than 1988 Puget Sound Estuary Program LAET screening level

1. Sample depth is reported as below ASB solids/sand (hardbottom) interface.

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R= Rejected analytical result due to low or no recoveries in the LCS and/or MS/MSD analyses in both the full scan and SIM SVOC analyses.

Total LPAH (Low PAH) are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene. 2-Methylnapthalene is not included in the sum of LPAHs

Total HPAH (High PAH) are the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzofluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

Benzo(j)fluoranthene is included in the total of benzo(b&k)fluoranthenes

Totals are calculated for LPAH and HPAH as the sum of all detected results. If all are undetcted results, the highest reporting limit value is reported as the sum.

Toxic equivalency (TEQ) values were calculated for the validated dioxin/furan congeners using the 2005 World Health Organization's toxic equivalency factors for mammals. Undetected congeners were assigned a "0" (ND=0) and assigned a concentration equal to ½ the detection limit (ND=1/2).

Total xylene is the sum of o-, m-, p- isomers

-- Sample was not submitted for chemical analysis.

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

mg/kg-OC = milligrams per kilogram organic carbon normalized

ng/kg = nanogram per kilogram

pct = percent

Non-organic carbon normalized samples with TOC results outside of the 0.5-3.5% range were screened against the 1988 Puget Sound Estuary Program LAET

There are no numeric SMS criteria for dioxin/furans, see 6.1.2. See 7.1.1 for potentially applicable dredge material management criteria.

The site specific Bioaccumulaltion Screening Level (BSL) for mercury is 1.2 mg/kg. (Supplemental RI Report, RETEC 2006)

Table 15d
Subsurface Sediment Chemical Testing Results - Composites Beneath ASB Berm

Analyte	SMS SQS	SMS CSL	PS LAET	Transect ID:	8-101	8-102	8-103	8-104	8-105	8-106	8-109	8-110	8-111	8-112
				Sample ID:	8-101BC-C2	8-102C-C2	8-103C-C2	8-104BC-C2	8-105C-C2	8-106C-C2	8-109C-C2	8-110BC-C2	8-111C-C2	8-112C-C2
				Sample Date:	7/29/08	7/29/08	7/29/08	8/4/08	8/4/08	8/4/08	8/1/08	7/29/08	8/1/08	7/30/08
				In-Situ Depth (ft):	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite
Grain Size (pct)														
Total Gravel	--	--	--		**0.7**	**0.1**	**0.4**	**1.7**	--	--	--	**1.0**	**1.6**	--
Total Sand	--	--	--		**78.8**	**86.4**	**86.5**	**80.6**	**68.5**	**84.8**	**85.5**	**53.8**	**88.3**	**80**
Total Silt	--	--	--		**20.5**	**13.5**	**13.1**	**12.5**	**24**	**10.5**	**14.4**	**35**	**10.1**	**15.5**
Total Clay	--	--	--		--	--	--	**5.1**	**7.6**	**4.6**	--	**10.2**	--	**4.5**
Total Fines (Silt + Clay)	--	--	--		**20.5**	**13.5**	**13.1**	**17.6**	**31.6**	**15.1**	**14.4**	**45.2**	**10.1**	**20**
Total Grain Size	--	--	--		**100**	**100**	**100**	**99.9**	**100.1**	**99.9**	**99.9**	**100**	**100**	**100**
Physical Parameters														
Atterberg Classification	--	--	--		**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**
Specific gravity (su)	--	--	--		**2.72**	**2.73**	**2.71**	**2.71**	**2.73**	**2.7**	**2.67**	**2.65**	**2.63**	**2.73**
Moisture (water) Content (pct)	--	--	--		**24.63**	**25.13**	**19.88**	**19.44**	**25.09**	**28.2**	**24.91**	**44.68**	**26.15**	**22.21**
Conventional Parameters														
Ammonia (mg-N/kg)	--	--	--		**46.2**	**72.7**	**73.1**	**181 J**	**9.27 J**	**116 J**	**18**	**18.9**	**290**	**24.3**
Sulfide (mg/kg)	--	--	--		1.18 U	--	**4.66**	1.11 U	**5.27**	**22.4**	**20.7**	--	**1.98**	1.28 U
Total organic carbon (pct)	--	--	--		**0.387**	**0.611**	**0.363**	**0.431**	**0.587**	**1.23**	**0.575**	**0.505**	**0.763**	**0.489**
Total solids (pct)	--	--	--		**79.3**	**80.3**	**81**	**83.6**	**78**	**80.2**	**83.4 J**	**78**	**80.5 J**	**81.6**
Total Solids (preserved) (pct)	--	--	--		**76.8**	--	**78.9**	**81.6**	**76.7**	**75.2**	**75.1**	--	**78.1**	**76.7**
Total volatile solids (pct)	--	--	--		**1.1**	**1.35**	**1.83**	**1.22**	**1.39**	**2.24**	**1.38 J**	**1.65**	**1.76 J**	**1.11**
Metals (mg/kg)														
Antimony	--	--	--		6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	6 UJ	7 UJ	6 UJ	6 U
Arsenic	57	93	--		6 U	6 U	6 U	6 U	6 U	6 U	6 U	7 U	6 U	6 U
Cadmium	5.1	6.7	--		**0.3**	**0.2**	**0.3**	**0.3**	**0.5**	**0.3**	**0.3**	**0.6**	0.2 U	**0.3**
Chromium	260	270	--		**20.9**	**18.2**	**17.5**	**16**	**21.6**	**23.4**	**21**	**31.2**	**17.6**	**18.9**
Copper	390	390	--		**8.1**	**8.9**	**9**	**8.2 J**	**11.9 J**	**15.3 J**	**7.8**	**16.9**	**7.7**	**7.8**
Lead	450	530	--		2 U	2 U	2 U	2 U	2 U	2 U	2 U	3 U	2 U	2 U
Mercury	0.41	0.59	--		0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.04 U	0.05 U	0.05 U	0.05 U
Nickel	--	--	--		**15**	**14**	**14**	**13**	**17**	**16**	**14**	**24**	**14**	**13**
Selenium	--	--	--		**0.3**	**0.4**	0.6 U	**0.2**	**0.3**	**0.3**	**0.3**	0.7 U	**0.3**	0.2 U
Silver	6.1	6.1	--		0.4 U	0.4 U	0.3 U	0.4 U	0.3 U	0.4 U	0.4 U	0.4 U	0.4 U	0.3 U
Zinc	410	960	--		**22**	**22**	**21**	**22**	**28**	**24**	**25**	**37**	**23**	**23**
Butyltins (ug/kg)														
Butyltin (ion)	--	--	--		3.4 U	3.7 U	3.4 U	4 U	3.5 U	3.6 U	3.5 U	3.6 U	3.5 U	3.5 U
Dibutyltin (ion)	--	--	--		4.9 U	5.2 U	4.8 U	5.7 U	4.9 U	5.1 U	4.9 U	5 U	5 U	5 U
Tributyltin (ion)	--	--	--		3.2 U	3.5 U	3.2 U	3.8 U	3.3 U	3.4 U	3.3 U	3.4 U	3.3 U	3.3 U
PCB Aroclors (mg/kg-OC)														
Aroclor 1016	--	--	--		2.5 U	1.6 U	2.6 U	2.3 U	1.7 U	0.8 U	1.7 U	1.9 U	1.3 U	2 U
Aroclor 1221	--	--	--		2.5 U	1.6 U	2.6 U	2.3 U	1.7 U	0.8 U	1.7 U	1.9 U	1.3 U	2 U
Aroclor 1232	--	--	--		2.5 U	1.6 U	2.6 U	2.3 U	1.7 U	0.8 U	1.7 U	1.9 U	1.3 U	2 U
Aroclor 1242	--	--	--		2.5 U	1.6 U	2.6 U	2.3 U	1.7 U	0.8 U	1.7 U	1.9 U	1.3 U	2 U
Aroclor 1248	--	--	--		2.5 U	1.6 U	2.6 U	2.3 U	1.7 U	0.8 U	1.7 U	1.9 U	1.3 U	2 U
Aroclor 1254	--	--	--		2.5 U	1.6 U	2.6 U	2.3 U	1.7 U	0.8 U	1.7 U	1.9 U	1.3 U	2 U
Aroclor 1260	--	--	--		2.5 U	1.6 U	2.6 U	2.3 U	1.7 U	0.8 U	1.7 U	1.9 U	1.3 U	2 U
Aroclor 1262	--	--	--		2.5 U	1.6 U	2.6 U	2.3 U	1.7 U	0.8 U	1.7 U	1.9 U	1.3 U	2 U
Aroclor 1268	--	--	--		2.5 U	1.6 U	2.6 U	2.3 U	1.7 U	0.8 U	1.7 U	1.9 U	1.3 U	2 U
Total PCB	12	65	--		2.5 U	1.6 U	2.6 U	2.3 U	1.7 U	0.8 U	1.7 U	1.9 U	1.3 U	2 U

Table 15d
Subsurface Sediment Chemical Testing Results - Composites Beneath ASB Berm

Analyte	SMS SQS	SMS CSL	PS LAET	Transect ID:	8-101	8-102	8-103	8-104	8-105	8-106	8-109	8-110	8-111	8-112
				Sample ID:	8-101BC-C2	8-102C-C2	8-103C-C2	8-104BC-C2	8-105C-C2	8-106C-C2	8-109C-C2	8-110BC-C2	8-111C-C2	8-112C-C2
				Sample Date:	7/29/08	7/29/08	7/29/08	8/4/08	8/4/08	8/4/08	8/1/08	7/29/08	8/1/08	7/30/08
				In-Situ Depth (ft):	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite
Aromatic Hydrocarbons (mg/kg-OC)														
Total LPAH	370	780	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	**2.0**	2.6 U	4.1 U	
Naphthalene	99	170	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	**2.0 J**	2.6 U	4.1 U	
Acenaphthylene	66	66	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
Acenaphthene	16	57	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
Fluorene	23	79	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
Phenanthrene	100	480	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
Anthracene	220	1,200	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
2-Methylnaphthalene	38	64	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
Total HPAH	960	5,300	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
Fluoranthene	160	1,200	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
Pyrene	1,000	1,400	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
Benzo(a)anthracene	110	270	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
Chrysene	110	460	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
Benzo(b)fluoranthene	--	--	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
Benzo(k)fluoranthene	--	--	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
Total Benzofluoranthenes (b, j, k)	230	450	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
Benzo(a)pyrene	99	210	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
Indeno(1,2,3-c,d)pyrene	34	88	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
Dibenzo(a,h)anthracene	12	33	--	1.6 UJ	0.97 UJ	1.6 UJ	1.4 UJ	1 UJ	0.5 UJ	1 UJ	1.2 UJ	0.8 UJ	1.2 UJ	
Benzo(g,h,i)perylene	31	78	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4.0 U	2.6 U	4.1 U	
Chlorinated Benzenes (mg/kg-OC)														
1,2-Dichlorobenzene	2.3	2.3	--	1.6 UJ	0.97 UJ	1.6 UJ	1.4 U	1 U	0.5 U	1 U	1.2 UJ	0.8 U	1.2 UJ	
1,4-Dichlorobenzene	3.1	9	--	1.6 U	0.97 U	1.6 U	1.4 U	1 U	0.5 U	1 U	1.2 U	0.8 U	1.2 U	
1,2,4-Trichlorobenzene	0.81	1.8	--	1.6 U	0.97 U	1.6 U	1.4 U	1 U	0.5 U	1 U	1.2 U	0.8 U	1.2 U	
Hexachlorobenzene	0.38	2.3	--	1.6 U	0.97 U	1.6 U	1.4 U	1 U	0.5 U	1 U	1.2 U	0.8 U	1.2 U	
Phthalates (mg/kg-OC)														
Dimethyl phthalate	53	53	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4 U	2.6 U	4.1 U	
Diethyl phthalate	61	110	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4 U	2.6 U	4.1 U	
Di-n-butyl phthalate	220	1,700	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4 U	2.6 U	4.1 U	
Butylbenzyl phthalate	4.9	64	--	3.9 U	2.5 U	3.9 U	3.5 U	2.6 U	1.2 U	2.6 U	3 U	2 U	2.9 U	
Bis(2-ethylhexyl) phthalate	47	78	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	**2.6 J**	2.6 U	4.1 U	
Di-n-octyl phthalate	58	4,500	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4 U	2.6 U	4.1 U	
Miscellaneous (mg/kg-OC)														
Dibenzofuran	15	58	--	4.9 U	3.3 U	5.2 U	4.6 U	3.2 U	1.5 U	3.3 U	4 U	2.6 U	4.1 U	
Hexachlorobutadiene	3.9	6.2	--	1.6 U	0.97 U	1.6 U	1.4 U	1 U	0.5 U	1 U	1.2 U	0.8 U	1.2 U	
N-Nitrosodiphenylamine	11	11	--	1.6 UJ	0.97 UJ	1.6 UJ	1.4 U	1 U	0.5 U	1 U	1.2 UJ	0.8 U	1.2 UJ	
Ionizable Organic Compounds (ug/kg)														
Phenol	420	1,200	420	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U	
2-Methylphenol (o-Cresol)	63	63	63	6.1 U	5.9 U	5.8 U	5.9 UJ	6 U	6.1 U	6 U	6 U	6.1 U	5.8 U	
4-Methylphenol (p-Cresol)	670	670	670	19 U	20 U	19 U	20 U	19 U	19 U	19 U	**21**	20 U	20 U	
2,4-Dimethylphenol	29	29	29	6.1 UJ	5.9 UJ	5.8 UJ	5.9 U	6 U	6.1 U	6 U	6 UJ	6.1 U	5.8 UJ	
Pentachlorophenol	360	690	140	31 U	29 U	29 U	30 U	30 U	31 U	30 U	30 U	30 U	29 U	
Benzyl alcohol	57	73	57	19 UJ	20 UJ	**(29 U) R**	20 UJ	19 UJ	19 UJ	19 UJ	20 UJ	19 UJ	20 UJ	
Benzoic acid	650	650	650	190 U	200 U	190 U	200 U	190 U	190 U	190 U	200 U	200 U	200 U	

Table 15d
Subsurface Sediment Chemical Testing Results - Composites Beneath ASB Berm

			Transect ID:	8-101	8-102	8-103	8-104	8-105	8-106	8-109	8-110	8-111	8-112
			Sample ID:	8-101BC-C2	8-102C-C2	8-103C-C2	8-104BC-C2	8-105C-C2	8-106C-C2	8-109C-C2	8-110BC-C2	8-111C-C2	8-112C-C2
			Sample Date:	7/29/08	7/29/08	7/29/08	8/4/08	8/4/08	8/4/08	8/1/08	7/29/08	8/1/08	7/30/08
			In-Situ Depth (ft):	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**										
PCB Aroclors (ug/kg)													
Aroclor 1016	--	--	--	9.7 U	9.6 U	9.5 U	9.8 U	9.7 U	9.8 U	9.7 U	9.7 U	9.7 U	9.7 U
Aroclor 1221	--	--	--	9.7 U	9.6 U	9.5 U	9.8 U	9.7 U	9.8 U	9.7 U	9.7 U	9.7 U	9.7 U
Aroclor 1232	--	--	--	9.7 U	9.6 U	9.5 U	9.8 U	9.7 U	9.8 U	9.7 U	9.7 U	9.7 U	9.7 U
Aroclor 1242	--	--	--	9.7 U	9.6 U	9.5 U	9.8 U	9.7 U	9.8 U	9.7 U	9.7 U	9.7 U	9.7 U
Aroclor 1248	--	--	--	9.7 U	9.6 U	9.5 U	9.8 U	9.7 U	9.8 U	9.7 U	9.7 U	9.7 U	9.7 U
Aroclor 1254	--	--	--	9.7 U	9.6 U	9.5 U	9.8 U	9.7 U	9.8 U	9.7 U	9.7 U	9.7 U	9.7 U
Aroclor 1260	--	--	--	9.7 U	9.6 U	9.5 U	9.8 U	9.7 U	9.8 U	9.7 U	9.7 U	9.7 U	9.7 U
Aroclor 1262	--	--	--	9.7 U	9.6 U	9.5 U	9.8 U	9.7 U	9.8 U	9.7 U	9.7 U	9.7 U	9.7 U
Aroclor 1268	--	--	--	9.7 U	9.6 U	9.5 U	9.8 U	9.7 U	9.8 U	9.7 U	9.7 U	9.7 U	9.7 U
Total PCB	--	--	130	9.7 U	9.6 U	9.5 U	9.8 U	9.7 U	9.8 U	9.7 U	9.7 U	9.7 U	9.7 U
Aromatic Hydrocarbons (ug/kg)													
Total LPAH	--	--	5,200	19 U	20 U	19 U	20 U	19 U	19 U	19 U	**10**	20 U	20 U
Naphthalene	--	--	2,100	19 U	20 U	19 U	20 U	19 U	19 U	19 U	**10 J**	20 U	20 U
Acenaphthylene	--	--	560	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Acenaphthene	--	--	500	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Fluorene	--	--	540	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Phenanthrene	--	--	1,500	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Anthracene	--	--	960	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
2-Methylnaphthalene	--	--	670	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Total HPAH	--	--	12,000	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Fluoranthene	--	--	1,700	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Pyrene	--	--	2,600	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Benzo(a)anthracene	--	--	1,300	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Chrysene	--	--	1,400	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Benzo(b)fluoranthene	--	--	--	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Benzo(k)fluoranthene	--	--	--	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Total Benzofluoranthenes (b, j, k)	--	--	3,200	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Benzo(a)pyrene	--	--	1,600	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Indeno(1,2,3-c,d)pyrene	--	--	600	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Dibenzo(a,h)anthracene	--	--	230	6.1 UJ	5.9 UJ	5.8 UJ	5.9 UJ	6 UJ	6.1 UJ	6 UJ	6 UJ	6.1 UJ	5.8 UJ
Benzo(g,h,i)perylene	--	--	670	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Chlorinated Benzenes (ug/kg)													
1,2-Dichlorobenzene	--	--	35	6.1 UJ	5.9 UJ	5.8 UJ	5.9 U	6 U	6.1 U	6 U	6 UJ	6.1 U	5.8 UJ
1,4-Dichlorobenzene	--	--	110	6.1 U	5.9 U	5.8 U	5.9 U	6 U	6.1 U	6 U	6 U	6.1 U	5.8 U
1,2,4-Trichlorobenzene	--	--	31	6.1 U	5.9 U	5.8 U	5.9 U	6 U	6.1 U	6 U	6 U	6.1 U	5.8 U
Hexachlorobenzene	--	--	22	6.1 U	5.9 U	5.8 U	5.9 U	6 U	6.1 U	6 U	6 U	6.1 U	5.8 U
Miscellaneous (ug/kg)													
Dibenzofuran	--	--	540	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Hexachlorobutadiene	--	--	11	6.1 U	5.9 U	5.8 U	5.9 U	6 U	6.1 U	6 U	6 U	6.1 U	5.8 U
N-Nitrosodiphenylamine	--	--	28	6.1 UJ	5.9 UJ	5.8 UJ	5.9 U	6 U	6.1 U	6 U	6 UJ	6.1 U	5.8 UJ
Phthalates (ug/kg)													
Dimethyl phthalate	--	--	71	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Diethyl phthalate	--	--	48	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Di-n-butyl phthalate	--	--	1,400	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Butylbenzyl phthalate	--	--	63	15 U	15 U	14 U	15 U	15 U	15 U	15 U	15 U	15 U	14 U
Bis(2-ethylhexyl) phthalate	--	--	1,300	19 U	20 U	19 U	20 U	19 U	19 U	19 U	**13 J**	20 U	20 U
Di-n-octyl phthalate	--	--	420	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U

Table 15d
Subsurface Sediment Chemical Testing Results - Composites Beneath ASB Berm

			Transect ID:	8-101	8-102	8-103	8-104	8-105	8-106	8-109	8-110	8-111	8-112
			Sample ID:	8-101BC-C2	8-102C-C2	8-103C-C2	8-104BC-C2	8-105C-C2	8-106C-C2	8-109C-C2	8-110BC-C2	8-111C-C2	8-112C-C2
			Sample Date:	7/29/08	7/29/08	7/29/08	8/4/08	8/4/08	8/4/08	8/1/08	7/29/08	8/1/08	7/30/08
			In-Situ Depth (ft):	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite
Analyte	SMS SQS	SMS CSL	PS LAET										
Dioxin Furans (ng/kg)													
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	0.243 U	0.159 U	0.151 U	0.116 U	0.107 U	0.128 U	0.164 U	0.134 U	0.0592 U	0.168 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	0.273 U	0.268 U	0.319 U	0.231 U	0.177 U	0.196 U	0.29 U	0.287 U	0.304 U	0.126 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	0.196 U	0.194 U	0.178 U	0.197 U	0.177 U	0.179 U	0.234 U	0.227 U	**0.267 J**	0.199 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	0.226 U	0.212 U	0.187 U	0.224 U	0.194 U	0.196 U	0.259 U	0.231 U	**0.356 J**	0.207 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	0.223 U	0.222 U	0.197 U	0.222 U	0.194 U	0.188 U	0.263 U	0.234 U	**0.243 J**	0.212 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	**2 J**	**0.258 J**	**0.605 J**	**2.28**	**0.381 J**	**0.296 J**	0.22 U	**1.81 J**	**2 J**	**0.494 J**
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	**11.3**	**2.16 J**	**2.22 J**	**2.76 J**	**3.5 J**	**2.12 J**	**1.12 J**	**7.56**	**3.55 J**	**2.09 J**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	**0.16 J**	0.104 U	0.1 U	**0.29 J**	0.0618 U	0.104 U	0.117 U	**0.186 J**	**0.157 J**	0.065 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	0.14 U	0.165 U	0.132 U	0.164 U	0.156 U	0.191 U	0.378 U	0.163 U	0.12 U	0.129 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	0.135 U	0.142 U	0.116 U	0.158 U	0.137 U	0.173 U	0.344 U	0.147 U	0.111 U	0.122 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	0.0512 U	0.115 U	0.0805 U	0.0959 U	0.0607 U	0.0766 U	0.114 U	0.111 U	0.0744 U	0.0678 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	0.0515 U	0.115 U	0.0763 U	0.0891 U	0.0586 U	0.0731 U	0.11 U	0.116 U	0.0703 U	0.066 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	0.0732 U	0.162 U	0.105 U	0.141 U	0.0783 U	0.101 U	0.153 U	0.158 U	0.0964 U	0.0905 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	0.0517 U	0.121 U	0.0813 U	0.104 U	0.0594 U	0.0783 U	0.116 U	0.115 U	0.0769 U	0.0698 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	**0.318 J**	0.0754 U	0.0852 U	0.0916 U	0.0734 U	0.082 U	0.12 U	0.118 U	0.11 U	0.0763 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	0.159 U	0.114 U	0.116 U	0.141 U	0.0945 U	0.105 U	0.161 U	0.182 U	0.169 U	0.106 U
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--	**0.667 J**	0.395 U	0.399 U	0.443 U	0.259 U	0.255 U	0.54 U	0.388 U	0.376 U	0.317 U
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	**6.39 J**	0.159 U	**3.91 J**	**9.85 J**	**0.369**	**0.495 J**	**0.255**	**8.2 J**	**13.4 J**	**1.65 J**
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	**5.96**	0.268 U	**5.47**	**11.6**	0.177 U	0.196 U	0.29 U	**10**	**13.7**	**1.83 J**
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**6.69**	0.209 U	**5.69 J**	**15.5 J**	**0.475 J**	**0.673 J**	**0.407**	**15.4 J**	**15.5 J**	**2.04**
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	**4.28**	**0.663 J**	**1.14**	**3.93**	**0.915**	**0.72**	**0.259 J**	**3.7**	**3.52**	**1.04**
Total Tetrachlorodibenzofuran (TCDF)	--	--	--	**0.408 J**	0.104 U	0.1 U	**0.74**	**0.108**	**0.116**	**0.135 J**	**0.608 J**	**1.05 J**	0.065 U
Total Pentachlorodibenzofuran (PeCDF)	--	--	--	0.138 U	0.153 U	0.124 U	0.161 U	0.146 U	0.182 U	0.361 U	0.155 U	0.116 U	0.126 U
Total Hexachlorodibenzofuran (HxCDF)	--	--	--	**0.372 J**	0.127 U	0.085 U	0.105 U	0.0637 U	0.0814 U	0.122 U	0.124 U	0.0787 U	0.0729 U
Total Heptachlorodibenzofuran (HpCDF)	--	--	--	**1**	0.0932 U	0.0996 U	0.114 U	0.0834 U	**0.176**	0.139 U	0.147 U	**0.285**	0.09 U
Total Dioxin/Furan TEQ (WHO) ND=0	--	--	--	**0.0428**	**0.00323**	**0.00672**	**0.0526**	**0.00486**	**0.00360**	**0.00034**	**0.0390**	**0.123**	**0.00557**
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--	**0.368**	**0.304**	**0.312**	**0.307**	**0.215**	**0.245**	**0.355**	**0.335**	**0.341**	**0.223**
Guaiacols (ug/kg)													
2-Methoxyphenol (Guaiacol)	--	--	--	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
3,4,5-Trichloroguaiacol	--	--	--	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
4,5-Dichloroguaiacol	--	--	--	19 U	20 U	19 UJ	20 U	19 U	19 U	19 U	20 U	20 U	20 U
4,5,6-Trichloroguaiacol	--	--	--	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Tetrachloroguaiacol	--	--	--	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Pesticides (ug/kg)													
4,4'-DDD (p,p'-DDD)	--	--	16	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2 U	2 U	2 U	1.9 U
4,4'-DDE (p,p'-DDE)	--	--	9	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2 U	2 U	2 U	1.9 U
4,4'-DDT (p,p'-DDT)	--	--	6	1.9 UJ	1.9 UJ	1.9 UJ	1.9 U	1.9 U	1.9 U	2 U	2 U	2 U	1.9 UJ
Total DDT	--	--	--	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2 U	2 U	2 U	1.9 U
Aldrin	--	--	--	0.96 U	0.96 U	0.96 U	0.97 U	0.96 U	0.97 U	0.98 U	0.98 U	0.98 U	0.97 U
alpha-Chlordane (cis-Chlordane)	--	--	--	0.96 U	0.96 U	0.96 U	0.97 U	0.96 U	0.97 U	0.98 U	0.98 U	0.98 U	0.97 U
beta-Chlordane (trans-Chlordane)	--	--	--	0.96 U	0.96 U	0.96 U	0.97 UJ	0.96 UJ	0.97 UJ	0.98 U	0.98 U	0.98 U	0.97 U
cis-Nonachlor	--	--	--	1.9 U	--	--	1.9 U	1.9 U	1.9 U	2 U	2 U	2 U	1.9 U
Dieldrin	--	--	--	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	1.9 U	2 U	2 U	2 U	1.9 U
gamma-BHC (Lindane)	--	--	--	0.96 U	0.96 U	0.96 U	0.97 U	0.96 U	0.97 U	0.98 U	0.98 U	0.98 U	0.97 U
Heptachlor	--	--	--	0.96 U	0.96 U	0.96 U	0.97 U	0.96 U	0.97 U	0.98 U	0.98 U	0.98 U	0.97 U
Oxychlordane	--	--	--	1.9 U	--	--	1.9 U	1.9 U	1.9 U	2 UJ	2 UJ	2 UJ	1.9 U
trans-Nonachlor	--	--	--	1.9 U	--	--	1.9 U	1.9 U	1.9 U	2 UJ	2 UJ	2 UJ	1.9 U

Table 15d
Subsurface Sediment Chemical Testing Results - Composites Beneath ASB Berm

			Transect ID:	8-101	8-102	8-103	8-104	8-105	8-106	8-109	8-110	8-111	8-112
			Sample ID:	8-101BC-C2	8-102C-C2	8-103C-C2	8-104BC-C2	8-105C-C2	8-106C-C2	8-109C-C2	8-110BC-C2	8-111C-C2	8-112C-C2
			Sample Date:	7/29/08	7/29/08	7/29/08	8/4/08	8/4/08	8/4/08	8/1/08	7/29/08	8/1/08	7/30/08
			In-Situ Depth (ft):	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**										
Semi-Volatile Organics (ug/kg)													
1,3-Dichlorobenzene	--	--	--	--	20 U	--	--	--	--	--	20 U	--	--
1-Methylnaphthalene	--	--	--	19 U	20 U	19 U	20 U	19 U	19 U	19 U	20 U	20 U	20 U
Hexachloroethane	--	--	--	19 U	20 U	19 UJ	20 U	19 U	19 U	19 UJ	20 U	20 U	20 U
Volatile Organics (ug/kg)													
1,2,3-Trichlorobenzene	--	--	--	--	--	--	--	--	--	--	--	--	4.8 U
1,3-Dichlorobenzene	--	--	170	1 U	--	1 U	0.9 U	0.9 U	1 UJ	0.9 U	--	1 U	1 U
Ethylbenzene	--	--	10	1 U	--	1 U	0.9 U	0.9 U	1 UJ	0.9 U	--	1 U	1 U
m,p-Xylene	--	--	--	1 U	--	1 U	0.9 U	0.9 U	1 UJ	0.9 U	--	1 U	1 U
o-Xylene	--	--	--	1 U	--	1 U	0.9 U	0.9 U	1 UJ	0.9 U	--	1 U	1 U
Total Xylene	--	--	40	1 U	--	1 U	0.9 U	0.9 U	1 UJ	0.9 U	--	1 U	1 U
Tetrachloroethene	--	--	57	1 U	--	1 U	0.9 U	0.9 U	1 UJ	0.9 U	--	1 U	1 U
Trichloroethene	--	--	--	1 U	--	1 U	0.9 U	0.9 U	1 UJ	0.9 U	--	1 U	1 U

Notes:

Detected concentration is greater than SMS SQS screening level

Detected concentration is greater than SMS CSL screening level

Detected concentration is greater than 1988 Puget Sound Estuary Program LAET screening level

There are no numeric SMS criteria for dioxin/furans, see 6.1.2. See 7.1.1 for potentially applicable dredge material management criteria.

The site specific Bioaccumulaltion Screening Level (BSL) for mercury is 1.2 mg/kg. (Supplemental RI Report, RETEC 2006)

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R= Rejected analytical result due to low or no recoveries in the LCS and/or MS/MSD analyses in both the full scan and SIM SVOC analyses.

Total LPAH (Low PAH) are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene. 2-Methylnapthalene is not included in the sum of LPAHs

Total HPAH (High PAH) are the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzofluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

Benzo(j)fluoranthene is included in the total of benzo(b&k)fluoranthenes

Totals are calculated for LPAH and HPAH as the sum of all detected results. If all are undetcted results, the highest reporting limit value is reported as the sum.

Toxic equivalency (TEQ) values were calculated for the validated dioxin/furan congeners using the 2005 World Health Organization's toxic equivalency factors for mammals. Undetected congeners were assigned a "0" (ND=0) and assigned a concentration equal to ½ the detection limit (ND=1/2).

Total xylene is the sum of o-, m-, p- isomers

-- Sample was not submitted for chemical analysis.

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

mg/kg-OC = milligrams per kilogram organic carbon normalized

ng/kg = nanogram per kilogram

pct = percent

Non-organic carbon normalized samples with TOC results outside of the 0.5-3.5% range were screened against the 1988 Puget Sound Estuary Program LAET

Table 16
Subsurface Sediment Chemical Testing Results - Inner Waterway Areas

				Location ID:	2B-01-VC	2B-01-VC	2B-01-VC	2B-01-VC	2C-01-VC	2C-01-VC	2C-01-VC	2C-02-VC	2C-02-VC	2C-02-VC	3A-01-VC	3A-01-VC	3A-01-VC
				Sample ID:	2B-01-VC-1-3	2B-01-VC-4-6	2B-01-VC-7-9	2B-01-VC-9-12[2]	2C-01-VC-1-3	2C-01-VC-4-6	2C-01-VC-7-9	2C-02-VC-1-3	2C-02-VC-4-6	2C-02-VC-7-9	3A-01-VC-1-3	3A-01-VC-4-6	3A-01-VC-7-9
				Sample Date:	7/24/08	7/24/08	7/24/08	7/24/08	7/21/08	7/21/08	7/21/08	7/18/08	7/18/08	7/18/08	7/18/08	7/18/08	7/18/08
				In-situ Depth[1] (ft):	1-3	4-6	7-9	9-12[2]	1-3	4-6	7-9	1-3	4-6	7-9	1-3	4-6	7-9
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**														
Grain Size (pct)																	
Total Gravel	--	--	--	**2.4**	**6.2**	**0.5**	**1.4**	--	**1.5**	**2.9**	--	**1.9**	--	**0.8**	--	**1.3**
Total Sand	--	--	--	**83.5**	**71.9**	**64.3**	**82.9**	**7.4**	**7.1**	**10.8**	**5.5**	**38.5**	**3.6**	**55.5**	**30.7**	**55.4**
Total Silt	--	--	--	**10.4**	**16.2**	**27.8**	**6.8**	**53.8**	**52.4**	**44.8**	**55.5**	**39.7**	**59.2**	**34.3**	**40.3**	**28.1**
Total Clay	--	--	--	**3.9**	**5.5**	**7.4**	**8.9**	**38.7**	**39.1**	**41.5**	**39**	**19.7**	**37.2**	**9.4**	**29**	**15.3**
Total Fines (Silt + Clay)	--	--	--	**14.3**	**21.7**	**35.2**	**15.7**	**92.5**	**91.5**	**86.3**	**94.5**	**59.4**	**96.4**	**43.7**	**69.3**	**43.4**
Total Grain Size	--	--	--	**100.2**	**99.8**	**100**	**100**	**99.9**	**100.1**	**100**	**100**	**99.8**	**100**	**100**	**100**	**100.1**
Physical Parameters																	
Atterberg Classification	--	--	--	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**CH**	**CH**	**MH**	**MH**	**ML**	**CL**	**ML**	**MH**	**ML**
Specific gravity (su)	--	--	--	**2.69**	**2.7**	**2.7**	**2.68**	**2.67**	**2.54**	**2.65**	**2.52**	**2.64**	**2.45**	**2.57**	**2.54**	**2.51**
Liquid Limit (pct)	--	--	--	--	--	--	--	**100**	**116**	**79.2**	**95.8**	**42.8**	**34.5**	**44.9**	**48.2**	**48.6**
Plastic Limit (pct)	--	--	--	--	--	--	--	**35.6**	**43.6**	**41.9**	**42.7**	**27.4**	**17**	**38.1**	**42.4**	**34**
Plasticity Index (pct)	--	--	--	--	--	--	--	**64.7**	**72.7**	**37.2**	**53.1**	**15.5**	**17.5**	**6.9**	**48.2**	**14.7**
Moisture (water) Content (pct)	--	--	--	**26.04**	**27.47**	**24.14**	**20.36**	**126.5**	**133.7**	**116.1**	**136.2**	**91.01**	**33.58**	**95.11**	**101.5**	**79.99**
Conventional Parameters																	
Ammonia (mg-N/kg)	--	--	--	--	--	--	**5.97**	--	--	--	--	--	--	--	--	--
Sulfide (mg/kg)	--	--	--	--	--	--	**4.59 J**	--	--	--	--	--	--	--	--	--
Total organic carbon (pct)	--	--	--	--	--	--	**0.644**	--	--	--	--	--	--	**6.67**	**3.81**	**5.11**
Total solids (pct)	--	--	--	--	--	--	**82.4**	--	--	--	--	--	--	**55.5**	**48.9**	**54.4**
Total Solids (preserved) (pct)	--	--	--	--	--	--	**84.9**	--	--	--	--	--	--	--	--	--
Total volatile solids (pct)	--	--	--	--	--	--	**1.53**	--	--	--	--	--	--	--	--	--
Metals (mg/kg)																	
Antimony	--	--	--	--	--	--	6 UJ	--	--	--	--	--	--	--	--	--
Arsenic	57	93	--	--	--	--	6 U	--	--	--	--	--	--	9 U	**10**	--
Cadmium	5.1	6.7	--	--	--	--	**0.3**	--	--	--	--	--	--	**0.7**	**1.4**	--
Chromium	260	270	--	--	--	--	**17.4**	--	--	--	--	--	--	**51.6**	**75**	--
Copper	390	390	--	--	--	--	**8.4**	--	--	--	--	--	--	**47.7**	**118**	--
Lead	450	530	--	--	--	--	2 U	--	--	--	--	--	--	**40**	**68**	--
Mercury	0.41	0.59	--	--	--	--	0.06 U	--	--	--	--	--	--	**0.21 J**	**0.56 J**	**1.48**
Nickel	--	--	--	--	--	--	**13**	--	--	--	--	--	--	--	--	--
Selenium	--	--	--	--	--	--	0.6 U	--	--	--	--	--	--	--	--	--
Silver	6.1	6.1	--	--	--	--	0.3 U	--	--	--	--	--	--	0.6 U	**2.1**	--
Zinc	410	960	--	--	--	--	**22**	--	--	--	--	--	--	**158**	**222**	--
Butyltins (ug/kg)																	
Butyltin (ion)	--	--	--	--	--	--	--	--	--	--	--	--	--	**4.2**	**4.4**	--
Dibutyltin (ion)	--	--	--	--	--	--	--	--	--	--	--	--	--	**24**	**12**	--
Tributyltin (ion)	--	--	--	--	--	--	3.3 U	--	--	--	--	--	--	**10**	**64**	--
Aromatic Hydrocarbons (mg/kg-OC)																	
Total LPAH	370	780	--	--	--	--	3 U	--	--	--	--	--	--	**3.06**	**2.47**	--
Naphthalene	99	170	--	--	--	--	3 UJ	--	--	--	--	--	--	0.3 U	0.52 U	--
Acenaphthylene	66	66	--	--	--	--	3 U	--	--	--	--	--	--	0.3 U	0.52 U	--
Acenaphthene	16	57	--	--	--	--	3 UJ	--	--	--	--	--	--	0.3 U	0.52 U	--
Fluorene	23	79	--	--	--	--	3 U	--	--	--	--	--	--	**0.18 J**	0.52 U	--
Phenanthrene	100	480	--	--	--	--	3 U	--	--	--	--	--	--	**2.4**	**2**	--
Anthracene	220	1,200	--	--	--	--	3 U	--	--	--	--	--	--	**0.48**	**0.47 J**	--
2-Methylnaphthalene	38	64	--	--	--	--	3 UJ	--	--	--	--	--	--	0.3 U	0.52 U	--
Total HPAH	960	5,300	--	--	--	--	3 U	--	--	--	--	--	--	**19.5**	**18.6**	--
Fluoranthene	160	1,200	--	--	--	--	3 U	--	--	--	--	--	--	**5.0**	**4.2**	--
Pyrene	1,000	1,400	--	--	--	--	3 U	--	--	--	--	--	--	**3.5**	**3.2**	--
Benzo(a)anthracene	110	270	--	--	--	--	3 U	--	--	--	--	--	--	**1.7**	**1.6**	--
Chrysene	110	460	--	--	--	--	3 U	--	--	--	--	--	--	**2.4**	**2.1**	--
Benzo(b)fluoranthene	--	--	--	--	--	--	3 U	--	--	--	--	--	--	**2.1**	**2.2**	--
Benzo(k)fluoranthene	--	--	--	--	--	--	3 U	--	--	--	--	--	--	**1.7**	**1.2**	--
Total Benzofluoranthenes (b, j, k)	230	450	--	--	--	--	3 U	--	--	--	--	--	--	**3.8**	**3.4**	--
Benzo(a)pyrene	99	210	--	--	--	--	3 U	--	--	--	--	--	--	**1.5**	**1.5**	--
Indeno(1,2,3-c,d)pyrene	34	88	--	--	--	--	3 UJ	--	--	--	--	--	--	**0.61**	**0.71**	--
Dibenzo(a,h)anthracene	12	33	--	--	--	--	0.93 UJ	--	--	--	--	--	--	**0.58**	**1.4**	--
Benzo(g,h,i)perylene	31	78	--	--	--	--	3 UJ	--	--	--	--	--	--	**0.58**	**0.55**	--

Table 16
Subsurface Sediment Chemical Testing Results - Inner Waterway Areas

				Location ID:	2B-01-VC	2B-01-VC	2B-01-VC	2B-01-VC	2C-01-VC	2C-01-VC	2C-01-VC	2C-02-VC	2C-02-VC	2C-02-VC	3A-01-VC	3A-01-VC	3A-01-VC
				Sample ID:	2B-01-VC-1-3	2B-01-VC-4-6	2B-01-VC-7-9	2B-01-VC-9-12[2]	2C-01-VC-1-3	2C-01-VC-4-6	2C-01-VC-7-9	2C-02-VC-1-3	2C-02-VC-4-6	2C-02-VC-7-9	3A-01-VC-1-3	3A-01-VC-4-6	3A-01-VC-7-9
				Sample Date:	7/24/08	7/24/08	7/24/08	7/24/08	7/21/08	7/21/08	7/21/08	7/18/08	7/18/08	7/18/08	7/18/08	7/18/08	7/18/08
				In-situ Depth[1] (ft):	1-3	4-6	7-9	9-12[2]	1-3	4-6	7-9	1-3	4-6	7-9	1-3	4-6	7-9
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**														
Chlorinated Benzenes (mg/kg-OC)																	
1,2-Dichlorobenzene	2.3	2.3	--	--	--	--	0.93 UJ	--	--	--	--	--	--	0.27 U	0.16 U	--
1,4-Dichlorobenzene	3.1	9	--	--	--	--	0.93 U	--	--	--	--	--	--	0.27 U	0.16 U	--
1,2,4-Trichlorobenzene	0.81	1.8	--	--	--	--	0.93 U	--	--	--	--	--	--	0.27 U	0.16 U	--
Hexachlorobenzene	0.38	2.3	--	--	--	--	0.93 U	--	--	--	--	--	--	0.27 U	0.16 U	--
Phthalates (mg/kg-OC)																	
Dimethyl phthalate	53	53	--	--	--	--	3 U	--	--	--	--	--	--	0.3 U	0.52 U	--
Diethyl phthalate	61	110	--	--	--	--	**12**	--	--	--	--	--	--	0.3 U	**0.68**	--
Di-n-butyl phthalate	220	1,700	--	--	--	--	3 U	--	--	--	--	--	--	0.3 U	0.52 U	--
Butylbenzyl phthalate	4.9	64	--	--	--	--	2.3 U	--	--	--	--	--	--	**1.2**	**3.4**	--
Bis(2-ethylhexyl) phthalate	47	78	--	--	--	--	3 U	--	--	--	--	--	--	**3.8**	**4.2**	--
Di-n-octyl phthalate	58	4,500	--	--	--	--	3 U	--	--	--	--	--	--	0.3 U	0.52 U	--
Miscellaneous (mg/kg-OC)																	
Dibenzofuran	15	58	--	--	--	--	3 U	--	--	--	--	--	--	0.3 U	0.52 U	--
Hexachlorobutadiene	3.9	6.2	--	--	--	--	0.93 U	--	--	--	--	--	--	0.27 U	0.16 U	--
N-Nitrosodiphenylamine	11	11	--	--	--	--	3 UJ	--	--	--	--	--	--	0.27 UJ	0.16 UJ	--
Ionizable Organic Compounds (ug/kg)																	
Phenol	420	1,200	420	--	--	--	19 UJ	--	--	--	--	--	--	**93**	20 U	--
2-Methylphenol (o-Cresol)	63	63	63	--	--	--	6 U	--	--	--	--	--	--	18 U	**9**	--
4-Methylphenol (p-Cresol)	670	670	670	--	--	--	19 U	--	--	--	--	--	--	**16 J**	20 U	--
2,4-Dimethylphenol	29	29	29	--	--	--	6 UJ	--	--	--	--	--	--	18 UJ	6 UJ	--
Pentachlorophenol	360	690	140	--	--	--	30 U	--	--	--	--	--	--	91 UJ	**50 J**	--
Benzyl alcohol	57	73	57	--	--	--	**(30 U) R**	--	--	--	--	--	--	20 UJ	20 UJ	--
Benzoic acid	650	650	650	--	--	--	190 U	--	--	--	--	--	--	200 U	200 U	--
Aromatic Hydrocarbons (ug/kg)																	
Total LPAH	--	--	5,200	--	--	--	19 U	--	--	--	--	--	--	**204**	**93**	--
Naphthalene	--	--	2,100	--	--	--	19 UJ	--	--	--	--	--	--	20 U	20 U	--
Acenaphthylene	--	--	560	--	--	--	19 U	--	--	--	--	--	--	20 U	20 U	--
Acenaphthene	--	--	500	--	--	--	19 UJ	--	--	--	--	--	--	20 U	20 U	--
Fluorene	--	--	540	--	--	--	19 U	--	--	--	--	--	--	**12 J**	20 U	--
Phenanthrene	--	--	1,500	--	--	--	19 U	--	--	--	--	--	--	**160**	**75**	--
Anthracene	--	--	960	--	--	--	19 U	--	--	--	--	--	--	**32**	**18 J**	--
2-Methylnaphthalene	--	--	670	--	--	--	19 UJ	--	--	--	--	--	--	20 U	20 U	--
Total HPAH	--	--	12,000	--	--	--	19 U	--	--	--	--	--	--	**1,297**	**710**	--
Fluoranthene	--	--	1,700	--	--	--	19 U	--	--	--	--	--	--	**330**	**160**	--
Pyrene	--	--	2,600	--	--	--	19 U	--	--	--	--	--	--	**230**	**120**	--
Benzo(a)anthracene	--	--	1,300	--	--	--	19 U	--	--	--	--	--	--	**110**	**61**	--
Chrysene	--	--	1,400	--	--	--	19 U	--	--	--	--	--	--	**160**	**80**	--
Benzo(b)fluoranthene	--	--	--	--	--	--	19 U	--	--	--	--	--	--	**140**	**84**	--
Benzo(k)fluoranthene	--	--	--	--	--	--	19 U	--	--	--	--	--	--	**110**	**47**	--
Total Benzofluoranthenes (b, j, k)	--	--	3,200	--	--	--	19 U	--	--	--	--	--	--	**250**	**131**	--
Benzo(a)pyrene	--	--	1,600	--	--	--	19 U	--	--	--	--	--	--	**98**	**58**	--
Indeno(1,2,3-c,d)pyrene	--	--	600	--	--	--	19 UJ	--	--	--	--	--	--	**41**	**27**	--
Dibenzo(a,h)anthracene	--	--	230	--	--	--	6 UJ	--	--	--	--	--	--	**39**	**52**	--
Benzo(g,h,i)perylene	--	--	670	--	--	--	19 UJ	--	--	--	--	--	--	**39**	**21**	--
Chlorinated Benzenes (ug/kg)																	
1,2-Dichlorobenzene	--	--	35	--	--	--	6 UJ	--	--	--	--	--	--	18 U	6 U	--
1,4-Dichlorobenzene	--	--	110	--	--	--	6 U	--	--	--	--	--	--	18 U	6 U	--
1,2,4-Trichlorobenzene	--	--	31	--	--	--	6 U	--	--	--	--	--	--	18 U	6 U	--
Hexachlorobenzene	--	--	22	--	--	--	6 U	--	--	--	--	--	--	18 U	6 U	--
Miscellaneous (ug/kg)																	
Dibenzofuran	--	--	540	--	--	--	19 U	--	--	--	--	--	--	20 U	20 U	--
Hexachlorobutadiene	--	--	11	--	--	--	6 U	--	--	--	--	--	--	18 U	6 U	--
N-Nitrosodiphenylamine	--	--	28	--	--	--	19 UJ	--	--	--	--	--	--	18 UJ	6 UJ	--

Table 16
Subsurface Sediment Chemical Testing Results - Inner Waterway Areas

			Location ID:	2B-01-VC	2B-01-VC	2B-01-VC	2B-01-VC	2C-01-VC	2C-01-VC	2C-01-VC	2C-02-VC	2C-02-VC	2C-02-VC	3A-01-VC	3A-01-VC	3A-01-VC
			Sample ID:	2B-01-VC-1-3	2B-01-VC-4-6	2B-01-VC-7-9	2B-01-VC-9-12[2]	2C-01-VC-1-3	2C-01-VC-4-6	2C-01-VC-7-9	2C-02-VC-1-3	2C-02-VC-4-6	2C-02-VC-7-9	3A-01-VC-1-3	3A-01-VC-4-6	3A-01-VC-7-9
			Sample Date:	7/24/08	7/24/08	7/24/08	7/24/08	7/21/08	7/21/08	7/21/08	7/18/08	7/18/08	7/18/08	7/18/08	7/18/08	7/18/08
			In-situ Depth[1] (ft):	1-3	4-6	7-9	9-12[2]	1-3	4-6	7-9	1-3	4-6	7-9	1-3	4-6	7-9
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**													
Phthalates (ug/kg)																
Dimethyl phthalate	--	--	71	--	--	--	19 U	--	--	--	--	--	--	20 U	20 U	--
Diethyl phthalate	--	--	48	--	--	--	**80**	--	--	--	--	--	--	20 U	**26**	--
Di-n-butyl phthalate	--	--	1,400	--	--	--	19 U	--	--	--	--	--	--	20 U	20 U	--
Butylbenzyl phthalate	--	--	63	--	--	--	15 U	--	--	--	--	--	--	**80**	**130**	--
Bis(2-ethylhexyl) phthalate	--	--	1,300	--	--	--	19 U	--	--	--	--	--	--	**250**	**160**	--
Di-n-octyl phthalate	--	--	420	--	--	--	19 U	--	--	--	--	--	--	20 U	20 U	--
Semi-Volatile Organics (ug/kg)																
1,3-Dichlorobenzene	--	--	170	--	--	--	19 U	--	--	--	--	--	--	20 U	20 U	--
1-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	20 U	20 U	--
Hexachloroethane	--	--	--	--	--	--	19 UJ	--	--	--	--	--	--	20 U	20 U	--

Table 16
Subsurface Sediment Chemical Testing Results - Inner Waterway Areas

				Location ID:	3A-02-VC	3A-02-VC	3A-02-VC	3A-03-VC	3A-03-VC	3A-03-VC	3A-04-VC	3A-04-VC	3A-04-VC	3A-05-VC	3A-05-VC	3A-05-VC
				Sample ID:	3A-02-VC-1-3	3A-02-VC-4-6	3A-02-VC-7-9	3A-03-VC-1-3	3A-03-VC-4-6	3A-03-VC-7-9	3A-04-VC-1-3	3A-04-VC-4-6	3A-04-VC-7-9	3A-05-VC-1-3	3A-05-VC-4-6	3A-05-VC-7-9
				Sample Date:	7/18/08	7/18/08	7/18/08	7/25/08	7/25/08	7/25/08	7/18/08	7/18/08	7/18/08	7/18/08	7/18/08	7/18/08
				In-situ Depth[1] (ft):	1-3	4-6	7-9	1-3	4-6	7-9	1-3	4-6	7-9	1-3	4-6	7-9
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**													
Grain Size (pct)																
Total Gravel	--	--	--	**2.2**	**12.2**	**59.7**	**1.2**	--	**0.4**	**0.2**	--	**0.4**	--	**0.1**	**3.6**
Total Sand	--	--	--	**56.9**	**80.8**	**35.1**	**49.3**	**44.4**	**36.1**	**7.6**	**18.2**	**20.6**	**10.6**	**15.1**	**20.2**
Total Silt	--	--	--	**26.1**	**3.6**	**3.3**	**31.4**	**42.4**	**51.9**	**57.9**	**62.5**	**64.5**	**55.1**	**56.9**	**48.8**
Total Clay	--	--	--	**14.8**	**3.4**	**2.1**	**18.2**	**13.1**	**11.7**	**34.3**	**19.3**	**14.4**	**34.3**	**27.9**	**27.1**
Total Fines (Silt + Clay)	--	--	--	**40.9**	**7.0**	**5.4**	**49.6**	**55.5**	**63.6**	**92.2**	**81.8**	**78.9**	**89.4**	**84.8**	**75.9**
Total Grain Size	--	--	--	**100**	**100**	**100.2**	**100.1**	**99.9**	**100.1**	**100**	**100**	**99.9**	**100**	**100**	**99.7**
Physical Parameters																
Atterberg Classification	--	--	--	**MH**	**Non-Plastic**	**Non-Plastic**	**MH**	**Non-Plastic**	**MH**	**MH**	**MH**	**MH**	**CH**	**MH**	**MH**
Specific gravity (su)	--	--	--	**2.45**	**2.5**	**2.63**	**2.43**	**2.46**	**2.42**	**2.58**	**2.5**	**2.45**	**2.57**	**2.44**	**2.58**
Liquid Limit (pct)	--	--	--	**51.2**	--	--	**60.8**	--	**81.2**	**103**	**173**	**89.9**	**103**	**87.4**	**58.5**
Plastic Limit (pct)	--	--	--	**45.5**	--	--	**40.1**	--	**74.9**	**44.3**	**62.9**	**76.8**	**40.9**	**65.3**	**35.6**
Plasticity Index (pct)	--	--	--	**5.8**	--	--	**20.7**	--	**6.3**	**58.8**	**110**	**13.2**	**62.1**	**22.1**	**22.9**
Moisture (water) Content (pct)	--	--	--	**201**	**25.85**	**25.49**	**156.7**	**138**	**155.5**	**126.8**	**204.1**	**196.5**	**127.9**	**172.9**	**88.13**
Conventional Parameters																
Ammonia (mg-N/kg)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sulfide (mg/kg)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total organic carbon (pct)	--	--	--	**6.43**	**1.24**	**4.02**	**4.19**	**8.05**	**22.3**	**4.13**	**8.16**	**7.41**	**4.63**	**7.12**	**5.28**
Total solids (pct)	--	--	--	**34.6**	**76.9**	**74.8**	**40.1**	**41.9**	**37.5**	**42.3**	**34.4**	**34.5**	**43.8**	**37.4**	**51.1**
Total Solids (preserved) (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total volatile solids (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Metals (mg/kg)																
Antimony	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Arsenic	57	93	--	10 U	6 U	--	10 U	**10**	--	**10**	10 U	--	**10**	**20**	--
Cadmium	5.1	6.7	--	**0.9**	0.2 U	--	**1.3**	**2.5**	--	**2**	**4.1**	--	**1.9**	**3.8**	--
Chromium	260	270	--	**55**	**36.3**	--	**71**	**132**	--	**89**	**173**	--	**91**	**175**	--
Copper	390	390	--	**55.5**	**19.1**	--	**71.6**	**97.7**	--	**94.5**	**132**	--	**85.2**	**122**	--
Lead	450	530	--	**70**	**108**	--	**76**	**279**	--	**123**	**357**	--	**85**	**271**	--
Mercury	0.41	0.59	--	**0.3 J**	**0.12 J**	**0.2**	**0.6 J**	**3.3 J**	**6.3**	**0.98 J**	**4.6 J**	**4.4**	**1.0**	**3.9**	**1.8**
Nickel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	6.1	6.1	--	0.8 U	0.4 U	--	**2.1**	**1**	--	**1.2**	**1.5**	--	**1.4**	**1.1**	--
Zinc	410	960	--	**247**	**68**	--	**228**	**272**	--	**248**	**366**	--	**221**	**318**	--
Butyltins (ug/kg)																
Butyltin (ion)	--	--	--	3.9 U	3.6 U	--	3.9 U	3.9 U	--	3.8 U	3.8 U	--	3.7 UJ	4 U	--
Dibutyltin (ion)	--	--	--	5.5 U	5.1 U	--	5.5 U	5.5 U	--	**8.2**	5.4 U	--	**10**	**10**	--
Tributyltin (ion)	--	--	--	3.7 U	3.4 U	--	**28**	**26**	--	**48**	**45**	--	**60 J**	**34**	--
Aromatic Hydrocarbons (mg/kg-OC)																
Total LPAH	370	780	--	**2.04**	**12.7**	--	**28.5**	**348**	--	**2.2**	**20.1**	--	**1.8**	**13.6**	--
Naphthalene	99	170	--	0.31 U	**1 J**	--	**1.1 J**	**96.9**	--	**0.31 J**	**1.2**	--	**0.32 J**	**2.3**	--
Acenaphthylene	66	66	--	0.31 U	1.6 U	--	**1.1 J**	**0.36**	--	0.48 U	2.08 U	--	0.43 U	1.7 U	--
Acenaphthene	16	57	--	0.31 U	**1.7**	--	**1.9**	**47.2**	--	0.48 U	**2.2**	--	0.43 U	**0.98 J**	--
Fluorene	23	79	--	**0.19 J**	**1.5 J**	--	**2.2**	**38.5**	--	0.48 U	**2.1**	--	0.43 U	**1.2 J**	--
Phenanthrene	100	480	--	**1.2**	**3.9**	--	**15.8**	**59.6**	--	**1.2**	**11.8**	--	**0.99**	**7.2**	--
Anthracene	220	1,200	--	**0.65**	**4.6**	--	**6.4**	**106**	--	**0.7**	**2.8**	--	**0.45**	**2.0**	--
2-Methylnaphthalene	38	64	--	0.31 U	1.6 U	--	1.4 U	**28.6**	--	0.48 U	**1.6 J**	--	0.43 U	**1.2 J**	--
Total HPAH	960	5,300	--	**21.3**	**108**	--	**171**	**111**	--	**19.1**	**66.2**	--	**15**	**42.0**	--
Fluoranthene	160	1,200	--	**5.9**	**36.3**	--	**33.4**	**39.8**	--	**3.4**	**22.1**	--	**2.8**	**12.2**	--
Pyrene	1,000	1,400	--	**4.0**	**24.2**	--	**33.4**	**24.8**	--	**3.2**	**15.9**	--	**2.8**	**8.9**	--
Benzo(a)anthracene	110	270	--	**1.7**	**11.3**	--	**15.8**	**6.3**	--	**1.8**	**5.9**	--	**1.4**	**3.7**	--
Chrysene	110	460	--	**2.2**	**11.3**	--	**22.9**	**14.9**	--	**2.9**	**8.7**	--	**2.1**	**5.5**	--
Benzo(b)fluoranthene	--	--	--	**1.7**	**6.9**	--	**22.9**	**9.3**	--	**2.3**	**5.3**	--	**1.9**	**3.4**	--
Benzo(k)fluoranthene	--	--	--	**2.5**	**9.7**	--	**16.5**	**4.8**	--	**2**	**4.9**	--	**1.3**	**3.9**	--
Total Benzofluoranthenes (b, j, k)	230	450	--	**4.2**	**16.6**	--	**39.4**	**14.2**	--	**4.3**	**10.2**	--	**3.2**	**7.3**	--
Benzo(a)pyrene	99	210	--	**1.6**	**5.6**	--	**15.3**	**5.2**	--	**1.6**	**3.4**	--	**1.3**	**2.5**	--
Indeno(1,2,3-c,d)pyrene	34	88	--	**0.54**	**1 J**	--	**4.53**	**2.5**	--	**0.61**	2.08 U	--	**0.58**	**0.94 J**	--
Dibenzo(a,h)anthracene	12	33	--	**0.65**	**1.1 J**	--	**2.1**	**0.53**	--	**0.73**	0.21 UJ	--	**0.35**	**0.22 J**	--
Benzo(g,h,i)perylene	31	78	--	**0.48**	**1.1 J**	--	**4.5**	**3.1 J**	--	**0.56**	2.08 U	--	**0.45**	**0.84 J**	--

Table 16
Subsurface Sediment Chemical Testing Results - Inner Waterway Areas

				Location ID:	3A-02-VC	3A-02-VC	3A-02-VC	3A-03-VC	3A-03-VC	3A-03-VC	3A-04-VC	3A-04-VC	3A-04-VC	3A-05-VC	3A-05-VC	3A-05-VC
				Sample ID:	3A-02-VC-1-3	3A-02-VC-4-6	3A-02-VC-7-9	3A-03-VC-1-3	3A-03-VC-4-6	3A-03-VC-7-9	3A-04-VC-1-3	3A-04-VC-4-6	3A-04-VC-7-9	3A-05-VC-1-3	3A-05-VC-4-6	3A-05-VC-7-9
				Sample Date:	7/18/08	7/18/08	7/18/08	7/25/08	7/25/08	7/25/08	7/18/08	7/18/08	7/18/08	7/18/08	7/18/08	7/18/08
				In-situ Depth[1] (ft):	1-3	4-6	7-9	1-3	4-6	7-9	1-3	4-6	7-9	1-3	4-6	7-9
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**													
Chlorinated Benzenes (mg/kg-OC)																
1,2-Dichlorobenzene	2.3	2.3	--	0.095 U	0.5 U	--	0.74 U	0.37 U	--	0.15 U	0.21 U	--	0.13 U	0.15 U	--	
1,4-Dichlorobenzene	3.1	9	--	0.095 U	0.5 U	--	0.74 U	0.37 U	--	0.15 U	0.21 U	--	0.13 U	0.15 U	--	
1,2,4-Trichlorobenzene	0.81	1.8	--	0.095 U	0.5 U	--	0.74 UJ	0.37 UJ	--	0.15 U	0.21 U	--	0.13 U	0.15 U	--	
Hexachlorobenzene	0.38	2.3	--	0.095 U	0.5 U	--	0.74 U	0.37 U	--	0.15 U	0.21 U	--	0.13 U	0.15 U	--	
Phthalates (mg/kg-OC)																
Dimethyl phthalate	53	53	--	**0.68**	1.6 U	--	1.4 U	0.25 U	--	0.48 U	2.08 U	--	0.43 U	1.69 U	--	
Diethyl phthalate	61	110	--	**0.3 J**	1.6 U	--	1.4 U	0.25 U	--	**0.53**	**2.2**	--	0.43 U	**1.8**	--	
Di-n-butyl phthalate	220	1,700	--	**0.58**	1.6 U	--	**2.4**	**0.47**	--	0.48 U	2.08 U	--	0.43 U	1.69 U	--	
Butylbenzyl phthalate	4.9	64	--	**2.3**	**2.2 J**	--	1.8 U	**1.37**	--	**3.2**	**4.7**	--	**1.3**	**4.8**	--	
Bis(2-ethylhexyl) phthalate	47	78	--	**5.9**	**6.5**	--	**23.9**	**12.42**	--	**4.4**	**11.3**	--	**3.0**	**13.1**	--	
Di-n-octyl phthalate	58	4,500	--	0.31 U	1.6 U	--	1.4 U	0.25 U	--	0.48 U	2.08 U	--	0.43 U	1.69 U	--	
Miscellaneous (mg/kg-OC)																
Dibenzofuran	15	58	--	0.31 U	**1.1 J**	--	**1.2 J**	**27.3**	--	0.48 U	**1.4 J**	--	0.43 U	**1.1 J**	--	
Hexachlorobutadiene	3.9	6.2	--	0.095 U	0.5 U	--	0.74 U	0.37 U	--	0.15 U	0.21 U	--	0.13 U	0.15 U	--	
N-Nitrosodiphenylamine	11	11	--	0.095 UJ	**0.97 J**	--	0.74 UJ	**3.11 J**	--	0.15 UJ	**2.1 J**	--	0.13 U	**1.54 J**	--	
Ionizable Organic Compounds (ug/kg)																
Phenol	420	1,200	420	**220**	20 U	--	**72**	**44**	--	20 U	170 U	--	**69**	120 U	--	
2-Methylphenol (o-Cresol)	63	63	63	6.1 U	6.2 UJ	--	31 U	30 U	--	6.2 U	17 U	--	6 U	11 U	--	
4-Methylphenol (p-Cresol)	670	670	670	**39**	20 U	--	**44 J**	**420**	--	**32**	**490**	--	**23**	**1,000**	--	
2,4-Dimethylphenol	29	29	29	6.1 UJ	6.2 UJ	--	31 UJ	30 UJ	--	6.2 UJ	**40 J**	--	6 UJ	11 UJ	--	
Pentachlorophenol	360	690	140	**37 J**	31 UJ	--	150 UJ	150 UJ	--	31 UJ	83 UJ	--	30 UJ	**85 J**	--	
Benzyl alcohol	57	73	57	92 U	93 U	--	59 UJ	20 UJ	--	20 UJ	250 U	--	20 UJ	170 U	--	
Benzoic acid	650	650	650	200 U	200 U	--	590 U	200 U	--	200 U	1700 U	--	200 U	1,200 U	--	
Aromatic Hydrocarbons (ug/kg)																
Total LPAH	--	--	5,200	**131**	**158**	--	**1,191**	**28,029**	--	**91**	**1,640**	--	**82**	**962**	--	
Naphthalene	--	--	2,100	20 U	**13 J**	--	**44 J**	**7,800**	--	**13 J**	**100 J**	--	**15 J**	**160**	--	
Acenaphthylene	--	--	560	20 U	20 U	--	**44 J**	**29**	--	20 U	170 U	--	20 U	120 U	--	
Acenaphthene	--	--	500	20 U	**21**	--	**79**	**3,800**	--	20 U	**180**	--	20 U	**70 J**	--	
Fluorene	--	--	540	**12 J**	**19 J**	--	**94**	**3,100**	--	20 U	**170**	--	20 U	**82 J**	--	
Phenanthrene	--	--	1,500	**77**	**48**	--	**660**	**4,800**	--	**49**	**960**	--	**46**	**510**	--	
Anthracene	--	--	960	**42**	**57**	--	**270**	**8,500**	--	**29**	**230**	--	**21**	**140**	--	
2-Methylnaphthalene	--	--	670	20 U	20 U	--	59 U	**2,300**	--	20 U	**130 J**	--	20 U	**84 J**	--	
Total HPAH	--	--	12,000	**1,368**	**1,346**	--	**7,179**	**8,963**	--	**788**	**5,400**	--	**697**	**2,993**	--	
Fluoranthene	--	--	1,700	**380**	**450**	--	**1,400**	**3,200**	--	**140**	**1,800**	--	**130**	**870**	--	
Pyrene	--	--	2,600	**260**	**300**	--	**1,400**	**2,000**	--	**130**	**1,300**	--	**130**	**630**	--	
Benzo(a)anthracene	--	--	1,300	**110**	**140**	--	**660**	**510**	--	**76**	**480**	--	**66**	**260**	--	
Chrysene	--	--	1,400	**140**	**140**	--	**960**	**1,200**	--	**120**	**710**	--	**99**	**390**	--	
Benzo(b)fluoranthene	--	--	--	**110**	**85**	--	**960**	**750**	--	**94**	**430**	--	**89**	**240**	--	
Benzo(k)fluoranthene	--	--	--	**160**	**120**	--	**690**	**390**	--	**83**	**400**	--	**61**	**280**	--	
Total Benzofluoranthenes (b, j, k)	--	--	3,200	**270**	**205**	--	**1,650**	**1,140**	--	**177**	**830**	--	**150**	**520**	--	
Benzo(a)pyrene	--	--	1,600	**100**	**70**	--	**640**	**420**	--	**67**	**280**	--	**58**	**180**	--	
Indeno(1,2,3-c,d)pyrene	--	--	600	**35**	**13 J**	--	**190**	**200 J**	--	**25**	170 U	--	**27**	**67 J**	--	
Dibenzo(a,h)anthracene	--	--	230	**42**	**14 J**	--	**89**	**43**	--	**30**	17 UJ	--	**16**	**16 J**	--	
Benzo(g,h,i)perylene	--	--	670	**31**	**14 J**	--	**190**	**250 J**	--	**23**	170 U	--	**21**	**60 J**	--	
Chlorinated Benzenes (ug/kg)																
1,2-Dichlorobenzene	--	--	35	6.1 U	6.2 U	--	31 U	30 U	--	6.2 U	17 U	--	6 U	11 U	--	
1,4-Dichlorobenzene	--	--	110	6.1 U	6.2 U	--	31 U	20 U	--	6.2 U	17 U	--	6 U	11 U	--	
1,2,4-Trichlorobenzene	--	--	31	6.1 U	6.2 U	--	31 UJ	30 UJ	--	6.2 U	17 U	--	6 U	11 U	--	
Hexachlorobenzene	--	--	22	6.1 U	6.2 U	--	31 U	30 U	--	6.2 U	17 U	--	6 U	11 U	--	
Miscellaneous (ug/kg)																
Dibenzofuran	--	--	540	20 U	**14 J**	--	**50 J**	**2,200**	--	20 U	**110 J**	--	20 U	**75 J**	--	
Hexachlorobutadiene	--	--	11	6.1 U	6.2 U	--	31 U		--	6.2 U	17 U	--	6 U	11 U	--	
N-Nitrosodiphenylamine	--	--	28	6.1 UJ	**12 J**	--	31 UJ	**250 J**	--	6.2 UJ	**170 J**	--	6 U	**110 J**	--	

Table 16
Subsurface Sediment Chemical Testing Results - Inner Waterway Areas

				Location ID:	3A-02-VC	3A-02-VC	3A-02-VC	3A-03-VC	3A-03-VC	3A-03-VC	3A-04-VC	3A-04-VC	3A-04-VC	3A-05-VC	3A-05-VC	3A-05-VC
				Sample ID:	3A-02-VC-1-3	3A-02-VC-4-6	3A-02-VC-7-9	3A-03-VC-1-3	3A-03-VC-4-6	3A-03-VC-7-9	3A-04-VC-1-3	3A-04-VC-4-6	3A-04-VC-7-9	3A-05-VC-1-3	3A-05-VC-4-6	3A-05-VC-7-9
				Sample Date:	7/18/08	7/18/08	7/18/08	7/25/08	7/25/08	7/25/08	7/18/08	7/18/08	7/18/08	7/18/08	7/18/08	7/18/08
				In-situ Depth[1] (ft):	1-3	4-6	7-9	1-3	4-6	7-9	1-3	4-6	7-9	1-3	4-6	7-9
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**													
Phthalates (ug/kg)																
Dimethyl phthalate	--	--	71	**44**	20 U	--	59 U	20 U	--	20 U	170 U	--	20 U	120 U	--	
Diethyl phthalate	--	--	48	**19 J**	20 U	--	59 U	20 U	--	**22**	**180**	--	20 U	**130**	--	
Di-n-butyl phthalate	--	--	1,400	**37**	20 U	--	**100**	38 U	--	20 U	170 U	--	20 U	120 U	--	
Butylbenzyl phthalate	--	--	63	**150**	**27 J**	--	77 U	**110**	--	**130**	**380**	--	**59**	**340**	--	
Bis(2-ethylhexyl) phthalate	--	--	1,300	**380**	**80**	--	**1,000**	**1,000**	--	**180**	**920**	--	**140**	**930**	--	
Di-n-octyl phthalate	--	--	420	20 U	20 U	--	59 U	20 U	--	20 U	170 U	--	20 U	120 U	--	
Semi-Volatile Organics (ug/kg)																
1,3-Dichlorobenzene	--	--	170	20 U	20 U	--	59 U	20 U	--	20 U	170 U	--	20 U	120 U	--	
1-Methylnaphthalene	--	--	--	20 U	20 U	--	59 U	**1,300**	--	20 U	170 U	--	20 U	120 U	--	
Hexachloroethane	--	--	--	20 U	20 U	--	59 U	20 U	--	20 U	170 U	--	20 U	120 U	--	

Table 16
Subsurface Sediment Chemical Testing Results - Inner Waterway Areas

				Location ID:	3B-01-VC	3B-01-VC	3B-01-VC	3B-01-VC	5C-01-VC	5C-01-VC	5C-01-VC	5C-02-VC	5C-02-VC	5C-02-VC	5C-03-VC	5C-03-VC	5C-03-VC
				Sample ID:	3B-01-VC-1-3	3B-01-VC-4-6	3B-01-VC-7-9	3B-01-VC-9-12	5C-01-VC-1-3	5C-01-VC-4-6	5C-01-VC-7-9	5C-02-VC-1-3	5C-02-VC-4-6	5C-02-VC-7-9	5C-03-VC-1-3	5C-03-VC-4-6	5C-03-VC-7-9
				Sample Date:	7/21/08	7/21/08	7/21/08	7/21/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08
				In-situ Depth[1] (ft):	1-3	4-6	7-9	9-12	1-3	4-6	7-9	1-3	4-6	7-9	1-3	4-6	7-9
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**														
Grain Size (pct)																	
Total Gravel	--	--	--	--	0.6	0.9	6.8	8.9	0.5	0.2	6.7	1.2	0.1	9.1	0.1	0.8	
Total Sand	--	--	--	25	34.6	17	27.3	81.2	81.9	88.3	84.3	92.8	93.6	75.6	66.6	69.9	
Total Silt	--	--	--	43.2	38.2	43.5	39.3	6.2	9.6	4.6	2.8	6	6.2	7.9	23.4	21	
Total Clay	--	--	--	31.8	26.5	38.4	26.6	1.4	7.8	7.2	6.1	--	--	7.2	9.8	8.4	
Total Fines (Silt + Clay)	--	--	--	75	64.7	81.9	65.9	7.6	17.4	11.8	8.9	6	6.2	15.1	33.2	29.4	
Total Grain Size	--	--	--	100	99.9	99.8	100	97.7	99.8	100.3	99.9	100	99.9	99.8	99.9	100.1	
Physical Parameters																	
Atterberg Classification	--	--	--	CH	CL	CL	CL	Non-Plastic	Non-Plastic	Non-Plastic	Non-Plastic	Non-Plastic	Non-Plastic	Non-Plastic	Non-Plastic	Non-Plastic	
Specific gravity (su)	--	--	--	2.65	2.78	2.74	2.75	2.76	2.71	2.7	2.69	2.7	2.7	2.7	2.69	2.71	
Liquid Limit (pct)	--	--	--	88.4	38.1	34.6	28	--	--	--	--	--	--	--	--	--	
Plastic Limit (pct)	--	--	--	33.5	18.8	15.2	15.7	--	--	--	--	--	--	--	--	--	
Plasticity Index (pct)	--	--	--	55	19.2	19.4	12.4	--	--	--	--	--	--	--	--	--	
Moisture (water) Content (pct)	--	--	--	112.9	48.23	30.32	23.36	19.01	21.78	18.02	19.11	21.93	16.54	28.12	28.29	23.15	
Conventional Parameters																	
Ammonia (mg-N/kg)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sulfide (mg/kg)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total organic carbon (pct)	--	--	--	4.47	--	--	--	1.84	0.558	1.4	0.638	0.472	0.291	2.38	0.781	0.402	
Total solids (pct)	--	--	--	47.8	--	--	--	80.1	82.5	84.9	83.5	86.1	85.2	78.8	79.4	81.9	
Total Solids (preserved) (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Total volatile solids (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Metals (mg/kg)																	
Antimony	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Arsenic	57	93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Cadmium	5.1	6.7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Chromium	260	270	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Copper	390	390	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Lead	450	530	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Mercury	0.41	0.59	--	**0.83**	--	--	--	0.04 U	0.05 U	0.06 U	0.05 U	0.06 U	0.06 U	**0.16**	0.05 U	0.06 U	
Nickel	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Selenium	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Silver	6.1	6.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Zinc	410	960	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Butyltins (ug/kg)																	
Butyltin (ion)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Dibutyltin (ion)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Tributyltin (ion)	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Aromatic Hydrocarbons (mg/kg-OC)																	
Total LPAH	370	780	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**4.1**	2.4 U	--	
Naphthalene	99	170	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**0.8**	2.4 U	--	
Acenaphthylene	66	66	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	0.8 U	2.4 U	--	
Acenaphthene	16	57	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**0.55 J**	2.4 U	--	
Fluorene	23	79	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**0.5 J**	2.4 U	--	
Phenanthrene	100	480	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**1.5**	2.4 U	--	
Anthracene	220	1,200	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**0.76 J**	2.4 U	--	
2-Methylnaphthalene	38	64	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	0.8 U	2.4 U	--	
Total HPAH	960	5,300	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**25.1**	2.4 U	--	
Fluoranthene	160	1,200	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**6.7**	2.4 U	--	
Pyrene	1,000	1,400	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**5.9**	2.4 U	--	
Benzo(a)anthracene	110	270	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**2.3**	2.4 U	--	
Chrysene	110	460	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**3.2**	2.4 U	--	
Benzo(b)fluoranthene	--	--	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**2.4**	2.4 U	--	
Benzo(k)fluoranthene	--	--	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**1.6**	2.4 U	--	
Total Benzofluoranthenes (b, j, k)	230	450	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**4.0**	2.4 U	--	
Benzo(a)pyrene	99	210	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**1.5**	2.4 U	--	
Indeno(1,2,3-c,d)pyrene	34	88	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**0.76 J**	2.4 U	--	
Dibenzo(a,h)anthracene	12	33	--	--	--	--	--	0.33 U	1.1 U	--	0.94 U	1.3 U	--	0.25 U	0.79 U	--	
Benzo(g,h,i)perylene	31	78	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**0.76 J**	2.4 U	--	

Table 16
Subsurface Sediment Chemical Testing Results - Inner Waterway Areas

			Location ID:	3B-01-VC	3B-01-VC	3B-01-VC	3B-01-VC	5C-01-VC	5C-01-VC	5C-01-VC	5C-02-VC	5C-02-VC	5C-02-VC	5C-03-VC	5C-03-VC	5C-03-VC
			Sample ID:	3B-01-VC-1-3	3B-01-VC-4-6	3B-01-VC-7-9	3B-01-VC-9-12	5C-01-VC-1-3	5C-01-VC-4-6	5C-01-VC-7-9	5C-02-VC-1-3	5C-02-VC-4-6	5C-02-VC-7-9	5C-03-VC-1-3	5C-03-VC-4-6	5C-03-VC-7-9
			Sample Date:	7/21/08	7/21/08	7/21/08	7/21/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08
			In-situ Depth[1] (ft):	1-3	4-6	7-9	9-12	1-3	4-6	7-9	1-3	4-6	7-9	1-3	4-6	7-9
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**													
Chlorinated Benzenes (mg/kg-OC)																
1,2-Dichlorobenzene	2.3	2.3	--	--	--	--	--	0.33 UJ	1.1 UJ	--	0.94 UJ	1.3 UJ	--	0.25 UJ	0.79 UJ	--
1,4-Dichlorobenzene	3.1	9	--	--	--	--	--	0.33 U	1.1 U	--	0.94 U	1.3 U	--	0.25 U	0.79 U	--
1,2,4-Trichlorobenzene	0.81	1.8	--	--	--	--	--	0.33 U	1.1 U	--	0.94 U	1.3 U	--	0.25 U	0.79 U	--
Hexachlorobenzene	0.38	2.3	--	--	--	--	--	0.33 U	1.1 U	--	0.94 U	1.3 U	--	0.25 U	0.79 U	--
Phthalates (mg/kg-OC)																
Dimethyl phthalate	53	53	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	0.8 U	2.4 U	--
Diethyl phthalate	61	110	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	0.8 U	2.4 U	--
Di-n-butyl phthalate	220	1,700	--	--	--	--	--	1.1 U	3.6 U	--	**2.7 J**	4.2 U	--	0.8 U	2.4 U	--
Butylbenzyl phthalate	4.9	64	--	--	--	--	--	0.82 UJ	2.7 UJ	--	2.4 UJ	3.2 UJ	--	0.63 UJ	2 UJ	--
Bis(2-ethylhexyl) phthalate	47	78	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**2.7**	2.4 U	--
Di-n-octyl phthalate	58	4,500	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	0.8 U	2.4 U	--
Miscellaneous (mg/kg-OC)																
Dibenzofuran	15	58	--	--	--	--	--	1.1 U	3.6 U	--	3.1 U	4.2 U	--	**0.46 J**	2.4 U	--
Hexachlorobutadiene	3.9	6.2	--	--	--	--	--	0.33 UJ	1.1 UJ	--	0.94 UJ	1.3 UJ	--	0.25 UJ	0.79 UJ	--
N-Nitrosodiphenylamine	11	11	--	--	--	--	--	0.33 UJ	1.1 UJ	--	0.94 UJ	1.3 UJ	--	0.25 UJ	0.79 UJ	--
Ionizable Organic Compounds (ug/kg)																
Phenol	420	1,200	420	--	--	--	--	20 U	20 U	--	20 U	20 U	--	19 U	19 U	--
2-Methylphenol (o-Cresol)	63	63	63	--	--	--	--	6.1 UJ	5.9 UJ	--	6 UJ	6.1 UJ	--	6 UJ	6.2 UJ	--
4-Methylphenol (p-Cresol)	670	670	670	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**33**	19 U	--
2,4-Dimethylphenol	29	29	29	--	--	--	--	6.1 UJ	5.9 UJ	--	6 UJ	6.1 UJ	--	6 UJ	6.2 UJ	--
Pentachlorophenol	360	690	140	--	--	--	--	30 U	29 U	--	30 U	30 U	--	30 U	31 U	--
Benzyl alcohol	57	73	57	--	--	--	--	20 UJ	29 UJ	--	30 UJ	30 UJ	--	30 UJ	31 UJ	--
Benzoic acid	650	650	650	--	--	--	--	200 U	200 U	--	200 U	200 U	--	190 U	190 U	--
Aromatic Hydrocarbons (ug/kg)																
Total LPAH	--	--	5,200	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**97**	19 U	--
Naphthalene	--	--	2,100	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**19**	19 U	--
Acenaphthylene	--	--	560	--	--	--	--	20 U	20 U	--	20 U	20 U	--	19 U	19 U	--
Acenaphthene	--	--	500	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**13 J**	19 U	--
Fluorene	--	--	540	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**12 J**	19 U	--
Phenanthrene	--	--	1,500	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**35**	19 U	--
Anthracene	--	--	960	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**18 J**	19 U	--
2-Methylnaphthalene	--	--	670	--	--	--	--	20 U	20 U	--	20 U	20 U	--	19 U	19 U	--
Total HPAH	--	--	12,000	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**595**	19 U	--
Fluoranthene	--	--	1,700	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**160**	19 U	--
Pyrene	--	--	2,600	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**140**	19 U	--
Benzo(a)anthracene	--	--	1,300	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**54**	19 U	--
Chrysene	--	--	1,400	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**77**	19 U	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**56**	19 U	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**37**	19 U	--
Total Benzofluoranthenes (b, j, k)	--	--	3,200	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**93**	19 U	--
Benzo(a)pyrene	--	--	1,600	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**35**	19 U	--
Indeno(1,2,3-c,d)pyrene	--	--	600	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**18 J**	19 U	--
Dibenzo(a,h)anthracene	--	--	230	--	--	--	--	6.1 U	5.9 U	--	6 U	6.1 U	--	6 U	6.2 U	--
Benzo(g,h,i)perylene	--	--	670	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**18 J**	19 U	--
Chlorinated Benzenes (ug/kg)																
1,2-Dichlorobenzene	--	--	35	--	--	--	--	6.1 UJ	5.9 UJ	--	6 UJ	6.1 UJ	--	6 UJ	6.2 UJ	--
1,4-Dichlorobenzene	--	--	110	--	--	--	--	6.1 U	5.9 U	--	6 U	6.1 U	--	6 U	6.2 U	--
1,2,4-Trichlorobenzene	--	--	31	--	--	--	--	6.1 U	5.9 U	--	6 U	6.1 U	--	6 U	6.2 U	--
Hexachlorobenzene	--	--	22	--	--	--	--	6.1 U	5.9 U	--	6 U	6.1 U	--	6 U	6.2 U	--
Miscellaneous (ug/kg)																
Dibenzofuran	--	--	540	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**11 J**	19 U	--
Hexachlorobutadiene	--	--	11	--	--	--	--	6.1 UJ	5.9 UJ	--	6 UJ	6.1 UJ	--	6 UJ	6.2 UJ	--
N-Nitrosodiphenylamine	--	--	28	--	--	--	--	6.1 UJ	5.9 UJ	--	6 UJ	6.1 UJ	--	6 UJ	6.2 UJ	--

Table 16
Subsurface Sediment Chemical Testing Results - Inner Waterway Areas

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	3B-01-VC	3B-01-VC	3B-01-VC	3B-01-VC	5C-01-VC	5C-01-VC	5C-01-VC	5C-02-VC	5C-02-VC	5C-02-VC	5C-03-VC	5C-03-VC	5C-03-VC
				Sample ID:	3B-01-VC-1-3	3B-01-VC-4-6	3B-01-VC-7-9	3B-01-VC-9-12	5C-01-VC-1-3	5C-01-VC-4-6	5C-01-VC-7-9	5C-02-VC-1-3	5C-02-VC-4-6	5C-02-VC-7-9	5C-03-VC-1-3	5C-03-VC-4-6	5C-03-VC-7-9
				Sample Date:	7/21/08	7/21/08	7/21/08	7/21/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08
				In-situ Depth[1] (ft):	1-3	4-6	7-9	9-12	1-3	4-6	7-9	1-3	4-6	7-9	1-3	4-6	7-9
Phthalates (ug/kg)																	
Dimethyl phthalate	--	--	71	--	--	--	--	--	20 U	20 U	--	20 U	20 U	--	19 U	19 U	--
Diethyl phthalate	--	--	48	--	--	--	--	--	20 U	20 U	--	20 U	20 U	--	19 U	19 U	--
Di-n-butyl phthalate	--	--	1,400	--	--	--	--	--	20 U	20 U	--	**17 J**	20 U	--	19 U	19 U	--
Butylbenzyl phthalate	--	--	63	--	--	--	--	--	15 UJ	15 UJ	--	15 UJ	15 UJ	--	15 UJ	16 UJ	--
Bis(2-ethylhexyl) phthalate	--	--	1,300	--	--	--	--	--	20 U	20 U	--	20 U	20 U	--	**65**	19 U	--
Di-n-octyl phthalate	--	--	420	--	--	--	--	--	20 U	20 U	--	20 U	20 U	--	19 U	19 U	--
Semi-Volatile Organics (ug/kg)																	
1,3-Dichlorobenzene	--	--	170	--	--	--	--	--	20 U	20 U	--	20 U	20 U	--	19 U	19 U	--
1-Methylnaphthalene	--	--	--	--	--	--	--	--	20 U	20 U	--	20 U	20 U	--	19 U	19 U	--
Hexachloroethane	--	--	--	--	--	--	--	--	20 U	20 U	--	20 U	20 U	--	19 U	19 U	--

Notes:

Detected concentration is greater than SMS SQS screening level

Detected concentration is greater than SMS CSL screening level

Detected concentration is greater than 1988 Puget Sound Estuary Program LAET screening level

ng/kg = nanogram per kilogram

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

mg/kg-OC = milligrams per kilogram organic carbon normalized

pct = percent

1. Sample depth is reported as below mudline.

2. Sample 2B-01-VC-9-12 was tested for the full DMMP suite. Results for pesticides and PCBs were all reported at non-detect concentrations and the dioxin/furan TEQ (U=1/2) was calculated at 0.34 ng/kg.

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

The site specific Bioaccumulaltion Screening Level (BSL) for mercury is 1.2 mg/kg. (Supplemental RI Report, RETEC 2006)

Total LPAH (Low PAH) are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene. 2-Methylnapthalene is not included in the sum of LPAHs

Total HPAH (High PAH) are the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzofluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

Benzo(j)fluoranthene is included in the total of benzo(b&k)fluoranthenes

Totals are calculated for LPAH and HPAH as the sum of all detected results. If all are undetcted results, the highest reporting limit value is reported as the sum.

Toxic equivalency (TEQ) values were calculated for the validated dioxin/furan congeners using the 2005 World Health Organization's toxic equivalency factors for mammals. Undetected congeners were assigned a "0" (ND=0) and assigned a concentration equal to ½ the detection limit (ND=1/2).

-- Sample was not submitted for chemical analysis.

Non-organic carbon normalized samples with TOC results outside of the 0.5-3.5% range were screened against the 2003 Freshwater LAET

Table 17a
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	1C-01-VC	1C-01-VC	1C-01-VC	1C-01-VC	1C-01-VC	1C-01-VC	1C-01-VC	1C-02-VC	1C-02-VC	1C-02-VC	1C-02-VC
				Sample ID:	1C-01-VC-U-0-3.4	1C-01-VC-L-1-2	1C-01-VC-L-2-3	1C-01-VC-L-3-4	1C-01-VC-L-4-5	1C-01-VC-L-5-6	1C-01-VC-L-6-7	1C-02-VC-L-1-2	1C-02-VC-L-2-3	1C-02-VC-L-3-4	1C-02-VC-L-4-5
				Sample Date:	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08
				In-situ Depth[1] (ft):	0-3.4	4.4-5.4	5.4-6.4	6.4-7.4	7.4-8.4	8.4-9.4	9.4-10.4	1-2	2-3	3-4	4-5
Grain Size (pct)															
Total Gravel	--	--	--	--	--	**1.6**	--	--	--	--	--	--	--	--	--
Total Sand	--	--	--	**2.9**	--	**3**	--	--	--	--	--	--	**8.4**	--	--
Total Silt	--	--	--	**54.7**	--	**52.7**	--	--	--	--	--	--	**53.1**	--	--
Total Clay	--	--	--	**42.4**	--	**42.6**	--	--	--	--	--	--	**38.5**	--	--
Total Fines (Silt + Clay)	--	--	--	**97.1**	--	**95.3**	--	--	--	--	--	--	**91.6**	--	--
Total Grain Size	--	--	--	**100**	--	**99.9**	--	--	--	--	--	--	**100**	--	--
Physical Parameters															
Atterberg Classification	--	--	--	**CH**	--	**CH**	--	--	--	--	--	--	**CH**	--	--
Specific gravity (su)	--	--	--	**2.68**	--	**2.65**	--	--	--	--	--	--	**2.71**	--	--
Liquid Limit (pct)	--	--	--	**90.3**	--	**103**	--	--	--	--	--	--	**64.2**	--	--
Plastic Limit (pct)	--	--	--	**35.3**	--	**36.8**	--	--	--	--	--	--	**27.1**	--	--
Plasticity Index (pct)	--	--	--	**55**	--	**66.3**	--	--	--	--	--	--	**37.1**	--	--
Moisture (water) Content (pct)	--	--	--	**108**	--	**109.3**	--	--	--	--	--	--	**74.08**	--	--
Conventional Parameters (pct)															
Total organic carbon	--	--	--	**2.48**	**3.45**	**2.18**	**1.96**	--	**0.798**	--	**1.73**	**1.15**	**1.13**	**0.672**	
Total solids	--	--	--	**47.4**	**47.4**	**48.1**	**52.9**	--	**62.9**	--	**51.3**	**57.7**	**62.5**	**69.8**	
Metals (mg/kg)															
Mercury	0.41	0.59	--	**1.73**	**0.57/ 0.6 J**	**0.09 U/ 0.2 J**	**0.78 / 0.37**	**0.26 J**	0.07 UJ	0.07 UJ	**0.93**	**0.41**	**0.75**	0.06 UJ	
Aromatic Hydrocarbons (mg/kg-OC)															
Total LPAH	370	780	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Naphthalene	99	170	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Acenaphthylene	66	66	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Acenaphthene	16	57	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Fluorene	23	79	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Phenanthrene	100	480	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Anthracene	220	1,200	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
2-Methylnaphthalene	38	64	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Total HPAH	960	5,300	--	--	--	--	**1.5**	--	2.4 U	--	--	--	--	2.8 U	
Fluoranthene	160	1,200	--	--	--	--	**0.87 J**	--	2.4 U	--	--	--	--	2.8 U	
Pyrene	1000	1,400	--	--	--	--	**0.66 J**	--	2.4 U	--	--	--	--	2.8 U	
Benzo(a)anthracene	110	270	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Chrysene	110	460	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Benzo(b)fluoranthene	--	--	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Benzo(k)fluoranthene	--	--	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Total Benzofluoranthenes (b, j, k)	230	450	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Benzo(a)pyrene	99	210	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Indeno(1,2,3-c,d)pyrene	34	88	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Dibenzo(a,h)anthracene	12	33	--	--	--	--	0.31 U	--	0.76 U	--	--	--	--	0.86 U	
Benzo(g,h,i)perylene	31	78	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Chlorinated Benzenes (mg/kg-OC)															
1,2-Dichlorobenzene	2.3	2.3	--	--	--	--	0.31 U	--	0.76 U	--	--	--	--	0.86 U	
1,4-Dichlorobenzene	3.1	9	--	--	--	--	0.31 U	--	0.76 U	--	--	--	--	0.86 U	
1,2,4-Trichlorobenzene	0.81	1.8	--	--	--	--	0.31 U	--	0.76 UJ	--	--	--	--	0.86 UJ	
Hexachlorobenzene	0.38	2.3	--	--	--	--	0.31 U	--	0.76 U	--	--	--	--	0.86 U	
Phthalates (mg/kg-OC)															
Dimethyl phthalate	53	53	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Diethyl phthalate	61	110	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Di-n-butyl phthalate	220	1,700	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Butylbenzyl phthalate	4.9	64	--	--	--	--	0.77 U	--	1.9 U	--	--	--	--	2.2 U	
Bis(2-ethylhexyl) phthalate	47	78	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	
Di-n-octyl phthalate	58	4,500	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U	

Table 17a
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C

			Location ID:	1C-01-VC	1C-01-VC	1C-01-VC	1C-01-VC	1C-01-VC	1C-01-VC	1C-01-VC	1C-02-VC	1C-02-VC	1C-02-VC	1C-02-VC
			Sample ID:	1C-01-VC-U-0-3.4	1C-01-VC-L-1-2	1C-01-VC-L-2-3	1C-01-VC-L-3-4	1C-01-VC-L-4-5	1C-01-VC-L-5-6	1C-01-VC-L-6-7	1C-02-VC-L-1-2	1C-02-VC-L-2-3	1C-02-VC-L-3-4	1C-02-VC-L-4-5
			Sample Date:	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08
			In-situ Depth[1] (ft):	0-3.4	4.4-5.4	5.4-6.4	6.4-7.4	7.4-8.4	8.4-9.4	9.4-10.4	1-2	2-3	3-4	4-5
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**											
Miscellaneous (mg/kg-OC)														
Dibenzofuran	15	58	--	--	--	--	0.97 U	--	2.4 U	--	--	--	--	2.8 U
Hexachlorobutadiene	3.9	6.2	--	--	--	--	0.31 U	--	0.76 U	--	--	--	--	0.86 U
N-Nitrosodiphenylamine	11	11	--	--	--	--	0.31 UJ	--	0.76 UJ	--	--	--	--	0.86 UJ
Ionizable Organic Compounds (ug/kg)														
Phenol	420	1,200	420	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
2-Methylphenol (o-Cresol)	63	63	63	--	--	--	6 U	6 U	6.1 U	--	--	--	--	5.8 U
4-Methylphenol (p-Cresol)	670	670	670	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
2,4-Dimethylphenol	29	29	29	--	--	--	6 UJ	6 UJ	6.1 UJ	--	--	--	--	5.8 UJ
Pentachlorophenol	360	690	140	--	--	--	30 UJ	30 UJ	30 UJ	--	--	--	--	**54 J**
Benzyl alcohol	57	73	57	--	--	--	19 UJ	20 UJ	19 UJ	--	--	--	--	19 UJ
Benzoic acid	650	650	650	--	--	--	190 U	200 U	190 U	--	--	--	--	190 U
Aromatic Hydrocarbons (ug/kg)														
Total LPAH	--	--	5,200	--	--	--	19 U	**13**	19 U	--	--	--	--	19 U
Naphthalene	--	--	2,100	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
Acenaphthylene	--	--	560	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
Acenaphthene	--	--	500	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
Fluorene	--	--	540	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
Phenanthrene	--	--	1,500	--	--	--	19 U	**13 J**	19 U	--	--	--	--	19 U
Anthracene	--	--	960	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
2-Methylnaphthalene	--	--	670	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
Total HPAH	--	--	12,000	--	--	--	**30**	**64**	19 U	--	--	--	--	19 U
Fluoranthene	--	--	1,700	--	--	--	**17 J**	**23**	19 U	--	--	--	--	19 U
Pyrene	--	--	2,600	--	--	--	**13 J**	**19 J**	19 U	--	--	--	--	19 U
Benzo(a)anthracene	--	--	1,300	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
Chrysene	--	--	1,400	--	--	--	19 U	**11 J**	19 U	--	--	--	--	19 U
Benzo(b)fluoranthene	--	--	--	--	--	--	19 U	**11 J**	19 U	--	--	--	--	19 U
Benzo(k)fluoranthene	--	--	--	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
Total Benzofluoranthenes (b, j, k)	--	--	3,200	--	--	--	19 U	**11**	19 U	--	--	--	--	19 U
Benzo(a)pyrene	--	--	1,600	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
Indeno(1,2,3-c,d)pyrene	--	--	600	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
Dibenzo(a,h)anthracene	--	--	230	--	--	--	6 U	6 U	6.1 U	--	--	--	--	5.8 U
Benzo(g,h,i)perylene	--	--	670	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
Chlorinated Benzenes (ug/kg)														
1,2-Dichlorobenzene	--	--	35	--	--	--	6 U	6 U	6.1 U	--	--	--	--	5.8 U
1,4-Dichlorobenzene	--	--	110	--	--	--	6 U	6 U	6.1 U	--	--	--	--	5.8 U
1,2,4-Trichlorobenzene	--	--	31	--	--	--	6 U	6 U	6.1 UJ	--	--	--	--	5.8 UJ
Hexachlorobenzene	--	--	22	--	--	--	6 U	6 U	6.1 U	--	--	--	--	5.8 U
Miscellaneous (ug/kg)														
Dibenzofuran	--	--	540	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
Hexachlorobutadiene	--	--	11	--	--	--	6 U	6 U	6.1 U	--	--	--	--	5.8 U
N-Nitrosodiphenylamine	--	--	28	--	--	--	6 UJ	6 UJ	6.1 UJ	--	--	--	--	5.8 UJ
Phthalates (ug/kg)														
Dimethyl phthalate	--	--	71	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
Diethyl phthalate	--	--	48	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
Di-n-butyl phthalate	--	--	1,400	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
Butylbenzyl phthalate	--	--	63	--	--	--	15 U	15 U	15 U	--	--	--	--	15 U
Bis(2-ethylhexyl) phthalate	--	--	1,300	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U
Di-n-octyl phthalate	--	--	420	--	--	--	19 U	20 U	19 U	--	--	--	--	19 U

Table 17a
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C

			Location ID:	1C-01-VC	1C-01-VC	1C-01-VC	1C-01-VC	1C-01-VC	1C-01-VC	1C-01-VC	1C-02-VC	1C-02-VC	1C-02-VC	1C-02-VC
			Sample ID:	1C-01-VC-U-0-3.4	1C-01-VC-L-1-2	1C-01-VC-L-2-3	1C-01-VC-L-3-4	1C-01-VC-L-4-5	1C-01-VC-L-5-6	1C-01-VC-L-6-7	1C-02-VC-L-1-2	1C-02-VC-L-2-3	1C-02-VC-L-3-4	1C-02-VC-L-4-5
			Sample Date:	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08
			In-situ Depth[1] (ft):	0-3.4	4.4-5.4	5.4-6.4	6.4-7.4	7.4-8.4	8.4-9.4	9.4-10.4	1-2	2-3	3-4	4-5
Analyte	SMS SQS	SMS CSL	PS LAET											
Dioxin Furans (ng/kg)														
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	**1.22**	--	--	--	**0.439 J**	0.0808 U	--	**0.852**	--	--	0.0632 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	**4.44**	--	--	--	**1.4 J**	0.13 U	--	**4**	--	--	0.0822 U
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**12.1**	--	--	--	**2.18 J**	0.0802 U	--	**13.7**	--	--	0.084 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**47.2**	--	--	--	**17.3**	0.0902 U	--	**31.5**	--	--	0.0929 U
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**17.3**	--	--	--	**4.36**	0.0868 U	--	**15.5**	--	--	0.0957 U
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	**957**	--	--	--	**400**	**1.38 J**	--	**512**	--	--	**1.01 J**
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	**10,100**	--	--	--	**3740**	**15.3**	--	**3,920**	--	--	**11.7**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	**22.1**	--	--	--	**2.01**	**0.05 J**	--	**13.4**	--	--	0.0268 U
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	**5.73**	--	--	--	**0.935 J**	0.0722 U	--	**4.28**	--	--	0.0596 U
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	**9.77**	--	--	--	**3.19**	0.068 U	--	**5.82**	--	--	0.055 U
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	**15.3**	--	--	--	**4.6**	0.0358 U	--	**14.1**	--	--	0.0268 U
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	**4.68 J**	--	--	--	**2.17 J**	0.0337 U	--	**4.88**	--	--	0.0255 U
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	**4.6**	--	--	--	**1.03 J**	0.0487 U	--	**2.81**	--	--	0.0347 U
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	**8.32**	--	--	--	**4**	0.0339 U	--	**4.65**	--	--	0.0262 U
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	**281**	--	--	--	**221**	0.0637 U	--	**280**	--	--	0.0256 U
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	**13.1**	--	--	--	**8.2**	0.0881 U	--	**8.74**	--	--	0.0362 U
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--	**930**	--	--	--	**796**	**0.65 J**	--	**516**	--	--	0.141 U
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	**531 J**	--	--	--	**32.8 J**	**0.422 J**	--	**586 J**	--	--	**0.498 J**
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	**557 J**	--	--	--	**38.7 J**	**0.0879 J**	--	**638**	--	--	**0.227 J**
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**920 J**	--	--	--	**116 J**	**1.15 J**	--	**886**	--	--	**1.06 J**
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	**2,070**	--	--	--	**900**	**3.44**	--	**1,030**	--	--	**2.61**
Total Tetrachlorodibenzofuran (TCDF)	--	--	--	**102**	--	--	--	**34.4 J**	**0.568 J**	--	**70.4 J**	--	--	**0.376 J**
Total Pentachlorodibenzofuran (PeCDF)	--	--	--	**79.3**	--	--	--	**39.6 J**	**0.197 J**	--	**48.8 J**	--	--	**0.163 J**
Total Hexachlorodibenzofuran (HxCDF)	--	--	--	**305 J**	--	--	--	**183 J**	**0.146 J**	--	**155 J**	--	--	**0.137 J**
Total Heptachlorodibenzofuran (HpCDF)	--	--	--	**1,110**	--	--	--	**908**	**0.754**	--	**697 J**	--	--	**0.228**
Total Dioxin/Furan TEQ (WHO) ND=0	--	--	--	**37.7**	--	--	--	**14.2**	**0.024**	--	**26.1**	--	--	**0.014**
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--	**37.7**	--	--	--	**14.2**	**0.161**	--	**26.1**	--	--	**0.116**
Semi-Volatile Organics (ug/kg)														
1,3-Dichlorobenzene	--	--	170	--	--	--	--	19 U	20 U	19 U	--	--	--	19 U
1-Methylnaphthalene	--	--	--	--	--	--	--	19 U	20 U	19 U	--	--	--	19 U
Hexachloroethane	--	--	--	--	--	--	--	19 U	20 U	19 U	--	--	--	19 U

Table 17a
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	1C-02-VC	1C-03-VC	1C-03-VC	1C-03-VC	1C-03-VC	1C-04-VC	1C-04-VC	1C-04-VC	1C-05-VC	1C-05-VC
				Sample ID:	1C-02-VC-L-5-6	1C-02-VC-L-6-7	1C-03-VC-U-0-1	1C-03-VC-L-1-2	1C-03-VC-L-2-3	1C-03-VC-L-3-4	1C-04-VC-L-1-2	1C-04-VC-L-2-3	1C-04-VC-L-3-4	1C-05-VC-U-0-2.5	1C-05-VC-L-1-2
				Sample Date:	7/21/08	7/21/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08
				In-situ Depth[1] (ft):	5-6	6-7	0-1	2-3	3-4	4-5	1-2	2-3	3-4	0-2.5	3.5-4.5
Grain Size (pct)															
Total Gravel	--	--	--	--	--	**0.2**	--	**0.3**	--	--	**0.3**	--	**0.2**	--
Total Sand	--	--	--	--	--	**1.2**	--	**79.4**	--	--	**80.7**	--	**13.3**	--
Total Silt	--	--	--	--	--	**60.1**	--	**14.6**	--	--	**13.5**	--	**49.2**	--
Total Clay	--	--	--	--	--	**38.5**	--	**5.6**	--	--	**5.5**	--	**37.3**	--
Total Fines (Silt + Clay)	--	--	--	--	--	**98.6**	--	**20.2**	--	--	**19**	--	**86.5**	--
Total Grain Size	--	--	--	--	--	**100**	--	**99.9**	--	--	**100**	--	**100**	--
Physical Parameters															
Atterberg Classification	--	--	--	--	--	**CH**	--	**Non-Plastic**	--	--	**Non-Plastic**	--	**CH**	--
Specific gravity (su)	--	--	--	--	--	**2.76**	--	**2.62**	--	--	**2.72**	--	**2.66**	--
Liquid Limit (pct)	--	--	--	--	--	**86.3**	--	--	--	--	--	--	**85.3**	--
Plastic Limit (pct)	--	--	--	--	--	**35.3**	--	--	--	--	--	--	**35.3**	--
Plasticity Index (pct)	--	--	--	--	--	**51**	--	--	--	--	--	--	**50**	--
Moisture (water) Content (pct)	--	--	--	--	--	**136.7**	--	**76.13**	--	--	**21.71**	--	**112.7**	--
Conventional Parameters (pct)															
Total organic carbon	--	--	--	--	--	**2.74**	**2.28**	**3.19**	**0.728**	**1.19**	**0.607**	**0.517**	**2.66**	**3.84**
Total solids	--	--	--	--	--	**43.4**	**50.2**	**56.1**	**77.8**	**75.8**	**80.2**	**79.7**	**46.1**	**50.3**
Metals (mg/kg)															
Mercury	0.41	0.59	--	0.06 UJ	0.05 UJ	**0.4**	**2.08**	**0.32**	**0.06**	**0.46**	**0.07**	0.06 U	**1.8**	**23**
Aromatic Hydrocarbons (mg/kg-OC)															
Total LPAH	370	780	--	--	--	--	--	**2.66**	--	--	3.1 U	--	--	--
Naphthalene	99	170	--	--	--	--	--	**0.41 J**	--	--	3.1 U	--	--	--
Acenaphthylene	66	66	--	--	--	--	--	0.63 U	--	--	3.1 U	--	--	--
Acenaphthene	16	57	--	--	--	--	--	0.63 U	--	--	3.1 U	--	--	--
Fluorene	23	79	--	--	--	--	--	**0.34 J**	--	--	3.1 U	--	--	--
Phenanthrene	100	480	--	--	--	--	--	**1.5**	--	--	3.1 U	--	--	--
Anthracene	220	1,200	--	--	--	--	--	**0.41 J**	--	--	3.1 U	--	--	--
2-Methylnaphthalene	38	64	--	--	--	--	--	0.63 U	--	--	3.1 U	--	--	--
Total HPAH	960	5,300	--	--	--	--	--	**6.64**	--	--	**3.4**	--	--	--
Fluoranthene	160	1,200	--	--	--	--	--	**2.1**	--	--	3.1 U	--	--	--
Pyrene	1000	1,400	--	--	--	--	--	**1.6**	--	--	**1.6 J**	--	--	--
Benzo(a)anthracene	110	270	--	--	--	--	--	**0.56 J**	--	--	3.1 U	--	--	--
Chrysene	110	460	--	--	--	--	--	**0.75**	--	--	**1.8 J**	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--	**0.47 J**	--	--	3.1 U	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	**0.41 J**	--	--	3.1 U	--	--	--
Total Benzofluoranthenes (b, j, k)	230	450	--	--	--	--	--	**0.88 J**	--	--	3.1 U	--	--	--
Benzo(a)pyrene	99	210	--	--	--	--	--	**0.41 J**	--	--	3.1 U	--	--	--
Indeno(1,2,3-c,d)pyrene	34	88	--	--	--	--	--	0.63 U	--	--	3.1 U	--	--	--
Dibenzo(a,h)anthracene	12	33	--	--	--	--	--	0.18 UJ	--	--	1 U	--	--	--
Benzo(g,h,i)perylene	31	78	--	--	--	--	--	**0.34 J**	--	--	3.1 U	--	--	--
Chlorinated Benzenes (mg/kg-OC)															
1,2-Dichlorobenzene	2.3	2.3	--	--	--	--	--	0.18 U	--	--	1 U	--	--	--
1,4-Dichlorobenzene	3.1	9	--	--	--	--	--	0.18 U	--	--	1 U	--	--	--
1,2,4-Trichlorobenzene	0.81	1.8	--	--	--	--	--	0.18 U	--	--	1 U	--	--	--
Hexachlorobenzene	0.38	2.3	--	--	--	--	--	0.18 U	--	--	1 U	--	--	--
Phthalates (mg/kg-OC)															
Dimethyl phthalate	53	53	--	--	--	--	--	0.63 U	--	--	3.1 U	--	--	--
Diethyl phthalate	61	110	--	--	--	--	--	0.63 U	--	--	**2.8 J**	--	--	--
Di-n-butyl phthalate	220	1,700	--	--	--	--	--	0.63 U	--	--	3.1 U	--	--	--
Butylbenzyl phthalate	4.9	64	--	--	--	--	--	0.47 U	--	--	2.5 U	--	--	--
Bis(2-ethylhexyl) phthalate	47	78	--	--	--	--	--	0.63 U	--	--	3.1 U	--	--	--
Di-n-octyl phthalate	58	4,500	--	--	--	--	--	0.63 U	--	--	3.1 U	--	--	--

Table 17a
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C

				Location ID:	1C-02-VC	1C-02-VC	1C-03-VC	1C-03-VC	1C-03-VC	1C-03-VC	1C-04-VC	1C-04-VC	1C-04-VC	1C-05-VC	1C-05-VC
				Sample ID:	1C-02-VC-L-5-6	1C-02-VC-L-6-7	1C-03-VC-U-0-1	1C-03-VC-L-1-2	1C-03-VC-L-2-3	1C-03-VC-L-3-4	1C-04-VC-L-1-2	1C-04-VC-L-2-3	1C-04-VC-L-3-4	1C-05-VC-U-0-2.5	1C-05-VC-L-1-2
				Sample Date:	7/21/08	7/21/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08
				In-situ Depth[1] (ft):	5-6	6-7	0-1	2-3	3-4	4-5	1-2	2-3	3-4	0-2.5	3.5-4.5
Analyte	SMS SQS	SMS CSL	PS LAET												
Miscellaneous (mg/kg-OC)															
Dibenzofuran	15	58	--	--	--	--	--	0.63 U	--	--	3.1 U	--	--	--	
Hexachlorobutadiene	3.9	6.2	--	--	--	--	--	0.18 U	--	--	1 U	--	--	--	
N-Nitrosodiphenylamine	11	11	--	--	--	--	--	0.44 UJ	--	--	1 UJ	--	--	--	
Ionizable Organic Compounds (ug/kg)															
Phenol	420	1,200	420	--	--	--	--	20 U	--	--	19 UJ	--	--	--	
2-Methylphenol (o-Cresol)	63	63	63	--	--	--	--	5.9 U	--	--	6.1 U	--	--	--	
4-Methylphenol (p-Cresol)	670	670	670	--	--	--	--	**26**	--	--	19 U	--	--	--	
2,4-Dimethylphenol	29	29	29	--	--	--	--	5.9 UJ	--	--	6.1 UJ	--	--	--	
Pentachlorophenol	360	690	140	--	--	--	--	30 UJ	--	--	30 UJ	--	--	--	
Benzyl alcohol	57	73	57	--	--	--	--	20 UJ	--	--	19 UJ	--	--	--	
Benzoic acid	650	650	650	--	--	--	--	200 U	--	--	190 U	--	--	--	
Aromatic Hydrocarbons (ug/kg)															
Total LPAH	--	--	5,200	--	--	--	--	**84**	--	--	19 U	--	--	--	
Naphthalene	--	--	2,100	--	--	--	--	**13 J**	--	--	19 U	--	--	--	
Acenaphthylene	--	--	560	--	--	--	--	20 U	--	--	19 U	--	--	--	
Acenaphthene	--	--	500	--	--	--	--	20 U	--	--	19 U	--	--	--	
Fluorene	--	--	540	--	--	--	--	**11 J**	--	--	19 U	--	--	--	
Phenanthrene	--	--	1,500	--	--	--	--	**47**	--	--	19 U	--	--	--	
Anthracene	--	--	960	--	--	--	--	**13 J**	--	--	19 U	--	--	--	
2-Methylnaphthalene	--	--	670	--	--	--	--	20 U	--	--	19 U	--	--	--	
Total HPAH	--	--	12,000	--	--	--	--	**213**	--	--	**21**	--	--	--	
Fluoranthene	--	--	1,700	--	--	--	--	**68**	--	--	19 U	--	--	--	
Pyrene	--	--	2,600	--	--	--	--	**51**	--	--	**9.8 J**	--	--	--	
Benzo(a)anthracene	--	--	1,300	--	--	--	--	**18 J**	--	--	19 U	--	--	--	
Chrysene	--	--	1,400	--	--	--	--	**24**	--	--	**11 J**	--	--	--	
Benzo(b)fluoranthene	--	--	--	--	--	--	--	**15 J**	--	--	19 U	--	--	--	
Benzo(k)fluoranthene	--	--	--	--	--	--	--	**13 J**	--	--	19 U	--	--	--	
Total Benzofluoranthenes (b, j, k)	--	--	3,200	--	--	--	--	**28 J**	--	--	19 U	--	--	--	
Benzo(a)pyrene	--	--	1,600	--	--	--	--	**13 J**	--	--	19 U	--	--	--	
Indeno(1,2,3-c,d)pyrene	--	--	600	--	--	--	--	20 U	--	--	19 U	--	--	--	
Dibenzo(a,h)anthracene	--	--	230	--	--	--	--	5.9 UJ	--	--	6.1 U	--	--	--	
Benzo(g,h,i)perylene	--	--	670	--	--	--	--	**11 J**	--	--	19 U	--	--	--	
Chlorinated Benzenes (ug/kg)															
1,2-Dichlorobenzene	--	--	35	--	--	--	--	5.9 U	--	--	6.1 U	--	--	--	
1,4-Dichlorobenzene	--	--	110	--	--	--	--	5.9 U	--	--	6.1 U	--	--	--	
1,2,4-Trichlorobenzene	--	--	31	--	--	--	--	5.9 U	--	--	6.1 U	--	--	--	
Hexachlorobenzene	--	--	22	--	--	--	--	5.9 U	--	--	6.1 U	--	--	--	
Miscellaneous (ug/kg)															
Dibenzofuran	--	--	540	--	--	--	--	20 U	--	--	19 U	--	--	--	
Hexachlorobutadiene	--	--	11	--	--	--	--	5.9 U	--	--	6.1 U	--	--	--	
N-Nitrosodiphenylamine	--	--	28	--	--	--	--	14 UJ	--	--	6.1 UJ	--	--	--	
Phthalates (ug/kg)															
Dimethyl phthalate	--	--	71	--	--	--	--	20 U	--	--	19 U	--	--	--	
Diethyl phthalate	--	--	48	--	--	--	--	20 U	--	--	**17 J**	--	--	--	
Di-n-butyl phthalate	--	--	1,400	--	--	--	--	20 U	--	--	19 U	--	--	--	
Butylbenzyl phthalate	--	--	63	--	--	--	--	15 U	--	--	15 U	--	--	--	
Bis(2-ethylhexyl) phthalate	--	--	1,300	--	--	--	--	20 U	--	--	19 U	--	--	--	
Di-n-octyl phthalate	--	--	420	--	--	--	--	20 U	--	--	19 U	--	--	--	

Table 17a
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C

			Location ID:	1C-02-VC	1C-02-VC	1C-03-VC	1C-03-VC	1C-03-VC	1C-03-VC	1C-04-VC	1C-04-VC	1C-04-VC	1C-05-VC	1C-05-VC
			Sample ID:	1C-02-VC-L-5-6	1C-02-VC-L-6-7	1C-03-VC-U-0-1	1C-03-VC-L-1-2	1C-03-VC-L-2-3	1C-03-VC-L-3-4	1C-04-VC-L-1-2	1C-04-VC-L-2-3	1C-04-VC-L-3-4	1C-05-VC-U-0-2.5	1C-05-VC-L-1-2
			Sample Date:	7/21/08	7/21/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08
			In-situ Depth[1] (ft):	5-6	6-7	0-1	2-3	3-4	4-5	1-2	2-3	3-4	0-2.5	3.5-4.5
Analyte	SMS SQS	SMS CSL	PS LAET											
Dioxin Furans (ng/kg)														
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	--	--	--	--	--	--	--	--	**1.5**	**5.48**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	--	--	--	--	--	--	--	--	**6.8**	**6.09**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	--	--	--	--	--	--	--	**23.4**	**10.6**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	--	--	--	--	--	--	--	**56.5**	**145**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	--	--	--	--	--	--	--	**27.8**	**29.1**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	--	--	--	--	--	--	--	--	**964**	**3,520**
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	--	--	--	--	--	--	--	--	--	**7,490**	**35,600**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	--	--	--	--	--	--	--	--	--	**29.3**	**39.8**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	--	--	--	--	--	--	--	**6.26**	**51.2**
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	--	--	--	--	--	--	--	**9.67**	**76.3**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	--	--	--	--	--	--	--	**14.2**	**147**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	--	--	--	--	--	--	--	**5.47**	**35.3**
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	--	--	--	--	--	--	--	**4.33**	**38.2**
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	--	--	--	--	--	--	--	**7.51**	**31.7**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	--	--	--	--	--	--	--	**139**	**715**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	--	--	--	--	--	--	--	**8.52**	**54.2**
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--	--	--	--	--	--	--	--	--	--	**443**	**2,270**
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	--	--	--	--	--	--	--	--	**1,030**	**93 J**
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	--	--	--	--	--	--	--	--	**1,130**	**117 J**
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	--	--	--	--	--	--	--	**1,670 J**	**675 J**
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	--	--	--	--	--	--	--	--	**2,020**	**6,860**
Total Tetrachlorodibenzofuran (TCDF)	--	--	--	--	--	--	--	--	--	--	--	--	**128**	**189**
Total Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	--	--	--	--	--	--	--	**80.1**	**398**
Total Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	--	--	--	--	--	--	--	**210**	**1,260**
Total Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	--	--	--	--	--	--	--	**516**	**2,870**
Total Dioxin/Furan TEQ (WHO) ND=0	--	--	--	--	--	--	--	--	--	--	--	--	**41.7**	**138**
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--	--	--	--	--	--	--	--	--	--	**41.7**	**138**
Semi-Volatile Organics (ug/kg)														
1,3-Dichlorobenzene	--	--	170	--	--	--	--	20 U	--	--	19 UJ	--	--	--
1-Methylnaphthalene	--	--	--	--	--	--	--	20 U	--	--	19 U	--	--	--
Hexachloroethane	--	--	--	--	--	--	--	20 U	--	--	19 UJ	--	--	--

Table 17a
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	1C-05-VC	1C-05-VC	1C-05-VC	1C-06-VC	1C-06-VC	1C-06-VC	1C-06-VC	1C-07-VC	1C-07-VC	1C-07-VC
				Sample ID:	1C-05-VC-L-2-3	1C-05-VC-L-3-4	1C-05-VC-L-4-5	1C-05-VC-L-5-6	1C-06-VC-U	1C-06-VC-L-1-2	1C-06-VC-L-2-3	1C-06-VC-L-3-4	1C-07-VC-U	1C-07-VC-L-1-2	1C-07-VC-L-2-3
				Sample Date:	7/22/08	7/22/08	7/22/08	7/22/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08
				In-situ Depth[1] (ft):	4.5-5.5	5.5-6.5	6.5-7.5	7.5-8.5	0-1	2-3	3-4	4-5	0-3	4-5	5-6
Grain Size (pct)															
Total Gravel	--	--	--		**0.1**	--	--	--	--	--	--	--	**0.3**	--	**0.3**
Total Sand	--	--	--		**31.5**	--	--	--	**1.6**	--	**10.1**	--	**7.5**	--	**4.3**
Total Silt	--	--	--		**41.4**	--	--	--	**60.2**	--	**62**	--	**55.2**	--	**48.9**
Total Clay	--	--	--		**26.9**	--	--	--	**38.3**	--	**27.9**	--	**36.9**	--	**46.6**
Total Fines (Silt + Clay)	--	--	--		**68.3**	--	--	--	**98.5**	--	**89.9**	--	**92.1**	--	**95.5**
Total Grain Size	--	--	--		**99.9**	--	--	--	**100.1**	--	**100**	--	**99.9**	--	**100.1**
Physical Parameters															
Atterberg Classification	--	--	--		**CH**	--	--	--	**CH**	--	**CH**	--	**CH**	--	**CH**
Specific gravity (su)	--	--	--		**2.67**	--	--	--	**2.66**	--	**2.71**	--	**2.59**	--	**2.6**
Liquid Limit (pct)	--	--	--		**67.8**	--	--	--	**89.6**	--	**51.3**	--	**102**	--	**97.5**
Plastic Limit (pct)	--	--	--		**30.5**	--	--	--	**34.2**	--	**22.6**	--	**36.6**	--	**38.1**
Plasticity Index (pct)	--	--	--		**37.4**	--	--	--	**55.4**	--	**28.7**	--	**65.5**	--	**59.4**
Moisture (water) Content (pct)	--	--	--		**88.55**	--	--	--	**130.2**	--	**47.41**	--	**126.1**	--	**95.93**
Conventional Parameters (pct)															
Total organic carbon	--	--	--		**2.89**	**1.15**	--	--	**2.34**	**3.2**	**0.988**	**0.371**	**3.47**	**3.52**	**3.67**
Total solids	--	--	--		**51.5**	**77**	--	--	**42.1**	**52.1**	**67.1**	**80.9**	**45.8**	**49.1**	**50.5**
Metals (mg/kg)															
Mercury	0.41	0.59	--		**5.32**	**0.28**	0.05 UJ	0.06 UJ	**0.4**	**1.47**	**0.08**	0.05 U	**6.3**	**0.7**	**0.46**
Aromatic Hydrocarbons (mg/kg-OC)															
Total LPAH	370	780	--		--	**1.4**	--	--	--	--	**12.6**	--	--	--	**6.6**
Naphthalene	99	170	--		--	1.7 U	--	--	--	--	**2.1**	--	--	--	**1.8**
Acenaphthylene	66	66	--		--	1.7 U	--	--	--	--	2 U	--	--	--	**0.44 J**
Acenaphthene	16	57	--		--	1.7 U	--	--	--	--	**1.1 J**	--	--	--	**0.44 J**
Fluorene	23	79	--		--	1.7 U	--	--	--	--	**2**	--	--	--	**0.46 J**
Phenanthrene	100	480	--		--	**1.4 J**	--	--	--	--	**5.8**	--	--	--	**2.7**
Anthracene	220	1,200	--		--	1.7 U	--	--	--	--	**1.6 J**	--	--	--	**0.76**
2-Methylnaphthalene	38	64	--		--	1.7 U	--	--	--	--	2 U	--	--	--	**0.74**
Total HPAH	960	5,300	--		--	**7.5**	--	--	--	--	**22.9**	--	--	--	**15.5**
Fluoranthene	160	1,200	--		--	**3.3**	--	--	--	--	**7.4**	--	--	--	**3.8**
Pyrene	1000	1,400	--		--	**2.3**	--	--	--	--	**5.5**	--	--	--	**3.5**
Benzo(a)anthracene	110	270	--		--	**0.87 J**	--	--	--	--	**1.9 J**	--	--	--	**1.4**
Chrysene	110	460	--		--	**1 J**	--	--	--	--	**2.4**	--	--	--	**1.8**
Benzo(b)fluoranthene	--	--	--		--	1.7 U	--	--	--	--	**1.8 J**	--	--	--	**1.2**
Benzo(k)fluoranthene	--	--	--		--	1.7 U	--	--	--	--	**1.3 J**	--	--	--	**1.1**
Total Benzofluoranthenes (b, j, k)	230	450	--		--	1.7 U	--	--	--	--	**3.1 J**	--	--	--	**2.3**
Benzo(a)pyrene	99	210	--		--	1.7 U	--	--	--	--	**1.3 J**	--	--	--	**1.3**
Indeno(1,2,3-c,d)pyrene	34	88	--		--	1.7 U	--	--	--	--	2 U	--	--	--	**0.6**
Dibenzo(a,h)anthracene	12	33	--		--	0.51 U	--	--	--	--	0.61 U	--	--	--	0.49 UJ
Benzo(g,h,i)perylene	31	78	--		--	1.7 U	--	--	--	--	**1.3 J**	--	--	--	**0.74**
Chlorinated Benzenes (mg/kg-OC)															
1,2-Dichlorobenzene	2.3	2.3	--		--	0.51 U	--	--	--	--	0.61 U	--	--	--	0.49 U
1,4-Dichlorobenzene	3.1	9	--		--	0.51 U	--	--	--	--	0.61 U	--	--	--	0.49 U
1,2,4-Trichlorobenzene	0.81	1.8	--		--	0.51 U	--	--	--	--	0.61 UJ	--	--	--	0.49 UJ
Hexachlorobenzene	0.38	2.3	--		--	0.51 U	--	--	--	--	0.61 U	--	--	--	0.49 U
Phthalates (mg/kg-OC)															
Dimethyl phthalate	53	53	--		--	1.7 U	--	--	--	--	2 U	--	--	--	0.54 U
Diethyl phthalate	61	110	--		--	1.7 U	--	--	--	--	2 U	--	--	--	0.54 U
Di-n-butyl phthalate	220	1,700	--		--	1.7 U	--	--	--	--	2 U	--	--	--	0.54 U
Butylbenzyl phthalate	4.9	64	--		--	1.3 U	--	--	--	--	1.5 U	--	--	--	1.3 U
Bis(2-ethylhexyl) phthalate	47	78	--		--	**1.4 J**	--	--	--	--	2 U	--	--	--	**0.65**
Di-n-octyl phthalate	58	4,500	--		--	1.7 U	--	--	--	--	2 U	--	--	--	0.54 U

Table 17a
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	1C-05-VC	1C-05-VC	1C-05-VC	1C-05-VC	1C-06-VC	1C-06-VC	1C-06-VC	1C-06-VC	1C-07-VC	1C-07-VC	1C-07-VC
				Sample ID:	1C-05-VC-L-2-3	1C-05-VC-L-3-4	1C-05-VC-L-4-5	1C-05-VC-L-5-6	1C-06-VC-U	1C-06-VC-L-1-2	1C-06-VC-L-2-3	1C-06-VC-L-3-4	1C-07-VC-U	1C-07-VC-L-1-2	1C-07-VC-L-2-3
				Sample Date:	7/22/08	7/22/08	7/22/08	7/22/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08
				In-situ Depth[1] (ft):	4.5-5.5	5.5-6.5	6.5-7.5	7.5-8.5	0-1	2-3	3-4	4-5	0-3	4-5	5-6
Miscellaneous (mg/kg-OC)															
Dibenzofuran	15	58	--	--	1.7 U	--	--	--	--	--	**1.3 J**	--	--	--	**0.49 J**
Hexachlorobutadiene	3.9	6.2	--	--	0.51 U	--	--	--	--	--	0.61 U	--	--	--	0.49 UJ
N-Nitrosodiphenylamine	11	11	--	--	0.51 UJ	--	--	--	--	--	0.61 UJ	--	--	--	0.49 UJ
Ionizable Organic Compounds (ug/kg)															
Phenol	420	1,200	420	--	19 U	--	--	--	--	--	20 U	--	--	--	20 U
2-Methylphenol (o-Cresol)	63	63	63	--	5.9 U	--	--	--	--	--	6 U	--	--	--	18 U
4-Methylphenol (p-Cresol)	670	670	670	--	19 U	--	--	--	--	--	**35**	--	--	--	**86**
2,4-Dimethylphenol	29	29	29	--	5.9 UJ	--	--	--	--	--	6 UJ	--	--	--	18 UJ
Pentachlorophenol	360	690	140	--	29 UJ	--	--	--	--	--	30 UJ	--	--	--	91 UJ
Benzyl alcohol	57	73	57	--	19 UJ	--	--	--	--	--	20 UJ	--	--	--	20 UJ
Benzoic acid	650	650	650	--	190 U	--	--	--	--	--	200 U	--	--	--	200 U
Aromatic Hydrocarbons (ug/kg)															
Total LPAH	--	--	5,200	--	**16**	--	--	--	--	--	**125**	--	--	--	**243**
Naphthalene	--	--	2,100	--	19 U	--	--	--	--	--	**21**	--	--	--	**67**
Acenaphthylene	--	--	560	--	19 U	--	--	--	--	--	20 U	--	--	--	**16 J**
Acenaphthene	--	--	500	--	19 U	--	--	--	--	--	**11 J**	--	--	--	**16 J**
Fluorene	--	--	540	--	19 U	--	--	--	--	--	**20**	--	--	--	**17 J**
Phenanthrene	--	--	1,500	--	**16 J**	--	--	--	--	--	**57**	--	--	--	**99**
Anthracene	--	--	960	--	19 U	--	--	--	--	--	**16 J**	--	--	--	**28**
2-Methylnaphthalene	--	--	670	--	19 U	--	--	--	--	--	20 U	--	--	--	**27**
Total HPAH	--	--	12,000	--	**86**	--	--	--	--	--	**227**	--	--	--	**570**
Fluoranthene	--	--	1,700	--	**38**	--	--	--	--	--	**73**	--	--	--	**140**
Pyrene	--	--	2,600	--	**26**	--	--	--	--	--	**54**	--	--	--	**130**
Benzo(a)anthracene	--	--	1,300	--	**10 J**	--	--	--	--	--	**19 J**	--	--	--	**52**
Chrysene	--	--	1,400	--	**12 J**	--	--	--	--	--	**24**	--	--	--	**66**
Benzo(b)fluoranthene	--	--	--	--	19 U	--	--	--	--	--	**18 J**	--	--	--	**44**
Benzo(k)fluoranthene	--	--	--	--	19 U	--	--	--	--	--	**13 J**	--	--	--	**40**
Total Benzofluoranthenes (b, j, k)	--	--	3,200	--	19 U	--	--	--	--	--	**31 J**	--	--	--	**84**
Benzo(a)pyrene	--	--	1,600	--	19 U	--	--	--	--	--	**13 J**	--	--	--	**49**
Indeno(1,2,3-c,d)pyrene	--	--	600	--	19 U	--	--	--	--	--	20 U	--	--	--	**22**
Dibenzo(a,h)anthracene	--	--	230	--	5.9 U	--	--	--	--	--	6 U	--	--	--	18 UJ
Benzo(g,h,i)perylene	--	--	670	--	19 U	--	--	--	--	--	**13 J**	--	--	--	**27**
Chlorinated Benzenes (ug/kg)															
1,2-Dichlorobenzene	--	--	35	--	5.9 U	--	--	--	--	--	6 U	--	--	--	18 U
1,4-Dichlorobenzene	--	--	110	--	5.9 U	--	--	--	--	--	6 U	--	--	--	18 U
1,2,4-Trichlorobenzene	--	--	31	--	5.9 U	--	--	--	--	--	6 UJ	--	--	--	18 UJ
Hexachlorobenzene	--	--	22	--	5.9 U	--	--	--	--	--	6 U	--	--	--	18 U
Miscellaneous (ug/kg)															
Dibenzofuran	--	--	540	--	19 U	--	--	--	--	--	**13 J**	--	--	--	**18 J**
Hexachlorobutadiene	--	--	11	--	5.9 U	--	--	--	--	--	6 U	--	--	--	18 UJ
N-Nitrosodiphenylamine	--	--	28	--	5.9 UJ	--	--	--	--	--	6 UJ	--	--	--	18 UJ
Phthalates (ug/kg)															
Dimethyl phthalate	--	--	71	--	19 U	--	--	--	--	--	20 U	--	--	--	20 U
Diethyl phthalate	--	--	48	--	19 U	--	--	--	--	--	20 U	--	--	--	20 U
Di-n-butyl phthalate	--	--	1,400	--	19 U	--	--	--	--	--	20 U	--	--	--	20 U
Butylbenzyl phthalate	--	--	63	--	15 U	--	--	--	--	--	15 U	--	--	--	46 U
Bis(2-ethylhexyl) phthalate	--	--	1,300	--	**16 J**	--	--	--	--	--	20 U	--	--	--	**24**
Di-n-octyl phthalate	--	--	420	--	19 U	--	--	--	--	--	20 U	--	--	--	20 U

Table 17a
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C

				Location ID:	1C-05-VC	1C-05-VC	1C-05-VC	1C-05-VC	1C-06-VC	1C-06-VC	1C-06-VC	1C-06-VC	1C-07-VC	1C-07-VC	1C-07-VC
				Sample ID:	1C-05-VC-L-2-3	1C-05-VC-L-3-4	1C-05-VC-L-4-5	1C-05-VC-L-5-6	1C-06-VC-U	1C-06-VC-L-1-2	1C-06-VC-L-2-3	1C-06-VC-L-3-4	1C-07-VC-U	1C-07-VC-L-1-2	1C-07-VC-L-2-3
				Sample Date:	7/22/08	7/22/08	7/22/08	7/22/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08
				In-situ Depth[1] (ft):	4.5-5.5	5.5-6.5	6.5-7.5	7.5-8.5	0-1	2-3	3-4	4-5	0-3	4-5	5-6
Analyte	SMS SQS	SMS CSL	PS LAET												
Dioxin Furans (ng/kg)															
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	**0.161 J**	0.0641 U	--	--	--	--	0.0752 U	0.0624 U	**2.17**	--	**2.1 J**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	**0.401 J**	0.372 U	--	--	--	--	0.119 U	0.0814 U	**6.27**	--	**6.34 J**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**0.794 J**	0.119 U	--	--	--	--	**0.343 J**	0.0687 U	**11.4**	--	**6.89 J**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**7.07**	0.132 U	--	--	--	--	**1.2 J**	0.0734 U	**94.4**	--	**63**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**1.86 J**	0.129 U	--	--	--	--	**0.592 J**	0.0758 U	**24.1**	--	**15.2 J**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	**166**	0.146 U	--	--	--	--	**18**	**0.335 J**	**2,160**	--	**1,510**
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	--	**1,720**	**3.49 J**	--	--	--	--	**153**	**2.91 J**	**22,600**	--	**14,400**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	--	**1.2**	0.0251 U	--	--	--	--	**0.65 J**	**0.0485 J**	**24.1**	--	**8.47**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	**1.07 J**	0.169 U	--	--	--	--	**0.266 J**	0.177 U	**15.3**	--	**3.89 J**
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	**1.97 J**	0.148 U	--	--	--	--	**0.41 J**	0.161 U	**28.8**	--	**16.5 J**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**3.98**	0.0611 U	--	--	--	--	**0.452 J**	0.0808 U	**48.6**	--	**15.8 J**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**1.42 J**	0.0588 U	--	--	--	--	0.0758 U	0.0755 U	**15.2**	--	**8.01 J**
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**1.16 J**	0.0767 U	--	--	--	--	0.104 U	0.1 U	**13.5**	--	**3.42 J**
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**1.92 J**	0.0599 U	--	--	--	--	**0.246 J**	0.0716 U	**20.9**	--	**16.2 J**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	**54.3**	0.0252 U	--	--	--	--	**5.02**	0.0378 U	**720**	--	**666**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	**3.22**	0.0341 U	--	--	--	--	0.0798 U	0.0529 U	**34.3**	--	**29.4**
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--	--	**171**	0.112 U	--	--	--	--	**13.4**	0.163 U	**2,310**	--	**2,140**
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	**10.2 J**	**0.151**	--	--	--	--	**36.3**	**0.532 J**	**263 J**	--	**140 J**
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	**11.3 J**	0.372 U	--	--	--	--	**34.1 J**	**0.536 J**	**307 J**	--	**148**
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**45.1 J**	**0.0903**	--	--	--	--	**46 J**	**0.723 J**	**757 J**	--	**448 J**
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	**354**	**0.659 J**	--	--	--	--	**38.1**	**0.836**	**4,580**	--	**3,600**
Total Tetrachlorodibenzofuran (TCDF)	--	--	--	--	**9.46 J**	0.0251 U	--	--	--	--	**8.03 J**	**0.522 J**	**166**	--	**183 J**
Total Pentachlorodibenzofuran (PeCDF)	--	--	--	--	**14.9 J**	0.158 U	--	--	--	--	**4.07 J**	0.169 U	**226**	--	**196 J**
Total Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**72.6 J**	0.0636 U	--	--	--	--	**6.75 J**	0.0813 U	**863**	--	**623 J**
Total Heptachlorodibenzofuran (HpCDF)	--	--	--	--	**230 J**	**0.148**	--	--	--	--	**18.9**	**0.166**	**2,830**	--	**2,640**
Total Dioxin/Furan TEQ (WHO) ND=0	--	--	--	--	**5.93**	**0.001**	--	--	--	--	**0.759**	**0.009**	**79.4**	--	**54.2**
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--	--	**5.93**	**0.278**	--	--	--	--	**0.866**	**0.136**	**79.4**	--	**54.2**
Semi-Volatile Organics (ug/kg)															
1,3-Dichlorobenzene	--	--	170	--	19 U	--	--	--	--	--	20 U	--	--	--	20 U
1-Methylnaphthalene	--	--	--	--	19 U	--	--	--	--	--	20 U	--	--	--	**20**
Hexachloroethane	--	--	--	--	19 U	--	--	--	--	--	20 U	--	--	--	20 U

Table 17a
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C

				Location ID:	1C-07-VC	1C-07-VC	1C-07-VC	1C-07-VC	1C-08-VC	1C-08-VC	1C-08-VC	1C-08-VC	1C-08-VC
				Sample ID:	1C-07-VC-L-3-4	1C-07-VC-L-4-5	1C-07-VC-L-5-6	1C-07-VC-L-6-7	1C-08-VC-U	1C-08-VC-L-1-2	1C-08-VC-L-2-3	1C-08-VC-L-3-4	1C-08-VC-L-4-5
				Sample Date:	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08
				In-situ Depth[1] (ft):	6-7	7-8	8-9	9-10	0-1	2-3	3-4	4-5	5-6
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**										
Grain Size (pct)													
Total Gravel	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Sand	--	--	--	--	--	--	--	--	**4.7**	--	**7.1**	--	--
Total Silt	--	--	--	--	--	--	--	--	**54.4**	--	**54.4**	--	--
Total Clay	--	--	--	--	--	--	--	--	**41**	--	**38.4**	--	--
Total Fines (Silt + Clay)	--	--	--	--	--	--	--	--	**95.4**	--	**92.8**	--	--
Total Grain Size	--	--	--	--	--	--	--	--	**100.1**	--	**99.9**	--	--
Physical Parameters													
Atterberg Classification	--	--	--	--	--	--	--	--	**CH**	--	**CH**	--	--
Specific gravity (su)	--	--	--	--	--	--	--	--	**2.64**	--	**2.58**	--	--
Liquid Limit (pct)	--	--	--	--	--	--	--	--	**89**	--	**104**	--	--
Plastic Limit (pct)	--	--	--	--	--	--	--	--	**33.5**	--	**40.7**	--	--
Plasticity Index (pct)	--	--	--	--	--	--	--	--	**55.5**	--	**63.4**	--	--
Moisture (water) Content (pct)	--	--	--	--	--	--	--	--	**132.8**	--	**104.2**	--	--
Conventional Parameters (pct)													
Total organic carbon	--	--	--	**4.31**	--	**2.64**	**3.04**	**2.17**	**3.67**	**3.94**	**1.21**	--	
Total solids	--	--	--	**52.8**	--	**49.6**	**49.9**	**42**	**52.6**	**49.5**	**73.5**	--	
Metals (mg/kg)													
Mercury	0.41	0.59	--	**0.55**	**0.56 J**	**0.44**	**0.36**	**0.65**	**1.99**	**0.67**	**0.09**	0.04 UJ	
Aromatic Hydrocarbons (mg/kg-OC)													
Total LPAH	370	780	--	--	--	--	**1.4**	--	--	--	**5.6**	--	
Naphthalene	99	170	--	--	--	--	**0.69**	--	--	--	**1.7**	--	
Acenaphthylene	66	66	--	--	--	--	0.63 U	--	--	--	1.6 U	--	
Acenaphthene	16	57	--	--	--	--	0.63 U	--	--	--	1.6 U	--	
Fluorene	23	79	--	--	--	--	0.63 U	--	--	--	1.6 U	--	
Phenanthrene	100	480	--	--	--	--	**0.72**	--	--	--	**2.9**	--	
Anthracene	220	1,200	--	--	--	--	0.63 U	--	--	--	**0.99 J**	--	
2-Methylnaphthalene	38	64	--	--	--	--	0.63 U	--	--	--	1.6 U	--	
Total HPAH	960	5,300	--	--	--	--	**5.1**	--	--	--	**16.8**	--	
Fluoranthene	160	1,200	--	--	--	--	**1.2**	--	--	--	**5**	--	
Pyrene	1000	1,400	--	--	--	--	**1.1**	--	--	--	**4**	--	
Benzo(a)anthracene	110	270	--	--	--	--	**0.39 J**	--	--	--	**1.3 J**	--	
Chrysene	110	460	--	--	--	--	**0.49 J**	--	--	--	**1.7**	--	
Benzo(b)fluoranthene	--	--	--	--	--	--	**0.49 J**	--	--	--	**1.6 J**	--	
Benzo(k)fluoranthene	--	--	--	--	--	--	**0.33 J**	--	--	--	**0.91 J**	--	
Total Benzofluoranthenes (b, j, k)	230	450	--	--	--	--	**0.82 J**	--	--	--	**2.5 J**	--	
Benzo(a)pyrene	99	210	--	--	--	--	**0.53 J**	--	--	--	**1.2 J**	--	
Indeno(1,2,3-c,d)pyrene	34	88	--	--	--	--	0.63 U	--	--	--	1.6 U	--	
Dibenzo(a,h)anthracene	12	33	--	--	--	--	**0.2**	--	--	--	0.49 U	--	
Benzo(g,h,i)perylene	31	78	--	--	--	--	**0.39 J**	--	--	--	**1.1 J**	--	
Chlorinated Benzenes (mg/kg-OC)													
1,2-Dichlorobenzene	2.3	2.3	--	--	--	--	0.2 U	--	--	--	0.49 U	--	
1,4-Dichlorobenzene	3.1	9	--	--	--	--	0.2 U	--	--	--	0.49 U	--	
1,2,4-Trichlorobenzene	0.81	1.8	--	--	--	--	0.2 UJ	--	--	--	0.49 UJ	--	
Hexachlorobenzene	0.38	2.3	--	--	--	--	0.2 U	--	--	--	0.49 U	--	
Phthalates (mg/kg-OC)													
Dimethyl phthalate	53	53	--	--	--	--	0.63 U	--	--	--	1.6 U	--	
Diethyl phthalate	61	110	--	--	--	--	0.63 U	--	--	--	**3.7**	--	
Di-n-butyl phthalate	220	1,700	--	--	--	--	0.63 U	--	--	--	1.6 U	--	
Butylbenzyl phthalate	4.9	64	--	--	--	--	0.49 U	--	--	--	1.2 U	--	
Bis(2-ethylhexyl) phthalate	47	78	--	--	--	--	0.63 U	--	--	--	1.6 U	--	
Di-n-octyl phthalate	58	4,500	--	--	--	--	0.63 U	--	--	--	1.6 U	--	

Table 17a
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C

				Location ID:	1C-07-VC	1C-07-VC	1C-07-VC	1C-07-VC	1C-08-VC	1C-08-VC	1C-08-VC	1C-08-VC	1C-08-VC
				Sample ID:	1C-07-VC-L-3-4	1C-07-VC-L-4-5	1C-07-VC-L-5-6	1C-07-VC-L-6-7	1C-08-VC-U	1C-08-VC-L-1-2	1C-08-VC-L-2-3	1C-08-VC-L-3-4	1C-08-VC-L-4-5
				Sample Date:	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08
				In-situ Depth[1] (ft):	6-7	7-8	8-9	9-10	0-1	2-3	3-4	4-5	5-6
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**										
Miscellaneous (mg/kg-OC)													
Dibenzofuran	15	58	--	--	--	--	0.63 U	--	--	--	1.6 U	--	
Hexachlorobutadiene	3.9	6.2	--	--	--	--	0.2 U	--	--	--	0.49 U	--	
N-Nitrosodiphenylamine	11	11	--	--	--	--	0.2 UJ	--	--	--	0.49 UJ	--	
Ionizable Organic Compounds (ug/kg)													
Phenol	420	1,200	420	--	--	--	19 U	--	--	--	19 U	--	
2-Methylphenol (o-Cresol)	63	63	63	--	--	--	6.1 U	--	--	--	5.9 U	--	
4-Methylphenol (p-Cresol)	670	670	670	--	--	--	19 U	--	--	--	19 U	--	
2,4-Dimethylphenol	29	29	29	--	--	--	6.1 UJ	--	--	--	5.9 UJ	--	
Pentachlorophenol	360	690	140	--	--	--	30 UJ	--	--	--	29 UJ	--	
Benzyl alcohol	57	73	57	--	--	--	19 UJ	--	--	--	19 UJ	--	
Benzoic acid	650	650	650	--	--	--	190 U	--	--	--	190 U	--	
Aromatic Hydrocarbons (ug/kg)													
Total LPAH	--	--	5,200	--	--	--	**43**	--	--	--	**68**	--	
Naphthalene	--	--	2,100	--	--	--	**21**	--	--	--	**21**	--	
Acenaphthylene	--	--	560	--	--	--	19 U	--	--	--	19 U	--	
Acenaphthene	--	--	500	--	--	--	19 U	--	--	--	19 U	--	
Fluorene	--	--	540	--	--	--	19 U	--	--	--	19 U	--	
Phenanthrene	--	--	1,500	--	--	--	**22**	--	--	--	**35**	--	
Anthracene	--	--	960	--	--	--	19 U	--	--	--	**12 J**	--	
2-Methylnaphthalene	--	--	670	--	--	--	19 U	--	--	--	19 U	--	
Total HPAH	--	--	12,000	--	--	--	**156**	--	--	--	**203**	--	
Fluoranthene	--	--	1,700	--	--	--	**37**	--	--	--	**60**	--	
Pyrene	--	--	2,600	--	--	--	**33**	--	--	--	**49**	--	
Benzo(a)anthracene	--	--	1,300	--	--	--	**12 J**	--	--	--	**16 J**	--	
Chrysene	--	--	1,400	--	--	--	**15 J**	--	--	--	**20**	--	
Benzo(b)fluoranthene	--	--	--	--	--	--	**15 J**	--	--	--	**19 J**	--	
Benzo(k)fluoranthene	--	--	--	--	--	--	**10 J**	--	--	--	**11 J**	--	
Total Benzofluoranthenes (b, j, k)	--	--	3,200	--	--	--	**25 J**	--	--	--	**30 J**	--	
Benzo(a)pyrene	--	--	1,600	--	--	--	**16 J**	--	--	--	**15 J**	--	
Indeno(1,2,3-c,d)pyrene	--	--	600	--	--	--	19 U	--	--	--	19 U	--	
Dibenzo(a,h)anthracene	--	--	230	--	--	--	**6.1**	--	--	--	5.9 U	--	
Benzo(g,h,i)perylene	--	--	670	--	--	--	**12 J**	--	--	--	**13 J**	--	
Chlorinated Benzenes (ug/kg)													
1,2-Dichlorobenzene	--	--	35	--	--	--	6.1 U	--	--	--	5.9 U	--	
1,4-Dichlorobenzene	--	--	110	--	--	--	6.1 U	--	--	--	5.9 U	--	
1,2,4-Trichlorobenzene	--	--	31	--	--	--	6.1 UJ	--	--	--	5.9 UJ	--	
Hexachlorobenzene	--	--	22	--	--	--	6.1 U	--	--	--	5.9 U	--	
Miscellaneous (ug/kg)													
Dibenzofuran	--	--	540	--	--	--	19 U	--	--	--	19 U	--	
Hexachlorobutadiene	--	--	11	--	--	--	6.1 U	--	--	--	5.9 U	--	
N-Nitrosodiphenylamine	--	--	28	--	--	--	6.1 UJ	--	--	--	5.9 UJ	--	
Phthalates (ug/kg)													
Dimethyl phthalate	--	--	71	--	--	--	19 U	--	--	--	19 U	--	
Diethyl phthalate	--	--	48	--	--	--	19 U	--	--	--	**45**	--	
Di-n-butyl phthalate	--	--	1,400	--	--	--	19 U	--	--	--	19 U	--	
Butylbenzyl phthalate	--	--	63	--	--	--	15 U	--	--	--	15 U	--	
Bis(2-ethylhexyl) phthalate	--	--	1,300	--	--	--	19 U	--	--	--	19 U	--	
Di-n-octyl phthalate	--	--	420	--	--	--	19 U	--	--	--	19 U	--	

Table 17a
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C

				Location ID:	1C-07-VC	1C-07-VC	1C-07-VC	1C-07-VC	1C-08-VC	1C-08-VC	1C-08-VC	1C-08-VC	1C-08-VC
				Sample ID:	1C-07-VC-L-3-4	1C-07-VC-L-4-5	1C-07-VC-L-5-6	1C-07-VC-L-6-7	1C-08-VC-U	1C-08-VC-L-1-2	1C-08-VC-L-2-3	1C-08-VC-L-3-4	1C-08-VC-L-4-5
				Sample Date:	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08
				In-situ Depth[1] (ft):	6-7	7-8	8-9	9-10	0-1	2-3	3-4	4-5	5-6
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**										
Dioxin Furans (ng/kg)													
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	**0.897**	--	**0.322 J**	--	--	--	**0.116 J**	--	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	**1.43 J**	--	**0.636 J**	--	--	--	0.0696 U	--	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**0.969 J**	--	**0.589 J**	--	--	--	0.106 U	--	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**1.62 J**	--	**0.787 J**	--	--	--	0.11 U	--	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**1.23 J**	--	**0.494 J**	--	--	--	0.108 U	--	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	**8.13**	--	**4.03**	--	--	--	**1.29 J**	--	
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	--	**30.4**	--	**15.3**	--	--	--	**9.29**	--	
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	--	**5.33**	--	**2.14**	--	--	--	**0.574**	--	
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	**2.33 J**	--	**0.915 J**	--	--	--	**0.28 J**	--	
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	**2.57**	--	**0.958 J**	--	--	--	**0.258 J**	--	
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**1.03 J**	--	**0.58 J**	--	--	--	0.0599 U	--	
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**1.04 J**	--	**0.488 J**	--	--	--	0.0572 U	--	
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**0.252 J**	--	0.0458 U	--	--	--	0.0833 U	--	
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**1 J**	--	**0.442 J**	--	--	--	0.0611 U	--	
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	**2.24 J**	--	**0.998 J**	--	--	--	**0.359 J**	--	
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	0.068 U	--	0.0715 U	--	--	--	0.26 U	--	
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--	--	**2.33 J**	--	0.218 U	--	--	--	0.225 U	--	
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	**78.6 J**	--	**35.3 J**	--	--	--	**8.35 J**	--	
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	**54.4 J**	--	**26.8 J**	--	--	--	**5.97 J**	--	
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**46.6**	--	**25.2 J**	--	--	--	**4.21 J**	--	
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	**15.9**	--	**7.4**	--	--	--	**2.64**	--	
Total Tetrachlorodibenzofuran (TCDF)	--	--	--	--	**99.7 J**	--	**36.9 J**	--	--	--	**10 J**	--	
Total Pentachlorodibenzofuran (PeCDF)	--	--	--	--	**29.1 J**	--	**11.2 J**	--	--	--	**3.28 J**	--	
Total Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**9.31 J**	--	**4.16 J**	--	--	--	**1.1 J**	--	
Total Heptachlorodibenzofuran (HpCDF)	--	--	--	--	**5.05**	--	**1.51 J**	--	--	--	**0.564 J**	--	
Total Dioxin/Furan TEQ (WHO) ND=0	--	--	--	--	**4.53**	--	**1.88**	--	--	--	**0.278**	--	
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--	--	**4.53**	--	**1.88**	--	--	--	**0.344**	--	
Semi-Volatile Organics (ug/kg)													
1,3-Dichlorobenzene	--	--	170	--	--	--	19 U	--	--	--	19 U	--	
1-Methylnaphthalene	--	--	--	--	--	--	19 U	--	--	--	19 U	--	
Hexachloroethane	--	--	--	--	--	--	19 U	--	--	--	19 U	--	

Notes:

Detected concentration is greater than SMS SQS screening level

Detected concentration is greater than SMS CSL screening level

Detected concentration is greater than 2003 Freshwater LAET screening level

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

ng/kg = nanogram per kilogram

pct = percent

mg/kg-OC = milligrams per kilogram organic carbon normalized

1. Sample depth is reported as below mudline.

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

The site specific Bioaccumulaltion Screening Level (BSL) for mercury is 1.2 mg/kg. (Supplemental RI Report, RETEC 2006)

Total LPAH (Low PAH) are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene. 2-Methylnapthalene is not included in the sum of LPAHs

Total HPAH (High PAH) are the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzofluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

Benzo(j)fluoranthene is included in the total of benzo(b&k)fluoranthenes

Totals are calculated for LPAH and HPAH as the sum of all detected results. If all are undetcted results, the highest reporting limit value is reported as the sum.

Toxic equivalency (TEQ) values were calculated for the validated dioxin/furan congeners using the 2005 World Health Organization's toxic equivalency factors for mammals. Undetected congeners were assigned a "0" (ND=0) and assigned a concentration equal to ½ the detection limit (ND=1/2).

-- Sample was not submitted for chemical analysis.

Non-organic carbon normalized samples with TOC results outside of the 0.5-3.5% range were screened against the 2003 Freshwater LAET

There are no numeric SMS criteria for dioxin/furans, see 6.1.2. See 7.1.1 for potentially applicable dredge material management criteria.

Table 17b
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C BST

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	1C-101B-HSA	1C-101B-HSA	1C-101B-HSA	1C-101B-HSA	1C-101B-HSA	1C-101B-HSA	1C-101C-HSA	1C-101C-HSA	1C-101C-HSA	1C-101C-HSA
				Sample ID:	1C-101B-HSA-S1A	1C-101B-HSA-S2A	1C-101B-HSA-S1	1C-101B-HSA-S2	1C-101B-HSA-S3	1C-101B-HSA-S4	1C-101C-HSA-S1A	1C-101C-HSA-S1	1C-101C-HSA-S2	1C-101C-HSA-S3
				Sample Date:	1/22/09	1/22/09	10/15/08	10/15/08	10/15/08	10/15/08	1/22/09	10/16/08	10/16/08	10/16/08
				In-situ Depth[1] (ft):	0 - 1.4 ft	1.4 - 2.0 ft	9.3 - 10.8 ft	11.8 - 13.3 ft	14.3 - 15.8 ft	16.8 - 18.3 ft	0 - 1.2 ft	5 - 6.5 ft	7.5 - 9 ft	10 - 11.5 ft
Conventional Parameters (pct)														
Total organic carbon	--	--	--		**1.33**	**4.02**	**1.77**	--	**0.284**	**0.32**	**1.88**	**0.36**	**0.277**	**0.214**
Total solids	--	--	--		**69.7**	**56.8**	**69.8**	--	**81.4**	**84.4**	**56.9**	**82.9**	**103.3**	**81.6**
Metals (mg/kg)														
Mercury	0.41	0.59	--		**0.6**	**3.24**	**0.32**	**0.41**	0.05 U	0.05 U	**0.11**	0.04 U	0.05 U	0.04 U
Aromatic Hydrocarbons (mg/kg-OC)														
Total LPAH	370	780	--		**29.1**	**2.5**	--	--	--	--	**1.1**	--	--	--
Naphthalene	99	170	--		**2.3**	0.5 U	--	--	--	--	1 U	--	--	--
Acenaphthylene	66	66	--		**1.4 J**	0.5 U	--	--	--	--	1 U	--	--	--
Acenaphthene	16	57	--		**0.98 J**	0.5 U	--	--	--	--	1 U	--	--	--
Fluorene	23	79	--		**1.9**	**0.27 J**	--	--	--	--	1 U	--	--	--
Phenanthrene	100	480	--		**10.5**	**0.92**	--	--	--	--	**1.1**	--	--	--
Anthracene	220	1,200	--		**12**	**1.3**	--	--	--	--	1 U	--	--	--
2-Methylnaphthalene	38	64	--		**0.74 J**	0.5 U	--	--	--	--	1 U	--	--	--
Total HPAH	960	5,300	--		**357**	**51.9**	--	--	--	--	**9.8**	--	--	--
Fluoranthene	160	1,200	--		**36.8**	**20.4**	--	--	--	--	**1.8**	--	--	--
Pyrene	1,000	1,400	--		**105**	**12.9**	--	--	--	--	**2**	--	--	--
Benzo(a)anthracene	110	270	--		**45.1**	**4.5**	--	--	--	--	**0.96 J**	--	--	--
Chrysene	110	460	--		**70.7**	**5.5**	--	--	--	--	**1.3**	--	--	--
Benzo(b)fluoranthene	--	--	--		**35.3**	**1.8**	--	--	--	--	**1.1**	--	--	--
Benzo(k)fluoranthene	--	--	--		**24.8**	**2.5**	--	--	--	--	**0.85 J**	--	--	--
Total Benzofluoranthenes (b, j, k)	230	450	--		**60.1**	**4.3**	--	--	--	--	**1.95**	--	--	--
Benzo(a)pyrene	99	210	--		**22.6**	**1.6**	--	--	--	--	**1.1**	--	--	--
Indeno(1,2,3-c,d)pyrene	34	88	--		**6.4**	**0.52**	--	--	--	--	1 U	--	--	--
Dibenzo(a,h)anthracene	12	33	--		**4.7**	**1.8**	--	--	--	--	0.32 U	--	--	--
Benzo(g,h,i)perylene	31	78	--		**5.2**	**0.42 J**	--	--	--	--	**0.64 J**	--	--	--
Chlorinated Benzenes (mg/kg-OC)														
1,2-Dichlorobenzene	2.3	2.3	--		0.47 U	0.15 U	--	--	--	--	0.32 U	--	--	--
1,4-Dichlorobenzene	3.1	9	--		0.47 U	0.15 U	--	--	--	--	0.32 U	--	--	--
1,2,4-Trichlorobenzene	0.81	1.8	--		0.47 U	0.15 U	--	--	--	--	0.32 U	--	--	--
Hexachlorobenzene	0.38	2.3	--		0.47 U	0.15 U	--	--	--	--	0.32 U	--	--	--
Phthalates (mg/kg-OC)														
Dimethyl phthalate	53	53	--		1.4 U	0.5 U	--	--	--	--	1 U	--	--	--
Diethyl phthalate	61	110	--		1.4 U	0.5 U	--	--	--	--	1 U	--	--	--
Di-n-butyl phthalate	220	1,700	--		1.4 U	0.5 U	--	--	--	--	1 U	--	--	--
Butylbenzyl phthalate	4.9	64	--		1.1 U	0.37 U	--	--	--	--	0.8 U	--	--	--
Bis(2-ethylhexyl) phthalate	47	78	--		**1.3 J**	0.5 U	--	--	--	--	1 U	--	--	--
Di-n-octyl phthalate	58	4,500	--		1.4 U	0.5 U	--	--	--	--	1 U	--	--	--
Miscellaneous (mg/kg-OC)														
Dibenzofuran	15	58	--		**2.1**	**0.25 J**	--	--	--	--	1 U	--	--	--
Hexachlorobutadiene	3.9	6.2	--		0.47 U	0.15 U	--	--	--	--	0.32 U	--	--	--
N-Nitrosodiphenylamine	11	11	--		0.47 U	0.15 U	--	--	--	--	0.32 U	--	--	--
Ionizable Organic Compounds (ug/kg)														
Phenol	420	1,200	420		19 U	20 U	--	--	--	--	19 U	--	--	--
2-Methylphenol (o-Cresol)	63	63	63		6.2 U	6.1 U	--	--	--	--	6.1 U	--	--	--
4-Methylphenol (p-Cresol)	670	670	670		19 U	20 U	--	--	--	--	19 U	--	--	--
2,4-Dimethylphenol	29	29	29		6.2 U	6.1 U	--	--	--	--	**7.3**	--	--	--
Pentachlorophenol	360	690	140		**490**	**60**	--	--	--	--	30 U	--	--	--
Benzyl alcohol	57	73	57		**(31 U) R**	30 U	--	--	--	--	30 U	--	--	--
Benzoic acid	650	650	650		190 U	200 U	--	--	--	--	190 U	--	--	--

Table 17b
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C BST

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	1C-101B-HSA	1C-101B-HSA	1C-101B-HSA	1C-101B-HSA	1C-101B-HSA	1C-101B-HSA	1C-101C-HSA	1C-101C-HSA	1C-101C-HSA	1C-101C-HSA
				Sample ID:	1C-101B-HSA-S1A	1C-101B-HSA-S2A	1C-101B-HSA-S1	1C-101B-HSA-S2	1C-101B-HSA-S3	1C-101B-HSA-S4	1C-101C-HSA-S1A	1C-101C-HSA-S1	1C-101C-HSA-S2	1C-101C-HSA-S3
				Sample Date:	1/22/09	1/22/09	10/15/08	10/15/08	10/15/08	10/15/08	1/22/09	10/16/08	10/16/08	10/16/08
				In-situ Depth[1] (ft):	0 - 1.4 ft	1.4 - 2.0 ft	9.3 - 10.8 ft	11.8 - 13.3 ft	14.3 - 15.8 ft	16.8 - 18.3 ft	0 - 1.2 ft	5 - 6.5 ft	7.5 - 9 ft	10 - 11.5 ft
Aromatic Hydrocarbons (ug/kg)														
Total LPAH	--	--	5,200	**387**	**101**	--	--	--	--	**20**	--	--	--
Naphthalene	--	--	2,100	**30**	20 U	--	--	--	--	19 U	--	--	--
Acenaphthylene	--	--	560	**19 J**	20 U	--	--	--	--	19 U	--	--	--
Acenaphthene	--	--	500	**13 J**	20 U	--	--	--	--	19 U	--	--	--
Fluorene	--	--	540	**25**	**11 J**	--	--	--	--	19 U	--	--	--
Phenanthrene	--	--	1,500	**140**	**37**	--	--	--	--	**20**	--	--	--
Anthracene	--	--	960	**160**	**53**	--	--	--	--	19 U	--	--	--
2-Methylnaphthalene	--	--	670	**9.9 J**	20 U	--	--	--	--	19 U	--	--	--
Total HPAH	--	--	12,000	**4,746**	**2,088**	--	--	--	--	**181**	--	--	--
Fluoranthene	--	--	1,700	**490**	**820**	--	--	--	--	**33**	--	--	--
Pyrene	--	--	2,600	**1,400**	**520**	--	--	--	--	**38**	--	--	--
Benzo(a)anthracene	--	--	1,300	**600**	**180**	--	--	--	--	**18 J**	--	--	--
Chrysene	--	--	1,400	**940**	**220**	--	--	--	--	**24**	--	--	--
Benzo(b)fluoranthene	--	--	--	**470**	**73**	--	--	--	--	**20**	--	--	--
Benzo(k)fluoranthene	--	--	--	**330**	**99**	--	--	--	--	**16 J**	--	--	--
Total Benzofluoranthenes (b, j, k)	--	--	3,200	**800**	**172**	--	--	--	--	**36**	--	--	--
Benzo(a)pyrene	--	--	1,600	**300**	**65**	--	--	--	--	**20**	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	600	**85**	**21**	--	--	--	--	19 U	--	--	--
Dibenzo(a,h)anthracene	--	--	230	**62**	**73**	--	--	--	--	6.1 U	--	--	--
Benzo(g,h,i)perylene	--	--	670	**69**	**17 J**	--	--	--	--	**12 J**	--	--	--
Chlorinated Benzenes (ug/kg)														
1,2-Dichlorobenzene	--	--	35	6.2 U	6.1 U	--	--	--	--	6.1 U	--	--	--
1,4-Dichlorobenzene	--	--	110	6.2 U	6.1 U	--	--	--	--	6.1 U	--	--	--
1,2,4-Trichlorobenzene	--	--	31	6.2 U	6.1 U	--	--	--	--	6.1 U	--	--	--
Hexachlorobenzene	--	--	22	6.2 U	6.1 U	--	--	--	--	6.1 U	--	--	--
Miscellaneous (ug/kg)														
Dibenzofuran	--	--	540	**28**	**10 J**	--	--	--	--	19 U	--	--	--
Hexachlorobutadiene	--	--	11	6.2 U	6.1 U	--	--	--	--	6.1 U	--	--	--
N-Nitrosodiphenylamine	--	--	28	6.2 U	6.1 U	--	--	--	--	6.1 U	--	--	--
Phthalates (ug/kg)														
Dimethyl phthalate	--	--	71	19 U	20 U	--	--	--	--	19 U	--	--	--
Diethyl phthalate	--	--	48	19 U	20 U	--	--	--	--	19 U	--	--	--
Di-n-butyl phthalate	--	--	1,400	19 U	20 U	--	--	--	--	19 U	--	--	--
Butylbenzyl phthalate	--	--	63	15 U	15 U	--	--	--	--	15 U	--	--	--
Bis(2-ethylhexyl) phthalate	--	--	1,300	**17 J**	20 U	--	--	--	--	19 U	--	--	--
Di-n-octyl phthalate	--	--	420	19 U	20 U	--	--	--	--	19 U	--	--	--

Table 17b
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C BST

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	1C-101B-HSA	1C-101B-HSA	1C-101B-HSA	1C-101B-HSA	1C-101B-HSA	1C-101B-HSA	1C-101C-HSA	1C-101C-HSA	1C-101C-HSA	1C-101C-HSA
				Sample ID:	1C-101B-HSA-S1A	1C-101B-HSA-S2A	1C-101B-HSA-S1	1C-101B-HSA-S2	1C-101B-HSA-S3	1C-101B-HSA-S4	1C-101C-HSA-S1A	1C-101C-HSA-S1	1C-101C-HSA-S2	1C-101C-HSA-S3
				Sample Date:	1/22/09	1/22/09	10/15/08	10/15/08	10/15/08	10/15/08	1/22/09	10/16/08	10/16/08	10/16/08
				In-situ Depth[1] (ft):	0 - 1.4 ft	1.4 - 2.0 ft	9.3 - 10.8 ft	11.8 - 13.3 ft	14.3 - 15.8 ft	16.8 - 18.3 ft	0 - 1.2 ft	5 - 6.5 ft	7.5 - 9 ft	10 - 11.5 ft
Dioxin Furans (ng/kg)														
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	**0.496**	**1.82**	--	--	--	--	**0.193 J**	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	**4.51**	**7.2**	--	--	--	--	**0.471 J**	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**11.6**	**17.5**	--	--	--	--	**0.721 J**	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**183**	**125**	--	--	--	--	**0.627 J**	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**23.8**	**39**	--	--	--	--	**0.483 J**	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	**4,490**	**3,400**	--	--	--	--	**6.46**	--	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	**50,900**	**32,600**	--	--	--	--	**42.4**	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	**5.32**	**25.1**	--	--	--	--	**1.05**	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	**5.34**	**12.9**	--	--	--	--	**0.449 J**	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	**15**	**24.9**	--	--	--	--	**0.448 J**	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	**32.3**	**45.7**	--	--	--	--	**0.258 J**	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	**10.7**	**14**	--	--	--	--	**0.262 J**	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	**11.9**	**13.9**	--	--	--	--	0.428 U	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	**23.4**	**20.2**	--	--	--	--	**0.244 J**	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	**492**	**435**	--	--	--	--	**0.771 J**	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	**23.4**	**22.5**	--	--	--	--	0.134 U	--	--	--
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--	**1,670**	**1,220**	--	--	--	--	**1.06 J**	--	--	--
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	**104 J**	**381 J**	--	--	--	--	**31 J**	--	--	--
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	**135**	**427 J**	--	--	--	--	**21 J**	--	--	--
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	**773 J**	**1,110**	--	--	--	--	**17.9**	--	--	--
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	**8,420**	**7,900**	--	--	--	--	**15.1**	--	--	--
Total Tetrachlorodibenzofuran (TCDF)	--	--	--	**31.2 J**	**111**	--	--	--	--	**18.3 J**	--	--	--
Total Pentachlorodibenzofuran (PeCDF)	--	--	--	**111**	**171 J**	--	--	--	--	**5.55 J**	--	--	--
Total Hexachlorodibenzofuran (HxCDF)	--	--	--	**835 J**	**704 J**	--	--	--	--	**2.48 J**	--	--	--
Total Heptachlorodibenzofuran (HpCDF)	--	--	--	**2,000**	**1,580**	--	--	--	--	**1.78 J**	--	--	--
Total Dioxin/Furan TEQ (WHO) ND=0	--	--	--	**106**	**95.6**	--	--	--	--	**1.26**	--	--	--
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--	**106**	**95.6**	--	--	--	--	**1.28**	--	--	--
Semi-Volatile Organics (ug/kg)														
1,3-Dichlorobenzene	--	--	170	19 U	20 U	--	--	--	--	19 U	--	--	--
1-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	--	--	--	19 U	20 U	--	--	--	--	19 U	--	--	--

Table 17b
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C BST

				Location ID:	1C-101C-HSA	1C-102C-HSA	1C-102C-HSA	1C-102C-HSA	1C-102C-HSA	1C-103B-HSA	1C-103B-HSA	1C-103B-HSA	1C-103B-HSA	1C-103C-HSA
				Sample ID:	1C-101C-HSA-S4	1C-102C-HSA-S1	1C-102C-HSA-S2	1C-102C-HSA-S3	1C-102C-HSA-S4	1C-103B-HSA-S1	1C-103B-HSA-S2	1C-103B-HSA-S3	1C-103B-HSA-S4	1C-103C-HSA-S1
				Sample Date:	10/16/08	10/13/08	10/13/08	10/13/08	10/13/08	10/15/08	10/15/08	10/15/08	10/15/08	10/13/08
				In-situ Depth[1] (ft):	12.5 - 14 ft	0 - 4.1 ft	5.1 - 6.6 ft	10.1 - 11.6 ft	12.6 - 14.1 ft	0 - 3.5 ft	4.5 - 6 ft	7 - 8.5 ft	9.5 - 11 ft	0 - 1.5 ft
Analyte	SMS SQS	SMS CSL	PS LAET											
Conventional Parameters (pct)														
Total organic carbon	--	--	--	**0.429**	**1.65**	**2.51**	**3.4**	**0.421**	--	**3.4**	**0.805**	**0.433**	--
Total solids	--	--	--	**74.8**	**54.3**	**47.5**	**55.3**	**80.1**	--	**71.3**	**72.6**	**83.9**	--
Metals (mg/kg)														
Mercury	0.41	0.59	--	0.05 U	**0.95**	**0.68**	**0.69**	**0.07**	**0.23**	**0.36**	**0.21**	0.04 U	**0.23**
Aromatic Hydrocarbons (mg/kg-OC)														
Total LPAH	370	780	--	--	**15.0**	--	**7.8**	**18**	--	--	--	--	--	--
Naphthalene	99	170	--	--	**1.1 J**	--	**0.76**	**18**	--	--	--	--	--	--
Acenaphthylene	66	66	--	--	**0.85 J**	--	**0.35 J**	4.8 U	--	--	--	--	--	--
Acenaphthene	16	57	--	--	**0.85 J**	--	**0.38 J**	4.8 U	--	--	--	--	--	--
Fluorene	23	79	--	--	**1.6**	--	**0.85**	4.8 U	--	--	--	--	--	--
Phenanthrene	100	480	--	--	**6.7**	--	**3.5**	4.8 U	--	--	--	--	--	--
Anthracene	220	1,200	--	--	**3.9**	--	**1.9**	4.8 U	--	--	--	--	--	--
2-Methylnaphthalene	38	64	--	--	1.2 U	--	0.59 U	4.8 U	--	--	--	--	--	--
Total HPAH	960	5,300	--	--	**108**	--	**34.8**	4.8 U	--	--	--	--	--	--
Fluoranthene	160	1,200	--	--	**9.7**	--	**4.7**	4.8 U	--	--	--	--	--	--
Pyrene	1,000	1,400	--	--	**26.1**	--	**5.6**	4.8 U	--	--	--	--	--	--
Benzo(a)anthracene	110	270	--	--	**9.7**	--	**3.8**	4.8 U	--	--	--	--	--	--
Chrysene	110	460	--	--	**17**	--	**7.1**	4.8 U	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	**10.3**	--	**3.5**	4.8 U	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	**8.5**	--	**2.7**	4.8 U	--	--	--	--	--	--
Total Benzofluoranthenes (b, j, k)	230	450	--	--	**18.8**	--	**6.2**	4.8 U	--	--	--	--	--	--
Benzo(a)pyrene	99	210	--	--	**8.5**	--	**2.8**	4.8 U	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	34	88	--	--	**3.2**	--	**1.2**	4.8 U	--	--	--	--	--	--
Dibenzo(a,h)anthracene	12	33	--	--	**11.5**	--	**2.1**	1.4 U	--	--	--	--	--	--
Benzo(g,h,i)perylene	31	78	--	--	**3.6**	--	**1.3**	4.8 U	--	--	--	--	--	--
Chlorinated Benzenes (mg/kg-OC)														
1,2-Dichlorobenzene	2.3	2.3	--	--	0.61 U	--	0.17 U	1.4 U	--	--	--	--	--	--
1,4-Dichlorobenzene	3.1	9	--	--	0.61 U	--	0.17 U	1.4 U	--	--	--	--	--	--
1,2,4-Trichlorobenzene	0.81	1.8	--	--	0.61 U	--	0.17 U	1.4 U	--	--	--	--	--	--
Hexachlorobenzene	0.38	2.3	--	--	0.61 U	--	0.17 U	1.4 U	--	--	--	--	--	--
Phthalates (mg/kg-OC)														
Dimethyl phthalate	53	53	--	--	1.2 U	--	0.59 U	4.8 U	--	--	--	--	--	--
Diethyl phthalate	61	110	--	--	1.2 U	--	**0.62**	4.8 U	--	--	--	--	--	--
Di-n-butyl phthalate	220	1,700	--	--	1.2 U	--	0.59 U	4.8 U	--	--	--	--	--	--
Butylbenzyl phthalate	4.9	64	--	--	1.5 U	--	0.44 U	3.6 U	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	47	78	--	--	1.2 U	--	0.59 U	4.8 U	--	--	--	--	--	--
Di-n-octyl phthalate	58	4,500	--	--	1.2 U	--	0.59 U	4.8 U	--	--	--	--	--	--
Miscellaneous (mg/kg-OC)														
Dibenzofuran	15	58	--	--	**0.85 J**	--	**0.47 J**	4.8 U	--	--	--	--	--	--
Hexachlorobutadiene	3.9	6.2	--	--	0.61 U	--	0.17 U	1.4 U	--	--	--	--	--	--
N-Nitrosodiphenylamine	11	11	--	--	0.61 U	--	0.17 U	1.4 U	--	--	--	--	--	--
Ionizable Organic Compounds (ug/kg)														
Phenol	420	1,200	420	--	20 U	--	20 U	20 U	--	--	--	--	--	--
2-Methylphenol (o-Cresol)	63	63	63	--	10 U	--	5.9 U	6 U	--	--	--	--	--	--
4-Methylphenol (p-Cresol)	670	670	670	--	**13 J**	--	20 U	20 U	--	--	--	--	--	--
2,4-Dimethylphenol	29	29	29	--	10 U	--	5.9 U	**8.3**	--	--	--	--	--	--
Pentachlorophenol	360	690	140	--	**54**	--	29 U	30 U	--	--	--	--	--	--
Benzyl alcohol	57	73	57	--	50 U	--	29 U	30 U	--	--	--	--	--	--
Benzoic acid	650	650	650	--	200 U	--	200 U	200 U	--	--	--	--	--	--

Table 17b
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C BST

			Location ID:	1C-101C-HSA	1C-102C-HSA	1C-102C-HSA	1C-102C-HSA	1C-102C-HSA	1C-103B-HSA	1C-103B-HSA	1C-103B-HSA	1C-103B-HSA	1C-103C-HSA
			Sample ID:	1C-101C-HSA-S4	1C-102C-HSA-S1	1C-102C-HSA-S2	1C-102C-HSA-S3	1C-102C-HSA-S4	1C-103B-HSA-S1	1C-103B-HSA-S2	1C-103B-HSA-S3	1C-103B-HSA-S4	1C-103C-HSA-S1
			Sample Date:	10/16/08	10/13/08	10/13/08	10/13/08	10/13/08	10/15/08	10/15/08	10/15/08	10/15/08	10/13/08
			In-situ Depth[1] (ft):	12.5 - 14 ft	0 - 4.1 ft	5.1 - 6.6 ft	10.1 - 11.6 ft	12.6 - 14.1 ft	0 - 3.5 ft	4.5 - 6 ft	7 - 8.5 ft	9.5 - 11 ft	0 - 1.5 ft
Analyte	SMS SQS	SMS CSL	PS LAET										
Aromatic Hydrocarbons (ug/kg)													
Total LPAH	--	--	5,200	--	**248**	--	**264**	**76**	--	--	--	--	--
Naphthalene	--	--	2,100	--	**18 J**	--	**26**	**76**	--	--	--	--	--
Acenaphthylene	--	--	560	--	**14 J**	--	**12 J**	20 U	--	--	--	--	--
Acenaphthene	--	--	500	--	**14 J**	--	**13 J**	20 U	--	--	--	--	--
Fluorene	--	--	540	--	**27**	--	**29**	20 U	--	--	--	--	--
Phenanthrene	--	--	1,500	--	**110**	--	**120**	20 U	--	--	--	--	--
Anthracene	--	--	960	--	**65**	--	**64**	20 U	--	--	--	--	--
2-Methylnaphthalene	--	--	670	--	20 U	--	20 U	20 U	--	--	--	--	--
Total HPAH	--	--	12,000	--	**1,782**	--	**1,184**	20 U	--	--	--	--	--
Fluoranthene	--	--	1,700	--	**160**	--	**160**	20 U	--	--	--	--	--
Pyrene	--	--	2,600	--	**430**	--	**190**	20 U	--	--	--	--	--
Benzo(a)anthracene	--	--	1,300	--	**160**	--	**130**	20 U	--	--	--	--	--
Chrysene	--	--	1,400	--	**280**	--	**240**	20 U	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	**170**	--	**120**	20 U	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	**140**	--	**93**	20 U	--	--	--	--	--
Total Benzofluoranthenes (b, j, k)	--	--	3,200	--	**310**	--	**213**	20 U	--	--	--	--	--
Benzo(a)pyrene	--	--	1,600	--	**140**	--	**96**	20 U	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	600	--	**53**	--	**40**	20 U	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	230	--	**190**	--	**71**	6 U	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	670	--	**59**	--	**44**	20 U	--	--	--	--	--
Chlorinated Benzenes (ug/kg)													
1,2-Dichlorobenzene	--	--	35	--	10 U	--	5.9 U	6 U	--	--	--	--	--
1,4-Dichlorobenzene	--	--	110	--	10 U	--	5.9 U	6 U	--	--	--	--	--
1,2,4-Trichlorobenzene	--	--	31	--	10 U	--	5.9 U	6 U	--	--	--	--	--
Hexachlorobenzene	--	--	22	--	10 U	--	5.9 U	6 U	--	--	--	--	--
Miscellaneous (ug/kg)													
Dibenzofuran	--	--	540	--	**14 J**	--	**16 J**	20 U	--	--	--	--	--
Hexachlorobutadiene	--	--	11	--	10 U	--	5.9 U	6 U	--	--	--	--	--
N-Nitrosodiphenylamine	--	--	28	--	10 U	--	5.9 U	6 U	--	--	--	--	--
Phthalates (ug/kg)													
Dimethyl phthalate	--	--	71	--	20 U	--	20 U	20 U	--	--	--	--	--
Diethyl phthalate	--	--	48	--	20 U	--	**21**	20 U	--	--	--	--	--
Di-n-butyl phthalate	--	--	1,400	--	20 U	--	20 U	20 U	--	--	--	--	--
Butylbenzyl phthalate	--	--	63	--	25 U	--	15 U	15 U	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	--	--	1,300	--	20 U	--	20 U	20 U	--	--	--	--	--
Di-n-octyl phthalate	--	--	420	--	20 U	--	20 U	20 U	--	--	--	--	--

Table 17b
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C BST

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	1C-101C-HSA	1C-102C-HSA	1C-102C-HSA	1C-102C-HSA	1C-102C-HSA	1C-103B-HSA	1C-103B-HSA	1C-103B-HSA	1C-103B-HSA	1C-103C-HSA
				Sample ID:	1C-101C-HSA-S4	1C-102C-HSA-S1	1C-102C-HSA-S2	1C-102C-HSA-S3	1C-102C-HSA-S4	1C-103B-HSA-S1	1C-103B-HSA-S2	1C-103B-HSA-S3	1C-103B-HSA-S4	1C-103C-HSA-S1
				Sample Date:	10/16/08	10/13/08	10/13/08	10/13/08	10/13/08	10/15/08	10/15/08	10/15/08	10/15/08	10/13/08
				In-situ Depth[1] (ft):	12.5 - 14 ft	0 - 4.1 ft	5.1 - 6.6 ft	10.1 - 11.6 ft	12.6 - 14.1 ft	0 - 3.5 ft	4.5 - 6 ft	7 - 8.5 ft	9.5 - 11 ft	0 - 1.5 ft
Dioxin Furans (ng/kg)														
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	**1.12**	--	**0.902**	0.0541 U	**0.142 J**	--	--	--	**0.226 J**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	**2.88**	--	**2.47**	0.0614 U	**0.956 J**	--	--	--	**1.3 J**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**2.9**	--	**2.44**	0.0705 U	**2.86**	--	--	--	**3.01**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**16.3**	--	**15.3**	0.0805 U	**26**	--	--	--	**24**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**4.6**	--	**4.6**	0.0805 U	**4.91**	--	--	--	**5.06**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	**250**	--	**248**	**0.614 J**	**590**	--	--	--	**481**
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	--	**2400**	--	**1,900**	**5.62**	**5,530**	--	--	--	**4,010**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	--	**6.26**	--	**5.6**	**0.0494 J**	**1.74**	--	--	--	**2.27**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	**2.88**	--	**2.52**	0.145 U	**1.47 J**	--	--	--	**1.3 J**
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	**4.31**	--	**4.18**	0.133 U	**2.99**	--	--	--	**3.3**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**3.85**	--	**4.16**	0.0772 U	**4.66**	--	--	--	**3.76**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**2.43 J**	--	**2.52**	0.0677 U	**1.82 J**	--	--	--	**1.79 J**
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**1.23 J**	--	**1.38 J**	0.104 U	**2.02 J**	--	--	--	**1.46 J**
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**3.58**	--	**3.67**	0.0784 U	**3.41**	--	--	--	**3.7**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	**58.6**	--	**418**	0.0698 U	**58.9**	--	--	--	**76.8**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	**2.33 J**	--	**3.93**	0.0926 U	**3.08**	--	--	--	**3.05**
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--	--	**93.6**	--	**337**	0.255 U	**140**	--	--	--	**164**
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	**215 J**	--	**86.7 J**	**0.53 J**	**18.5 J**	--	--	--	**38 J**
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	**132 J**	--	**79.1**	**0.503 J**	**22.5 J**	--	--	--	**43.6 J**
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	**150 J**	--	**139**	**0.624 J**	**185**	--	--	--	**187**
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	**528**	--	**540**	**1.43**	**1,930**	--	--	--	**1,540**
Total Tetrachlorodibenzofuran (TCDF)	--	--	--	--	**105 J**	--	**93.2 J**	**0.916 J**	**11.5 J**	--	--	--	**22.3 J**
Total Pentachlorodibenzofuran (PeCDF)	--	--	--	--	**47.2 J**	--	**48**	**0.613 J**	**27.2**	--	--	--	**34.5 J**
Total Hexachlorodibenzofuran (HxCDF)	--	--	--	--	**92.2**	--	**135 J**	**0.487 J**	**114**	--	--	--	**118 J**
Total Heptachlorodibenzofuran (HpCDF)	--	--	--	--	**184**	--	**779**	**0.5**	**215 J**	--	--	--	**255**
Total Dioxin/Furan TEQ (WHO) ND=0	--	--	--	--	**13.4**	--	**16.0**	**0.013**	**15.0**	--	--	--	**13.9**
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--	--	**13.4**	--	**16.0**	**0.121**	**15.0**	--	--	--	**13.9**
Semi-Volatile Organics (ug/kg)														
1,3-Dichlorobenzene	--	--	170	--	20 U	--	20 U	20 U	--	--	--	--	--
1-Methylnaphthalene	--	--	--	--	20 U	--	20 U	20 U	--	--	--	--	--
Hexachloroethane	--	--	--	--	20 U	--	20 U	20 U	--	--	--	--	--

Table 17b
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C BST

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	1C-103C-HSA	1C-103C-HSA	1C-103C-HSA	1C-104B-HSA	1C-104B-HSA	1C-104B-HSA	1C-104C-HSA	1C-104C-HSA	1C-104C-HSA	1C-104C-HSA
				Sample ID:	1C-103C-HSA-S2	1C-103C-HSA-S3	1C-103C-HSA-S4	1C-104B-HSA-S1	1C-104B-HSA-S2	1C-104B-HSA-S4	1C-104C-HSA-S1	1C-104C-HSA-S2	1C-104C-HSA-S3	1C-104C-HSA-S4
				Sample Date:	10/13/08	10/13/08	10/13/08	10/14/08	10/14/08	10/14/08	10/14/08	10/14/08	10/14/08	10/14/08
				In-situ Depth[1] (ft):	2.5 - 4 ft	5 - 6.5 ft	7.5 - 9 ft	0 - 3.6 ft	4.6 - 6.1 ft	12.1 - 13.6 ft	0 - 5 ft	6 - 7.5 ft	8.5 - 10 ft	11 - 12.5 ft
Conventional Parameters (pct)														
Total organic carbon	--	--	--		**1.77**	**1.93**	**2.26**	**1.6**	**2.26**	**1.55**	**1.61**	--	**0.207**	**0.325**
Total solids	--	--	--		**77.7**	**72.1**	**74**	**71.5**	**65**	**63.4**	**66.8**	--	**83.7**	**73.7**
Metals (mg/kg)														
Mercury	0.41	0.59	--		**0.18**	**0.08**	**0.13**	**6.5**	**0.6**	**0.17**	**0.19**	**0.06**	0.05 U	0.05 U
Aromatic Hydrocarbons (mg/kg-OC)														
Total LPAH	370	780	--		--	--	--	**28.5**	**40.1**	**4.7**	1.2 U	--	--	--
Naphthalene	99	170	--		--	--	--	**1.8**	**5.3**	**0.84 J**	1.2 U	--	--	--
Acenaphthylene	66	66	--		--	--	--	**1.5**	**0.84 J**	1.2 U	1.2 U	--	--	--
Acenaphthene	16	57	--		--	--	--	**2.6**	**7.5**	1.2 U	1.2 U	--	--	--
Fluorene	23	79	--		--	--	--	**1.9**	**4.3**	1.2 U	1.2 U	--	--	--
Phenanthrene	100	480	--		--	--	--	**6.3**	**13.7**	**3.0**	1.2 U	--	--	--
Anthracene	220	1,200	--		--	--	--	**14.4**	**8.4**	**0.84 J**	1.2 U	--	--	--
2-Methylnaphthalene	38	64	--		--	--	--	**0.94 J**	**2.6**	1.2 U	1.2 U	--	--	--
Total HPAH	960	5,300	--		--	--	--	**252**	**122**	**17.3**	**4.2**	--	--	--
Fluoranthene	160	1,200	--		--	--	--	**46.9**	**37.2**	**3.7**	**0.93 J**	--	--	--
Pyrene	1,000	1,400	--		--	--	--	**62.5**	**31.4**	**4.1**	**1.4**	--	--	--
Benzo(a)anthracene	110	270	--		--	--	--	**26.9**	**13.7**	**1.7**	1.2 U	--	--	--
Chrysene	110	460	--		--	--	--	**51.3**	**19.5**	**1.9**	**0.81 J**	--	--	--
Benzo(b)fluoranthene	--	--	--		--	--	--	**22.5**	**4.9**	**1.2 J**	1.2 U	--	--	--
Benzo(k)fluoranthene	--	--	--		--	--	--	**16.3**	**6.2**	**1.3**	1.2 U	--	--	--
Total Benzofluoranthenes (b, j, k)	230	450	--		--	--	--	**38.8**	**11.1**	**2.5**	1.2 U	--	--	--
Benzo(a)pyrene	99	210	--		--	--	--	**15.6**	**5.3**	**1.5**	1.2 U	--	--	--
Indeno(1,2,3-c,d)pyrene	34	88	--		--	--	--	**4.4**	**1.5**	**0.71 J**	1.2 U	--	--	--
Dibenzo(a,h)anthracene	12	33	--		--	--	--	**1.9**	**0.71**	**0.4**	**1.1**	--	--	--
Benzo(g,h,i)perylene	31	78	--		--	--	--	**3.8**	**1.6**	**0.77 J**	1.2 U	--	--	--
Chlorinated Benzenes (mg/kg-OC)														
1,2-Dichlorobenzene	2.3	2.3	--		--	--	--	0.36 U	0.26 U	0.4 U	0.38 U	--	--	--
1,4-Dichlorobenzene	3.1	9	--		--	--	--	**0.39**	0.26 U	0.4 U	0.38 U	--	--	--
1,2,4-Trichlorobenzene	0.81	1.8	--		--	--	--	**0.5**	0.26 U	0.4 U	0.38 U	--	--	--
Hexachlorobenzene	0.38	2.3	--		--	--	--	**0.43**	**0.75**	0.4 U	0.38 U	--	--	--
Phthalates (mg/kg-OC)														
Dimethyl phthalate	53	53	--		--	--	--	1.3 U	0.88 U	1.2 U	1.2 U	--	--	--
Diethyl phthalate	61	110	--		--	--	--	1.3 U	0.88 U	1.2 U	1.2 U	--	--	--
Di-n-butyl phthalate	220	1,700	--		--	--	--	1.3 U	0.88 U	1.2 U	1.2 U	--	--	--
Butylbenzyl phthalate	4.9	64	--		--	--	--	0.88 U	0.66 U	0.97 U	0.93 U	--	--	--
Bis(2-ethylhexyl) phthalate	47	78	--		--	--	--	**0.88 J**	0.88 U	1.2 U	1.2 U	--	--	--
Di-n-octyl phthalate	58	4,500	--		--	--	--	1.3 U	0.88 U	1.2 U	1.2 U	--	--	--
Miscellaneous (mg/kg-OC)														
Dibenzofuran	15	58	--		--	--	--	**1.6**	**3**	1.2 U	1.2 U	--	--	--
Hexachlorobutadiene	3.9	6.2	--		--	--	--	0.36 U	0.26 U	0.4 U	0.38 U	--	--	--
N-Nitrosodiphenylamine	11	11	--		--	--	--	0.36 U	**0.49**	0.4 U	0.38 U	--	--	--
Ionizable Organic Compounds (ug/kg)														
Phenol	420	1,200	420		--	--	--	20 U	20 U	19 U	19 U	--	--	--
2-Methylphenol (o-Cresol)	63	63	63		--	--	--	5.7 U	5.8 U	6.2 U	6.1 U	--	--	--
4-Methylphenol (p-Cresol)	670	670	670		--	--	--	**51**	**170**	19 U	19 U	--	--	--
2,4-Dimethylphenol	29	29	29		--	--	--	5.7 U	5.8 U	6.2 U	6.1 U	--	--	--
Pentachlorophenol	360	690	140		--	--	--	**30**	29 U	31 U	31 U	--	--	--
Benzyl alcohol	57	73	57		--	--	--	28 U	29 U	31 U	31 U	--	--	--
Benzoic acid	650	650	650		--	--	--	200 U	200 U	190 U	190 U	--	--	--

Table 17b
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C BST

			Location ID:	1C-103C-HSA	1C-103C-HSA	1C-103C-HSA	1C-104B-HSA	1C-104B-HSA	1C-104B-HSA	1C-104C-HSA	1C-104C-HSA	1C-104C-HSA	1C-104C-HSA
			Sample ID:	1C-103C-HSA-S2	1C-103C-HSA-S3	1C-103C-HSA-S4	1C-104B-HSA-S1	1C-104B-HSA-S2	1C-104B-HSA-S4	1C-104C-HSA-S1	1C-104C-HSA-S2	1C-104C-HSA-S3	1C-104C-HSA-S4
			Sample Date:	10/13/08	10/13/08	10/13/08	10/14/08	10/14/08	10/14/08	10/14/08	10/14/08	10/14/08	10/14/08
			In-situ Depth[1] (ft):	2.5 - 4 ft	5 - 6.5 ft	7.5 - 9 ft	0 - 3.6 ft	4.6 - 6.1 ft	12.1 - 13.6 ft	0 - 5 ft	6 - 7.5 ft	8.5 - 10 ft	11 - 12.5 ft
Analyte	SMS SQS	SMS CSL	PS LAET										
Aromatic Hydrocarbons (ug/kg)													
Total LPAH	--	--	5,200	--	--	--	**455**	**906**	**72**	19 U	--	--	--
Naphthalene	--	--	2,100	--	--	--	**28**	**120**	**13 J**	19 U	--	--	--
Acenaphthylene	--	--	560	--	--	--	**24**	**19 J**	19 U	19 U	--	--	--
Acenaphthene	--	--	500	--	--	--	**42**	**170**	19 U	19 U	--	--	--
Fluorene	--	--	540	--	--	--	**31**	**97**	19 U	19 U	--	--	--
Phenanthrene	--	--	1,500	--	--	--	**100**	**310**	**46**	19 U	--	--	--
Anthracene	--	--	960	--	--	--	**230**	**190**	**13 J**	19 U	--	--	--
2-Methylnaphthalene	--	--	670	--	--	--	**15 J**	**59**	19 U	19 U	--	--	--
Total HPAH	--	--	12,000	--	--	--	**4,031**	**2,756**	**267**	**68**	--	--	--
Fluoranthene	--	--	1,700	--	--	--	**750**	**840**	**57**	**15 J**	--	--	--
Pyrene	--	--	2,600	--	--	--	**1,000**	**710**	**64**	**23**	--	--	--
Benzo(a)anthracene	--	--	1,300	--	--	--	**430**	**310**	**26**	19 U	--	--	--
Chrysene	--	--	1,400	--	--	--	**820**	**440**	**29**	**13 J**	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	**360**	**110**	**19 J**	19 U	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	**260**	**140**	**20**	19 U	--	--	--
Total Benzofluoranthenes (b, j, k)	--	--	3,200	--	--	--	**620**	**250**	**39**	19 U	--	--	--
Benzo(a)pyrene	--	--	1,600	--	--	--	**250**	**120**	**23**	19 U	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	600	--	--	--	**70**	**34**	**11 J**	19 U	--	--	--
Dibenzo(a,h)anthracene	--	--	230	--	--	--	**31**	**16**	**6.2**	**17**	--	--	--
Benzo(g,h,i)perylene	--	--	670	--	--	--	**60**	**36**	**12 J**	19 U	--	--	--
Chlorinated Benzenes (ug/kg)													
1,2-Dichlorobenzene	--	--	35	--	--	--	5.7 U	5.8 U	6.2 U	6.1 U	--	--	--
1,4-Dichlorobenzene	--	--	110	--	--	--	**6.3**	5.8 U	6.2 U	6.1 U	--	--	--
1,2,4-Trichlorobenzene	--	--	31	--	--	--	**8**	5.8 U	6.2 U	6.1 U	--	--	--
Hexachlorobenzene	--	--	22	--	--	--	**6.8**	**17**	6.2 U	6.1 U	--	--	--
Miscellaneous (ug/kg)													
Dibenzofuran	--	--	540	--	--	--	**25**	**67**	19 U	19 U	--	--	--
Hexachlorobutadiene	--	--	11	--	--	--	5.7 U	5.8 U	6.2 U	6.1 U	--	--	--
N-Nitrosodiphenylamine	--	--	28	--	--	--	5.7 U	**11**	6.2 U	6.1 U	--	--	--
Phthalates (ug/kg)													
Dimethyl phthalate	--	--	71	--	--	--	20 U	20 U	19 U	19 U	--	--	--
Diethyl phthalate	--	--	48	--	--	--	20 U	20 U	19 U	19 U	--	--	--
Di-n-butyl phthalate	--	--	1,400	--	--	--	20 U	20 U	19 U	19 U	--	--	--
Butylbenzyl phthalate	--	--	63	--	--	--	14 U	15 U	15 U	15 U	--	--	--
Bis(2-ethylhexyl) phthalate	--	--	1,300	--	--	--	**14 J**	20 U	19 U	19 U	--	--	--
Di-n-octyl phthalate	--	--	420	--	--	--	20 U	20 U	19 U	19 U	--	--	--

Table 17b
Subsurface Sediment Chemical Testing Results - Outer Waterway-Unit 1C BST

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	1C-103C-HSA	1C-103C-HSA	1C-103C-HSA	1C-104B-HSA	1C-104B-HSA	1C-104B-HSA	1C-104C-HSA	1C-104C-HSA	1C-104C-HSA	1C-104C-HSA
				Sample ID:	1C-103C-HSA-S2	1C-103C-HSA-S3	1C-103C-HSA-S4	1C-104B-HSA-S1	1C-104B-HSA-S2	1C-104B-HSA-S4	1C-104C-HSA-S1	1C-104C-HSA-S2	1C-104C-HSA-S3	1C-104C-HSA-S4
				Sample Date:	10/13/08	10/13/08	10/13/08	10/14/08	10/14/08	10/14/08	10/14/08	10/14/08	10/14/08	10/14/08
				In-situ Depth[1] (ft):	2.5 - 4 ft	5 - 6.5 ft	7.5 - 9 ft	0 - 3.6 ft	4.6 - 6.1 ft	12.1 - 13.6 ft	0 - 5 ft	6 - 7.5 ft	8.5 - 10 ft	11 - 12.5 ft
Dioxin Furans (ng/kg)														
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	--	--	**0.529**	**0.655**	**0.31 J**	**0.195 J**	--	--	--
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	--	--	**1.8 J**	**2.29 J**	**1.54 J**	**0.738 J**	--	--	--
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	--	**4.72**	**4.57**	**1.93 J**	**1.71 J**	--	--	--
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	--	**53.5**	**28.5**	**1.99 J**	**11.2**	--	--	--
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	--	**9.88**	**7.2**	**1.46 J**	**2.72**	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	--	--	**1,530**	**607**	**8.33**	**304**	--	--	--
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)	--	--	--	--	--	--	**14,700**	**5,670**	**27.3**	**2,750**	--	--	--
2,3,7,8-Tetrachlorodibenzofuran (TCDF)	--	--	--	--	--	--	**19.5**	**6.64**	**1.39**	**2.39**	--	--	--
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	--	**15.5**	**3.45**	**0.694 J**	**1.15 J**	--	--	--
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	--	**17.7**	**9.19**	**0.814 J**	**1.65 J**	--	--	--
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	--	**28.9**	**11.5**	**0.526 J**	**2.22 J**	--	--	--
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	--	**7.34**	**4.86**	**0.382 J**	**0.891 J**	--	--	--
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	--	**6.49**	**2.28 J**	0.0849 U	**0.763 J**	--	--	--
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	--	**8.66**	**8.5**	**0.436 J**	**1.28 J**	--	--	--
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	--	**193**	**259**	**1.55 J**	**24.1**	--	--	--
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	--	**11.5**	**9.63**	0.0987 U	**1.65 J**	--	--	--
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)	--	--	--	--	--	--	**622**	**593**	**2.43 J**	**88**	--	--	--
Total Tetrachlorodibenzo-p-dioxin (TCDD)	--	--	--	--	--	--	**36 J**	**86.1 J**	**109 J**	**38.6 J**	--	--	--
Total Pentachlorodibenzo-p-dioxin (PeCDD)	--	--	--	--	--	--	**42.8 J**	**64**	**97 J**	**37.9 J**	--	--	--
Total Hexachlorodibenzo-p-dioxin (HxCDD)	--	--	--	--	--	--	**272**	**171**	**56.6**	**113 J**	--	--	--
Total Heptachlorodibenzo-p-dioxin (HpCDD)	--	--	--	--	--	--	**3,290**	**1,420**	**15.7**	**813**	--	--	--
Total Tetrachlorodibenzofuran (TCDF)	--	--	--	--	--	--	**73.8 J**	**67.4 J**	**26.8 J**	**24.7**	--	--	--
Total Pentachlorodibenzofuran (PeCDF)	--	--	--	--	--	--	**105 J**	**99**	**9.18 J**	**14.8 J**	--	--	--
Total Hexachlorodibenzofuran (HxCDF)	--	--	--	--	--	--	**281**	**284**	**4.38 J**	**37.7**	--	--	--
Total Heptachlorodibenzofuran (HpCDF)	--	--	--	--	--	--	**703**	**847**	**3.79 J**	**92.1 J**	--	--	--
Total Dioxin/Furan TEQ (WHO) ND=0	--	--	--	--	--	--	**43.9**	**23.8**	**3.03**	**7.93**	--	--	--
Total Dioxin/Furan TEQ (WHO) ND=1/2	--	--	--	--	--	--	**43.9**	**23.8**	**3.04**	**7.93**	--	--	--
Semi-Volatile Organics (ug/kg)														
1,3-Dichlorobenzene	--	--	170	--	--	--	20 U	20 U	19 U	19 U	--	--	--
1-Methylnaphthalene	--	--	--	--	--	--	20 U	**40**	19 U	19 U	--	--	--
Hexachloroethane	--	--	--	--	--	--	20 U	20 U	19 U	19 U	--	--	--

Notes:

Detected concentration is greater than SMS SQS screening level

Detected concentration is greater than SMS CSL screening level

Detected concentration is greater than 1988 Puget Sound Estuary Program LAET screening level

1. Sample depth is reported as below mudline.

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

Total LPAH (Low PAH) are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene. 2-Methylnapthalene is not included in the sum of LPAHs

Total HPAH (High PAH) are the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzofluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

Benzo(j)fluoranthene is included in the total of benzo(b&k)fluoranthenes

Totals are calculated for LPAH and HPAH as the sum of all detected results. If all are undetcted results, the highest reporting limit value is reported as the sum.

Toxic equivalency (TEQ) values were calculated for the validated dioxin/furan congeners using the 2005 World Health Organization's toxic equivalency factors for mammals. Undetected congeners were assigned a "0" (ND=0) and assigned a concentration equal to ½ the detection limit (ND=1/2).

-- Sample was not submitted for chemical analysis.

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

mg/kg-OC = milligrams per kilogram organic carbon normalized

ng/kg = nanogram per kilogram

pct = percent

The site specific Bioaccumulaltion Screening Level (BSL) for mercury is 1.2 mg/kg. (Supplemental RI Report, RETEC 2006)

There are no numeric SMS criteria for dioxin/furans, see 6.1.2. See 7.1.1 for potentially applicable dredge material management criteria.

Non-organic carbon normalized samples with TOC results outside of the 0.5-3.5% range were screened against the 1988 Puget Sound Estuary Program LAET

Table 17c
Subsurface Sediment Chemical Testing Results - Outer Waterway-Units 1A/1B

Analyte	Location ID:	1A-01-VC	1A-01-VC	1A-05-VC	1A-01-VC	1B-03-VC	1B-01-VC	1B-07-VC	1B-01-VC
	Sample ID:	1A-01-VC	1A-01-VC-C1	1A-05-VC	1A-01-VC-C2	1B-03-VC	1B-01-VC-C1	1B-07-VC	1B-01-VC-C2
	Sample Date:	7/17/08	7/17/08	7/17/08	7/17/08	7/17/08	7/17/08	7/17/08	7/17/08
	In-situ Depth[1] (ft):	0-4	Composite	0-4	Composite	0-4	Composite	0-4	Composite
Grain Size (pct)									
Total Gravel		--	**0.1**	--	**0.1**	--	--	--	**0.2**
Total Sand		--	**3.6**	--	**2.5**	--	**3.6**	--	**3.6**
Total Silt		--	**48.8**	--	**50.9**	--	**49**	--	**48.5**
Total Clay		--	**47.5**	--	**46.4**	--	**47.5**	--	**47.6**
Total Fines (Silt + Clay)		--	**96.3**	--	**97.3**	--	**96.5**	--	**96.1**
Total Grain Size		--	**100**	--	**99.9**	--	**100.1**	--	**99.9**
Physical Parameters									
Specific gravity (su)		--	**2.64**	--	**2.66**	--	**2.65**	--	**2.65**
Liquid Limit (pct)		--	**94.6**	--	**98**	--	**95.5**	--	**94.3**
Plastic Limit (pct)		--	**37.6**	--	**38.6**	--	**35.7**	--	**34.9**
Plasticity Index (pct)		--	**57**	--	**59.4**	--	**59.8**	--	**59.4**
Moisture (water) Content (pct)		--	**117.7**	--	**125.3**	--	**122.6**	--	**120.1**
Chlorinated Benzenes (ug/kg)									
1,2-Dichlorobenzene		1.7 U	--	1.8 U	--	1.6 U	--	1.7 U	--
1,4-Dichlorobenzene		1.7 U	--	1.8 U	--	1.6 U	--	1.7 U	--
1,2,4-Trichlorobenzene		8.6 U	--	9 U	--	8.2 U	--	8.7 U	--
Hexachlorobenzene		--	--	--	--	--	--	--	--
Dioxin Furans (ng/kg)									
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)		--	**1.2**	--	**1.21**	--	**1.35**	--	**1.22**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (PeCDD)		--	**5.41**	--	**7.87**	--	**5.73**	--	**6.29**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)		--	**19**	--	**32.3**	--	**20.1**	--	**25.3**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (HxCDD)		--	**33.1**	--	**47.2**	--	**43.6**	--	**43.4**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (HxCDD)		--	**18.8**	--	**29**	--	**20.5**	--	**23.5**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (HpCDD)		--	**483**	--	**589**	--	**1,180**	--	**627**
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin (OCDD)		--	**3,510**	--	**3,390**	--	**12,400**	--	**4,400**
2,3,7,8-Tetrachlorodibenzofuran (TCDF)		--	**22**	--	**32.3**	--	**22**	--	**23.4**
1,2,3,7,8-Pentachlorodibenzofuran (PeCDF)		--	**3.79**	--	**4.51**	--	**5.23**	--	**4.42**
2,3,4,7,8-Pentachlorodibenzofuran (PeCDF)		--	**5.23**	--	**6.44**	--	**7.38**	--	**6.57**
1,2,3,4,7,8-Hexachlorodibenzofuran (HxCDF)		--	**7.34**	--	**7.42**	--	**11.4**	--	**9.37**
1,2,3,6,7,8-Hexachlorodibenzofuran (HxCDF)		--	**3.06**	--	**3.41**	--	**4.34**	--	**3.73**
1,2,3,7,8,9-Hexachlorodibenzofuran (HxCDF)		--	**2.18 J**	--	**2.28 J**	--	**3.36**	--	**2.66**
2,3,4,6,7,8-Hexachlorodibenzofuran (HxCDF)		--	**3.83**	--	**4.47**	--	**5.6**	--	**5.04**
1,2,3,4,6,7,8-Heptachlorodibenzofuran (HpCDF)		--	**73.3**	--	**68.6**	--	**145**	--	**96.4**
1,2,3,4,7,8,9-Heptachlorodibenzofuran (HpCDF)		--	**4.06**	--	**4.27**	--	**7.93**	--	**5.85**
1,2,3,4,5,6,7,8-Octachlorodibenzofuran (OCDF)		--	**255**	--	**230**	--	**855**	--	**337**
Total Tetrachlorodibenzo-p-dioxin (TCDD)		--	**978 J**	--	**1650**	--	**941 J**	--	**1210**
Total Pentachlorodibenzo-p-dioxin (PeCDD)		--	**1,040**	--	**1,770 J**	--	**1,030 J**	--	**1,390 J**
Total Hexachlorodibenzo-p-dioxin (HxCDD)		--	**1,390**	--	**2,280**	--	**1,380**	--	**1,770**

Table 17c
Subsurface Sediment Chemical Testing Results - Outer Waterway-Units 1A/1B

Analyte	Location ID:	1A-01-VC	1A-01-VC	1A-05-VC	1A-01-VC	1B-03-VC	1B-01-VC	1B-07-VC	1B-01-VC
	Sample ID:	1A-01-VC	1A-01-VC-C1	1A-05-VC	1A-01-VC-C2	1B-03-VC	1B-01-VC-C1	1B-07-VC	1B-01-VC-C2
	Sample Date:	7/17/08	7/17/08	7/17/08	7/17/08	7/17/08	7/17/08	7/17/08	7/17/08
	In-situ Depth[1] (ft):	0-4	Composite	0-4	Composite	0-4	Composite	0-4	Composite
Total Heptachlorodibenzo-p-dioxin (HpCDD)		--	**917**	--	**1,090**	--	**2,210**	--	**1,240**
Total Tetrachlorodibenzofuran (TCDF)		--	**101**	--	**148 J**	--	**104 J**	--	**117**
Total Pentachlorodibenzofuran (PeCDF)		--	**47.2 J**	--	**58.5 J**	--	**60.2 J**	--	**60 J**
Total Hexachlorodibenzofuran (HxCDF)		--	**107 J**	--	**110 J**	--	**168**	--	**140 J**
Total Heptachlorodibenzofuran (HpCDF)		--	**298**	--	**270**	--	**620**	--	**390**
Total Dioxin/Furan TEQ (WHO) ND=0		--	**26.0**	--	**34.7**	--	**39.8**	--	**32.0**
Total Dioxin/Furan TEQ (WHO) ND=1/2		--	**26.0**	--	**34.7**	--	**39.8**	--	**32.0**
Guaiacols (ug/kg)									
2-Methoxyphenol (Guaiacol)		--	20 U	--	20 U	--	20 U	--	20 UJ
3,4-Dichloroguaiacol		--	20 U	--	20 U	--	20 U	--	20 U
3,4,5-Trichloroguaiacol		--	20 U	--	20 U	--	20 U	--	20 UJ
3,4,6-Trichloroguaiacol		--	20 U	--	20 U	--	20 U	--	20 U
4,5-Dichloroguaiacol		--	20 U	--	20 U	--	20 U	--	20 UJ
4,5,6-Trichloroguaiacol		--	20 U	--	20 U	--	20 U	--	20 U
4,6-Dichloroguaiacol		--	20 U	--	20 U	--	20 U	--	20 U
Tetrachloroguaiacol		--	20 U	--	20 U	--	20 U	--	20 UJ
Volatile Organics (ug/kg)									
1,3-Dichlorobenzene		1.7 U	--	1.8 U	--	1.6 U	--	1.7 U	--
Ethylbenzene		1.7 U	--	1.8 U	--	1.6 U	--	1.7 U	--
m,p-Xylene		1.7 U	--	1.8 U	--	1.6 U	--	1.7 U	--
o-Xylene		1.7 U	--	1.8 U	--	1.6 U	--	1.7 U	--
Total Xylene		1.7 U	--	1.8 U	--	1.6 U	--	1.7 U	--
Tetrachloroethene		1.7 U	--	1.8 U	--	1.6 U	--	1.7 U	--
Trichloroethene		1.7 U	--	1.8 U	--	1.6 U	--	1.7 U	--

Notes:

1. Sample depth is reported as below mudline.

Bold = Detected result

VOCs were sampled from discrete core samples (not from homogenized composite).

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

Toxic equivalency (TEQ) values were calculated for the validated dioxin/furan congeners using the 2005 World Health Organization's toxic equivalency factors for mammals. Undetected congeners were assigned a "0" (ND=0) and assigned a concentration equal to ½ the detection limit (ND=1/2).

Total xylene is the sum of o-, m-, p- isomers

-- Sample was not submitted for chemical analysis.

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

mg/kg-OC = milligrams per kilogram organic carbon normalized

ng/kg = nanogram per kilogram

pct = percent

There are no numeric SMS criteria for dioxin/furans, see 6.1.2. See 7.1.1 for potentially applicable dredge material management criteria.

Table 18
Subsurface Sediment Chemical Testing Results - Unit 5, 6 and 9

			Location ID:	5B-01-VC	5B-01-VC	5B-01-VC	5B-02-VC	5B-02-VC	5B-02-VC	5B-03-VC	5B-03-VC	5B-03-VC	6B-01-VC	6B-01-DC
			Sample ID:	5B-01-VC-1-3	5B-01-VC-4-6	5B-01-VC-7-9	5B-02-VC-1-3	5B-02-VC-4-6	5B-02-VC-7-9	5B-03-VC-1-3	5B-03-VC-4-6	5B-03-VC-7-9	6B-01-VC-1-3	6B-01-DC-1-2
			Sample Date:	7/25/08	7/25/08	7/25/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/18/08	4/30/2009
			In-situ Depth[1] (ft):	1-3	4-6	7-9	1-3	4-6	7-9	1-3	4-6	7-9	1-3	1-2
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**											
Grain Size (pct)														
Total Gravel	--	--	--	**14.6**	**0.9**	**0.2**	**5.7**	**0.9**	**2**	**5.8**	**0.6**	**0.1**	**1.1**	--
Total Sand	--	--	--	**35.4**	**21.6**	**3**	**66.2**	**82.4**	**70**	**87.2**	**75.2**	**72.6**	**10.7**	--
Total Silt	--	--	--	**33**	**31.4**	**50.3**	**15.6**	**11.5**	**20.2**	**4.3**	**19.6**	**20**	**49.7**	--
Total Clay	--	--	--	**16.7**	**45.9**	**46.6**	**12.4**	**5.1**	**7.7**	**3**	**4.6**	**7.3**	**38.6**	--
Total Fines (Silt + Clay)	--	--	--	**49.7**	**77.3**	**96.9**	**28**	**16.6**	**27.9**	**7.3**	**24.2**	**27.3**	**88.3**	--
Total Grain Size	--	--	--	**99.7**	**99.8**	**100.1**	**99.9**	**99.9**	**99.9**	**100.3**	**100**	**100**	**100.1**	--
Physical Parameters														
Atterberg Classification	--	--	--	**Non-Plastic**	**MH**	**MH**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**Non-Plastic**	**MH**	--
Specific gravity (su)	--	--	--	**2.12**	**2.29**	**2.68**	**2.44**	**2.76**	**2.7**	**2.72**	**2.71**	**2.76**	**2.49**	--
Liquid Limit (pct)	--	--	--	--	**58.7**	**66.1**	--	--	--	--	--	--	**75.8**	--
Plastic Limit (pct)	--	--	--	--	**37.7**	**32.7**	--	--	--	--	--	--	**39.6**	--
Plasticity Index (pct)	--	--	--	--	**21**	**33.4**	--	--	--	--	--	--	**36.2**	--
Moisture (water) Content (pct)	--	--	--	**188.6**	**123.5**	**101.2**	**83.43**	**28.88**	**37.44**	**25**	**32.21**	**29.4**	**159.4**	
Conventional Parameters (pct)														
Total organic carbon	--	--	--	**10.4**	**4.04**	**2.27**	**6.33**	**1.21**	**0.796**	--	--	--	--	--
Total solids	--	--	--	**34.3**	**42.2**	**49.8**	**60.8**	**76.9**	**75.7**	--	--	--	--	--
Metals (mg/kg)														
Mercury	0.41	0.59		**10.2**	**0.41**	**0.17**	**0.15**	0.06 U	**0.06**	--	--	--	--	**0.62**
Aromatic Hydrocarbons (mg/kg-OC)														
Total LPAH	370	780	--	**0.91**	**1.7**	**2.4**	**0.19**	1.7 U	--	--	--	--	--	--
Naphthalene	99	170	--	**0.13 J**	**0.87**	**0.88**	0.32 U	1.7 U	--	--	--	--	--	--
Acenaphthylene	66	66	--	0.19 U	0.5 U	0.88 U	0.32 U	1.7 U	--	--	--	--	--	--
Acenaphthene	16	57	--	0.19 U	0.5 U	0.88 U	0.32 U	1.7 U	--	--	--	--	--	--
Fluorene	23	79	--	**0.11 J**	0.5 U	0.88 U	0.32 U	1.7 U	--	--	--	--	--	--
Phenanthrene	100	480	--	**0.46**	**0.87**	**1.5**	**0.19 J**	1.7 U	--	--	--	--	--	--
Anthracene	220	1,200	--	**0.21**	0.5 U	0.88 U	0.32 U	1.7 U	--	--	--	--	--	--
2-Methylnaphthalene	38	64	--	**0.11 J**	0.5 U	0.88 U	0.32 U	1.7 U	--	--	--	--	--	--
Total HPAH	960	5,300	--	**4.6**	**5.7**	**9.3**	**0.76**	1.7 U	--	--	--	--	--	--
Fluoranthene	160	1,200	--	**1.4**	**0.89**	**2.1**	**0.32**	1.7 U	--	--	--	--	--	--
Pyrene	1,000	1,400	--	**0.96**	**1.4**	**2.1**	**0.27 J**	1.7 U	--	--	--	--	--	--
Benzo(a)anthracene	110	270	--	**0.5**	**0.52**	**1.0**	0.32 U	1.7 U	--	--	--	--	--	--
Chrysene	110	460	--	**0.64**	**0.67**	**1.1**	**0.17 J**	1.7 U	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	**0.35**	**0.54**	**0.75 J**	0.32 U	1.7 U	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	**0.41**	**0.64**	**1.1**	0.32 U	1.7 U	--	--	--	--	--	--
Total Benzofluoranthenes (b, j, k)	230	450	--	**0.76**	**1.2**	**1.9**	0.32 U	1.7 U	--	--	--	--	--	--
Benzo(a)pyrene	99	210	--	**0.33**	**0.69**	**1.1**	0.32 U	1.7 U	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	34	88	--	0.19 U	0.5 U	0.88 U	0.32 U	1.7 U	--	--	--	--	--	--
Dibenzo(a,h)anthracene	12	33	--	0.06 U	0.15 U	0.27 U	0.096 U	0.5 U	--	--	--	--	--	--
Benzo(g,h,i)perylene	31	78	--	0.19 U	**0.3 J**	0.88 U	0.32 U	1.7 U	--	--	--	--	--	--
Chlorinated Benzenes (mg/kg-OC)														
1,2-Dichlorobenzene	2.3	2.3	--	0.06 U	0.15 U	0.27 UJ	0.096 UJ	0.5 UJ	--	--	--	--	--	--
1,4-Dichlorobenzene	3.1	9	--	0.06 U	0.15 U	0.27 U	0.096 U	0.5 U	--	--	--	--	--	--
1,2,4-Trichlorobenzene	0.81	1.8	--	0.06 UJ	0.15 UJ	0.27 U	0.096 U	0.5 U	--	--	--	--	--	--
Hexachlorobenzene	0.38	2.3	--	**0.095**	0.15 U	0.27 U	0.096 U	0.5 U	--	--	--	--	--	--

Table 18
Subsurface Sediment Chemical Testing Results - Unit 5, 6 and 9

			Location ID:	5B-01-VC	5B-01-VC	5B-01-VC	5B-02-VC	5B-02-VC	5B-02-VC	5B-03-VC	5B-03-VC	5B-03-VC	6B-01-VC	6B-01-DC
			Sample ID:	5B-01-VC-1-3	5B-01-VC-4-6	5B-01-VC-7-9	5B-02-VC-1-3	5B-02-VC-4-6	5B-02-VC-7-9	5B-03-VC-1-3	5B-03-VC-4-6	5B-03-VC-7-9	6B-01-VC-1-3	6B-01-DC-1-2
			Sample Date:	7/25/08	7/25/08	7/25/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/18/08	4/30/2009
			In-situ Depth[1] (ft):	1-3	4-6	7-9	1-3	4-6	7-9	1-3	4-6	7-9	1-3	1-2
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**											
Phthalates (mg/kg-OC)														
Dimethyl phthalate	53	53	--	0.19 U	0.5 U	0.88 U	0.32 U	1.7 U	--	--	--	--	--	--
Diethyl phthalate	61	110	--	0.19 U	0.5 U	0.88 U	0.32 U	1.7 U	--	--	--	--	--	--
Di-n-butyl phthalate	220	1,700	--	0.19 U	0.5 U	0.88 U	0.32 U	1.7 U	--	--	--	--	--	--
Butylbenzyl phthalate	4.9	64	--	**0.36**	0.37 U	0.66 UJ	**0.33 J**	1.2 UJ	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	47	78	--	**0.52**	0.5 U	0.88 U	0.32 U	**0.91 J**	--	--	--	--	--	--
Di-n-octyl phthalate	58	4,500	--	0.19 U	0.5 U	0.88 U	0.32 U	1.7 U	--	--	--	--	--	--
Miscellaneous (mg/kg-OC)														
Dibenzofuran	15	58	--	0.19 U	0.5 U	0.88 U	0.32 U	1.7 U	--	--	--	--	--	--
Hexachlorobutadiene	3.9	6.2	--	0.06 U	0.15 U	0.27 UJ	0.096 UJ	0.5 UJ	--	--	--	--	--	--
N-Nitrosodiphenylamine	11	11	--	**0.15 J**	0.15 UJ	0.27 UJ	0.096 UJ	0.5 UJ	--	--	--	--	--	--
Ionizable Organic Compounds (ug/kg)														
Phenol	420	1,200	420	**60**	**24**	20 U	20 U	20 U	--	--	--	--	--	--
2-Methylphenol (o-Cresol)	63	63	63	6.2 U	6.1 U	6.1 UJ	**7.4 J**	6.1 UJ	--	--	--	--	--	--
4-Methylphenol (p-Cresol)	670	670	670	**82**	**38**	**15 J**	**13 J**	20 U	--	--	--	--	--	--
2,4-Dimethylphenol	29	29	29	6.2 UJ	6.1 UJ	6.1 UJ	**14 J**	6.1 UJ	--	--	--	--	--	--
Pentachlorophenol	360	690	140	**31 J**	30 UJ	31 U	31 U	30 U	--	--	--	--	--	--
Benzyl alcohol	57	73	57	20 UJ	20 UJ	31 UJ	**47 J**	30 UJ	--	--	--	--	--	--
Benzoic acid	650	650	650	200 U	200 U	200 U	200 U	200 U	--	--	--	--	--	--
Aromatic Hydrocarbons (ug/kg)														
Total LPAH	--	--	5,200	**95**	**70**	**53**	**12**	20 U	--	--	--	--	--	--
Naphthalene	--	--	2,100	**14 J**	**35**	**20**	20 U	20 U	--	--	--	--	--	--
Acenaphthylene	--	--	560	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--
Acenaphthene	--	--	500	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--
Fluorene	--	--	540	**11 J**	20 U	20 U	20 U	20 U	--	--	--	--	--	--
Phenanthrene	--	--	1,500	**48**	**35**	**33**	**12 J**	20 U	--	--	--	--	--	--
Anthracene	--	--	960	**22**	20 U	20 U	20 U	20 U	--	--	--	--	--	--
2-Methylnaphthalene	--	--	670	**11 J**	20 U	20 U	20 U	20 U	--	--	--	--	--	--
Total HPAH	--	--	12,000	**482**	**229**	**212**	**48**	20 U	--	--	--	--	--	--
Fluoranthene	--	--	1,700	**150**	**36**	**48**	**20**	20 U	--	--	--	--	--	--
Pyrene	--	--	2,600	**100**	**57**	**48**	**17 J**	20 U	--	--	--	--	--	--
Benzo(a)anthracene	--	--	1,300	**52**	**21**	**23**	20 U	20 U	--	--	--	--	--	--
Chrysene	--	--	1,400	**67**	**27**	**25**	**11 J**	20 U	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	**36**	**22**	**17 J**	20 U	20 U	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	**43**	**26**	**26**	20 U	20 U	--	--	--	--	--	--
Total Benzofluoranthenes (b, j, k)	--	--	3,200	**79**	**48**	**43**	20 U	20 U	--	--	--	--	--	--
Benzo(a)pyrene	--	--	1,600	**34**	**28**	**25**	20 U	20 U	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	600	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	230	6.2 U	6.1 U	6.1 U	6.1 U	6.1 U	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	670	20 U	**12 J**	20 U	20 U	20 U	--	--	--	--	--	--
Chlorinated Benzenes (ug/kg)														
1,2-Dichlorobenzene	--	--	35	6.2 U	6.1 U	6.1 UJ	6.1 UJ	6.1 UJ	--	--	--	--	--	--
1,4-Dichlorobenzene	--	--	110	6.2 U	6.1 U	6.1 U	6.1 U	6.1 U	--	--	--	--	--	--
1,2,4-Trichlorobenzene	--	--	31	6.2 UJ	6.1 UJ	6.1 U	6.1 U	6.1 U	--	--	--	--	--	--
Hexachlorobenzene	--	--	22	**9.9**	6.1 U	6.1 U	6.1 U	6.1 U	--	--	--	--	--	--
Miscellaneous (ug/kg)														
Dibenzofuran	--	--	540	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--
Hexachlorobutadiene	--	--	11	6.2 U	6.1 U	6.1 UJ	6.1 UJ	6.1 UJ	--	--	--	--	--	--
N-Nitrosodiphenylamine	--	--	28	**16 J**	6.1 UJ	6.1 UJ	6.1 UJ	6.1 UJ	--	--	--	--	--	--

Table 18
Subsurface Sediment Chemical Testing Results - Unit 5, 6 and 9

			Location ID:	5B-01-VC	5B-01-VC	5B-01-VC	5B-02-VC	5B-02-VC	5B-02-VC	5B-03-VC	5B-03-VC	5B-03-VC	6B-01-VC	6B-01-DC
			Sample ID:	5B-01-VC-1-3	5B-01-VC-4-6	5B-01-VC-7-9	5B-02-VC-1-3	5B-02-VC-4-6	5B-02-VC-7-9	5B-03-VC-1-3	5B-03-VC-4-6	5B-03-VC-7-9	6B-01-VC-1-3	6B-01-DC-1-2
			Sample Date:	7/25/08	7/25/08	7/25/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/18/08	4/30/2009
			In-situ Depth[1] (ft):	1-3	4-6	7-9	1-3	4-6	7-9	1-3	4-6	7-9	1-3	1-2
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**											
Phthalates (ug/kg)														
Dimethyl phthalate	--	--	71	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--
Diethyl phthalate	--	--	48	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--
Di-n-butyl phthalate	--	--	1,400	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--
Butylbenzyl phthalate	--	--	63	**37**	15 U	15 UJ	**21 J**	15 UJ	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	--	--	1,300	**54**	20 U	20 U	20 U	**11 J**	--	--	--	--	--	--
Di-n-octyl phthalate	--	--	420	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--
Semi-Volatile Organics (ug/kg)														
1,3-Dichlorobenzene	--	--	170	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--
1-Methylnaphthalene	--	--	--	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--
Hexachloroethane	--	--	--	20 U	20 U	20 U	20 U	20 U	--	--	--	--	--	--

Table 18
Subsurface Sediment Chemical Testing Results - Unit 5, 6 and 9

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	6B-01-DC	6B-02-VC	6B-02-VC	6B-02-VC	6B-02-DC	6B-02-DC	6C-01-VC	6C-01-VC	6C-01-VC	6C-01-DC	6C-01-DC
				Sample ID:	6B-01-DC-2-3	6B-02-VC-1-3	6B-02-VC-4-6	6B-02-VC-7-9	6B-02-DC-1-2	6B-02-DC-2-3	6C-01-VC-1-3	6C-01-VC-4-6	6C-01-VC-7-9	6C-01-DC-1-2	6C-01-DC-2-3
				Sample Date:	4/30/2009	7/25/08	7/25/08	7/25/08	4/30/2009	4/30/2009	7/23/08	7/23/08	7/23/08	4/30/2009	4/30/2009
				In-situ Depth[1] (ft):	2-3	1-3	4-6	7-9	1-2	2-3	1-3	4-6	7-9	1-2	2-3
Grain Size (pct)															
Total Gravel	--	--	--		--	--	**0.5**	--	--	--	**0.8**	**5.7**	**1**	--	--
Total Sand	--	--	--		--	**2.7**	**2.5**	**2.7**	--	--	**40.3**	**78.9**	**80.2**	--	--
Total Silt	--	--	--		--	**57.2**	**51.4**	**55.3**	--	--	**38.7**	**10.1**	**14.3**	--	--
Total Clay	--	--	--		--	**40.2**	**45.6**	**41.8**	--	--	**20.2**	**5.3**	**4.4**	--	--
Total Fines (Silt + Clay)	--	--	--		--	**97.4**	**97**	**97.1**	--	--	**58.9**	**15.4**	**18.7**	--	--
Total Grain Size	--	--	--		--	**100.1**	**100**	**99.8**	--	--	**100**	**100**	**99.9**	--	--
Physical Parameters															
Atterberg Classification	--	--	--		--	**MH**	**MH**	**MH**	--	--	**CH**	**Non-Plastic**	**Non-Plastic**	--	--
Specific gravity (su)	--	--	--		--	**2.69**	**2.66**	**2.64**	--	--	**2.65**	**2.73**	**2.73**	--	--
Liquid Limit (pct)	--	--	--		--	**69.9**	**72.4**	**69.1**	--	--	**59.1**	--	--	--	--
Plastic Limit (pct)	--	--	--		--	**38.5**	**36.5**	**36.1**	--	--	**28.1**	--	--	--	--
Plasticity Index (pct)	--	--	--		--	**31.4**	**35.9**	**33**	--	--	**31**	--	--	--	--
Moisture (water) Content (pct)	--	--	--			**130**	**119.6**	**108**			**71.71**	**24.02**	**19.25**	--	--
Conventional Parameters (pct)															
Total organic carbon	--	--	--		--	--	--	--	**3.34**	**3.01**	--	--	--	**3.7**	**3.17**
Total solids	--	--	--		--	--	--	--	**42.2**	**42.8**	--	--	--	**44.9**	**49.4**
Metals (mg/kg)															
Mercury	0.41	0.59			**2.49**	--	--	--	**0.45**	**0.52**	--	--	--	**0.57**	**0.35**
Aromatic Hydrocarbons (mg/kg-OC)															
Total LPAH	370	780	--		--	--	--	--	**0.69**	**0.37**	--	--	--	**0.97**	0.63 U
Naphthalene	99	170	--		--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
Acenaphthylene	66	66	--		--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
Acenaphthene	16	57	--		--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
Fluorene	23	79	--		--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
Phenanthrene	100	480	--		--	--	--	--	**0.69**	**0.37 J**	--	--	--	**0.65**	0.63 U
Anthracene	220	1,200	--		--	--	--	--	0.60 U	0.66 U	--	--	--	**0.32 J**	0.63 U
2-Methylnaphthalene	38	64	--		--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
Total HPAH	960	5,300	--		--	--	--	--	**5.3**	**3.4**	--	--	--	**10.2**	**1.5**
Fluoranthene	160	1,200	--		--	--	--	--	**1.1**	**0.73**	--	--	--	**1.8**	**0.44 J**
Pyrene	1,000	1,400	--		--	--	--	--	**1.4**	**0.90**	--	--	--	**2.3**	**0.66**
Benzo(a)anthracene	110	270	--		--	--	--	--	**0.54 J**	**0.40 J**	--	--	--	**0.86**	0.63 U
Chrysene	110	460	--		--	--	--	--	**0.84**	**0.60 J**	--	--	--	**2.0**	**0.35 J**
Benzo(b)fluoranthene	--	--	--		--	--	--	--	**0.54 J**	**0.40 J**	--	--	--	**1.1**	0.63 U
Benzo(k)fluoranthene	--	--	--		--	--	--	--	**0.42 J**	**0.37 J**	--	--	--	**0.84**	0.63 U
Total Benzofluoranthenes (b, j, k)	230	450	--		--	--	--	--	**0.96 J**	**0.76 J**	--	--	--	**1.9**	0.63 U
Benzo(a)pyrene	99	210	--		--	--	--	--	**0.42 J**	0.66 U	--	--	--	**0.70**	0.63 U
Indeno(1,2,3-c,d)pyrene	34	88	--		--	--	--	--	0.60 U	0.66 U	--	--	--	**0.32 J**	0.63 U
Dibenzo(a,h)anthracene	12	33	--		--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
Benzo(g,h,i)perylene	31	78	--		--	--	--	--	0.60 U	0.66 U	--	--	--	**0.30 J**	0.63 U
Chlorinated Benzenes (mg/kg-OC)															
1,2-Dichlorobenzene	2.3	2.3	--		--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
1,4-Dichlorobenzene	3.1	9	--		--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
1,2,4-Trichlorobenzene	0.81	1.8	--		--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
Hexachlorobenzene	0.38	2.3	--		--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U

Table 18
Subsurface Sediment Chemical Testing Results - Unit 5, 6 and 9

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	6B-01-DC	6B-02-VC	6B-02-VC	6B-02-VC	6B-02-DC	6B-02-DC	6C-01-VC	6C-01-VC	6C-01-VC	6C-01-DC	6C-01-DC
				Sample ID:	6B-01-DC-2-3	6B-02-VC-1-3	6B-02-VC-4-6	6B-02-VC-7-9	6B-02-DC-1-2	6B-02-DC-2-3	6C-01-VC-1-3	6C-01-VC-4-6	6C-01-VC-7-9	6C-01-DC-1-2	6C-01-DC-2-3
				Sample Date:	4/30/2009	7/25/08	7/25/08	7/25/08	4/30/2009	4/30/2009	7/23/08	7/23/08	7/23/08	4/30/2009	4/30/2009
				In-situ Depth[1] (ft):	2-3	1-3	4-6	7-9	1-2	2-3	1-3	4-6	7-9	1-2	2-3
Phthalates (mg/kg-OC)															
Dimethyl phthalate	53	53	--	--	--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
Diethyl phthalate	61	110	--	--	--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
Di-n-butyl phthalate	220	1,700	--	--	--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
Butylbenzyl phthalate	4.9	64	--	--	--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
Bis(2-ethylhexyl) phthalate	47	78	--	--	--	--	--	--	**0.36 J**	0.66 U	--	--	--	0.54 U	0.63 U
Di-n-octyl phthalate	58	4,500	--	--	--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
Miscellaneous (mg/kg-OC)															
Dibenzofuran	15	58	--	--	--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
Hexachlorobutadiene	3.9	6.2	--	--	--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
N-Nitrosodiphenylamine	11	11	--	--	--	--	--	--	0.60 U	0.66 U	--	--	--	0.54 U	0.63 U
Ionizable Organic Compounds (ug/kg)															
Phenol	420	1,200	420	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
2-Methylphenol (o-Cresol)	63	63	63	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
4-Methylphenol (p-Cresol)	670	670	670	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
2,4-Dimethylphenol	29	29	29	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
Pentachlorophenol	360	690	140	--	--	--	--	--	99 U	100 U	--	--	--	98 U	98 U
Benzyl alcohol	57	73	57	--	--	--	--	--	20 U	**(20 U) R**	--	--	--	20 U	20 U
Benzoic acid	650	650	650	--	--	--	--	--	200 U	200 UJ	--	--	--	200 U	200 U
Aromatic Hydrocarbons (ug/kg)															
Total LPAH	--	--	5,200	--	--	--	--	--	**23**	**11**	--	--	--	**36**	20 U
Naphthalene	--	--	2,100	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
Acenaphthylene	--	--	560	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
Acenaphthene	--	--	500	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
Fluorene	--	--	540	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
Phenanthrene	--	--	1,500	--	--	--	--	--	**23**	**11 J**	--	--	--	**24**	20 U
Anthracene	--	--	960	--	--	--	--	--	20 U	20 U	--	--	--	**12 J**	20 U
2-Methylnaphthalene	--	--	670	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
Total HPAH	--	--	12,000	--	--	--	--	--	**176**	**102**	--	--	--	**377**	**46**
Fluoranthene	--	--	1,700	--	--	--	--	--	**38**	**22**	--	--	--	**66**	**14 J**
Pyrene	--	--	2,600	--	--	--	--	--	**46**	**27**	--	--	--	**86**	**21**
Benzo(a)anthracene	--	--	1,300	--	--	--	--	--	**18 J**	**12 J**	--	--	--	**32**	20 U
Chrysene	--	--	1,400	--	--	--	--	--	**28**	**18 J**	--	--	--	**74**	**11 J**
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--	**18 J**	**12 J**	--	--	--	**39**	20 U
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--	**14 J**	**11 J**	--	--	--	**31**	20 U
Total Benzofluoranthenes (b, j, k)	--	--	3,200	--	--	--	--	--	**32 J**	**23 J**	--	--	--	**70**	20 U
Benzo(a)pyrene	--	--	1,600	--	--	--	--	--	**14 J**	20 U	--	--	--	**26**	20 U
Indeno(1,2,3-c,d)pyrene	--	--	600	--	--	--	--	--	20 U	20 U	--	--	--	**12 J**	20 U
Dibenzo(a,h)anthracene	--	--	230	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
Benzo(g,h,i)perylene	--	--	670	--	--	--	--	--	20 U	20 U	--	--	--	**11 J**	20 U
Chlorinated Benzenes (ug/kg)															
1,2-Dichlorobenzene	--	--	35	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
1,4-Dichlorobenzene	--	--	110	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
1,2,4-Trichlorobenzene	--	--	31	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
Hexachlorobenzene	--	--	22	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
Miscellaneous (ug/kg)															
Dibenzofuran	--	--	540	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
Hexachlorobutadiene	--	--	11	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
N-Nitrosodiphenylamine	--	--	28	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U

Table 18
Subsurface Sediment Chemical Testing Results - Unit 5, 6 and 9

			Location ID:	6B-01-DC	6B-02-VC	6B-02-VC	6B-02-VC	6B-02-DC	6B-02-DC	6C-01-VC	6C-01-VC	6C-01-VC	6C-01-DC	6C-01-DC
			Sample ID:	6B-01-DC-2-3	6B-02-VC-1-3	6B-02-VC-4-6	6B-02-VC-7-9	6B-02-DC-1-2	6B-02-DC-2-3	6C-01-VC-1-3	6C-01-VC-4-6	6C-01-VC-7-9	6C-01-DC-1-2	6C-01-DC-2-3
			Sample Date:	4/30/2009	7/25/08	7/25/08	7/25/08	4/30/2009	4/30/2009	7/23/08	7/23/08	7/23/08	4/30/2009	4/30/2009
			In-situ Depth[1] (ft):	2-3	1-3	4-6	7-9	1-2	2-3	1-3	4-6	7-9	1-2	2-3
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**											
Phthalates (ug/kg)														
Dimethyl phthalate	--	--	71	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
Diethyl phthalate	--	--	48	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
Di-n-butyl phthalate	--	--	1,400	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
Butylbenzyl phthalate	--	--	63	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
Bis(2-ethylhexyl) phthalate	--	--	1,300	--	--	--	--	**12 J**	20 U	--	--	--	20 U	20 U
Di-n-octyl phthalate	--	--	420	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
Semi-Volatile Organics (ug/kg)														
1,3-Dichlorobenzene	--	--	170	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
1-Methylnaphthalene	--	--	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U
Hexachloroethane	--	--	--	--	--	--	--	20 U	20 U	--	--	--	20 U	20 U

Table 18
Subsurface Sediment Chemical Testing Results - Unit 5, 6 and 9

Analyte	SMS SQS	SMS CSL	PS LAET	Location ID:	6C-02-VC	6C-02-VC	6C-02-DC	6C-02-DC	9-01-VC	9-02-VC	9-03-VC	9-04-VC	9-05-VC	9-06-VC
				Sample ID:	6C-02-VC-1-3	6C-02-VC-4-6	6C-02-VC-7-9	6C-02-DC-1-2	6C-02-DC-2-3	9-01-VC-0-4	9-02-VC-0-4	9-03-VC-0-4	9-04-VC-0-4	9-05-VC-0-4	9-06-VC-0-4
				Sample Date:	7/23/08	7/23/08	7/23/08	4/30/2009	4/30/2009	7/16/08	7/16/08	7/15/08	7/16/08	7/16/08	7/16/08
				In-situ Depth[1] (ft):	1-3	4-6	7-9	1-2	2-3	0-4	0-4	0-4	0-4	0-4	0-4
Grain Size (pct)															
Total Gravel	--	--	--		--	--	0.2	--	--	--	--	--	--	--	--
Total Sand	--	--	--		2.7	3.9	15.9	--	--	--	--	--	--	--	--
Total Silt	--	--	--		56.8	52.9	52.9	--	--	--	--	--	--	--	--
Total Clay	--	--	--		40.4	43.2	31	--	--	--	--	--	--	--	--
Total Fines (Silt + Clay)	--	--	--		97.2	96.1	83.9	--	--	--	--	--	--	--	--
Total Grain Size	--	--	--		99.9	100	100	--	--	--	--	--	--	--	--
Physical Parameters															
Atterberg Classification	--	--	--		CH	MH	CH	--	--	--	--	--	--	--	--
Specific gravity (su)	--	--	--		2.69	2.65	2.67	--	--	--	--	--	--	--	--
Liquid Limit (pct)	--	--	--		100	97.2	65.1	--	--	--	--	--	--	--	--
Plastic Limit (pct)	--	--	--		41	41.5	31.7	--	--	--	--	--	--	--	--
Plasticity Index (pct)	--	--	--		59.3	55.7	33.4	--	--	--	--	--	--	--	--
Moisture (water) Content (pct)	--	--	--		164.5	104	85.31	--	--	--	--	--	--	--	--
Conventional Parameters (pct)															
Total organic carbon	--	--	--		--	--	--		--	1.12	0.738	1.86	1.68	2.51	1.99
Total solids	--	--	--		--	--	--		--	54.9	54.3	52.5	43	43.3	75.7
Metals (mg/kg)															
Mercury	0.41	0.59			--	--	--	0.47	0.67	0.22	0.37	1.26	0.79	0.4	0.07
Aromatic Hydrocarbons (mg/kg-OC)															
Total LPAH	370	780	--		--	--	--	--	--	--	--	--	--	--	--
Naphthalene	99	170	--		--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	66	66	--		--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	16	57	--		--	--	--	--	--	--	--	--	--	--	--
Fluorene	23	79	--		--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	100	480	--		--	--	--	--	--	--	--	--	--	--	--
Anthracene	220	1,200	--		--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	38	64	--		--	--	--	--	--	--	--	--	--	--	--
Total HPAH	960	5,300	--		--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	160	1,200	--		--	--	--	--	--	--	--	--	--	--	--
Pyrene	1,000	1,400	--		--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	110	270	--		--	--	--	--	--	--	--	--	--	--	--
Chrysene	110	460	--		--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--		--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--		--	--	--	--	--	--	--	--	--	--	--
Total Benzofluoranthenes (b, j, k)	230	450	--		--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	99	210	--		--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	34	88	--		--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	12	33	--		--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	31	78	--		--	--	--	--	--	--	--	--	--	--	--
Chlorinated Benzenes (mg/kg-OC)															
1,2-Dichlorobenzene	2.3	2.3	--		--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	3.1	9	--		--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	0.81	1.8	--		--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	0.38	2.3	--		--	--	--	--	--	--	--	--	--	--	--

Table 18
Subsurface Sediment Chemical Testing Results - Unit 5, 6 and 9

			Location ID:	6C-02-VC	6C-02-VC	6C-02-VC	6C-02-DC	6C-02-DC	9-01-VC	9-02-VC	9-03-VC	9-04-VC	9-05-VC	9-06-VC
			Sample ID:	6C-02-VC-1-3	6C-02-VC-4-6	6C-02-VC-7-9	6C-02-DC-1-2	6C-02-DC-2-3	9-01-VC-0-4	9-02-VC-0-4	9-03-VC-0-4	9-04-VC-0-4	9-05-VC-0-4	9-06-VC-0-4
			Sample Date:	7/23/08	7/23/08	7/23/08	4/30/2009	4/30/2009	7/16/08	7/16/08	7/15/08	7/16/08	7/16/08	7/16/08
			In-situ Depth[1] (ft):	1-3	4-6	7-9	1-2	2-3	0-4	0-4	0-4	0-4	0-4	0-4
Analyte	SMS SQS	SMS CSL	PS LAET											
Phthalates (mg/kg-OC)														
Dimethyl phthalate	53	53	--	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	61	110	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl phthalate	220	1,700	--	--	--	--	--	--	--	--	--	--	--	--
Butylbenzyl phthalate	4.9	64	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	47	78	--	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	58	4,500	--	--	--	--	--	--	--	--	--	--	--	--
Miscellaneous (mg/kg-OC)														
Dibenzofuran	15	58	--	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	3.9	6.2	--	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	11	11	--	--	--	--	--	--	--	--	--	--	--	--
Ionizable Organic Compounds (ug/kg)														
Phenol	420	1,200	420	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol (o-Cresol)	63	63	63	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol (p-Cresol)	670	670	670	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	29	29	29	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	360	690	140	--	--	--	--	--	--	--	--	--	--	--
Benzyl alcohol	57	73	57	--	--	--	--	--	--	--	--	--	--	--
Benzoic acid	650	650	650	--	--	--	--	--	--	--	--	--	--	--
Aromatic Hydrocarbons (ug/kg)														
Total LPAH	--	--	5,200	--	--	--	--	--	--	--	--	--	--	--
Naphthalene	--	--	2,100	--	--	--	--	--	--	--	--	--	--	--
Acenaphthylene	--	--	560	--	--	--	--	--	--	--	--	--	--	--
Acenaphthene	--	--	500	--	--	--	--	--	--	--	--	--	--	--
Fluorene	--	--	540	--	--	--	--	--	--	--	--	--	--	--
Phenanthrene	--	--	1,500	--	--	--	--	--	--	--	--	--	--	--
Anthracene	--	--	960	--	--	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	--	--	670	--	--	--	--	--	--	--	--	--	--	--
Total HPAH	--	--	12,000	--	--	--	--	--	--	--	--	--	--	--
Fluoranthene	--	--	1,700	--	--	--	--	--	--	--	--	--	--	--
Pyrene	--	--	2,600	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)anthracene	--	--	1,300	--	--	--	--	--	--	--	--	--	--	--
Chrysene	--	--	1,400	--	--	--	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Benzofluoranthenes (b, j, k)	--	--	3,200	--	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	--	--	1,600	--	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-c,d)pyrene	--	--	600	--	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	--	--	230	--	--	--	--	--	--	--	--	--	--	--
Benzo(g,h,i)perylene	--	--	670	--	--	--	--	--	--	--	--	--	--	--
Chlorinated Benzenes (ug/kg)														
1,2-Dichlorobenzene	--	--	35	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	--	--	110	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	--	--	31	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	--	--	22	--	--	--	--	--	--	--	--	--	--	--
Miscellaneous (ug/kg)														
Dibenzofuran	--	--	540	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	--	--	11	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	--	--	28	--	--	--	--	--	--	--	--	--	--	--

Table 18
Subsurface Sediment Chemical Testing Results - Unit 5, 6 and 9

			Location ID:	6C-02-VC	6C-02-VC	6C-02-VC	6C-02-DC	6C-02-DC	9-01-VC	9-02-VC	9-03-VC	9-04-VC	9-05-VC	9-06-VC
			Sample ID:	6C-02-VC-1-3	6C-02-VC-4-6	6C-02-VC-7-9	6C-02-DC-1-2	6C-02-DC-2-3	9-01-VC-0-4	9-02-VC-0-4	9-03-VC-0-4	9-04-VC-0-4	9-05-VC-0-4	9-06-VC-0-4
			Sample Date:	7/23/08	7/23/08	7/23/08	4/30/2009	4/30/2009	7/16/08	7/16/08	7/15/08	7/16/08	7/16/08	7/16/08
			In-situ Depth[1] (ft):	1-3	4-6	7-9	1-2	2-3	0-4	0-4	0-4	0-4	0-4	0-4
Analyte	**SMS SQS**	**SMS CSL**	**PS LAET**											
Phthalates (ug/kg)														
Dimethyl phthalate	--	--	71	--	--	--	--	--	--	--	--	--	--	--
Diethyl phthalate	--	--	48	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl phthalate	--	--	1,400	--	--	--	--	--	--	--	--	--	--	--
Butylbenzyl phthalate	--	--	63	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	--	--	1,300	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	--	--	420	--	--	--	--	--	--	--	--	--	--	--
Semi-Volatile Organics (ug/kg)														
1,3-Dichlorobenzene	--	--	170	--	--	--	--	--	--	--	--	--	--	--
1-Methylnaphthalene	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

Detected concentration is greater than SMS SQS screening level

Detected concentration is greater than SMS CSL screening level

Detected concentration is greater than 1988 Puget Sound Estuary Program LAET screening level

1. Sample depth is reported as below mudline.

Bold = Detected result

J = Estimated value

U = Compound analyzed, but not detected above detection limit

UJ = Compound analyzed, but not detected above estimated detection limit

R= Rejected analytical result due to low or no recoveries in the LCS and/or MS/MSD analyses in both the full scan and SIM SVOC analyses.

Total LPAH (Low PAH) are the total of Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene. 2-Methylnapthalene is not included in the sum of LPAHs

Total HPAH (High PAH) are the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzofluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

Benzo(j)fluoranthene is included in the total of benzo(b&k)fluoranthenes

Totals are calculated for LPAH and HPAH as the sum of all detected results. If all are undetcted results, the highest reporting limit value is reported as the sum.

-- Sample was not submitted for chemical analysis.

µg/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

mg/kg-OC = milligrams per kilogram organic carbon normalized

pct = percent

Non-organic carbon normalized samples with TOC results outside of the 0.5-3.5% range were screened against the 1988 Puget Sound Estuary Program LAET

The site specific Bioaccumulaltion Screening Level (BSL) for mercury is 1.2 mg/kg. (Supplemental RI Report, RETEC 2006)

Table 19
Subsurface Sediment Leachability Testing Results

Location ID:	1A-01-VC	1A-01-VC	1B-01-VC	1B-01-VC	1C-01-VC	1C-03-VC	1C-05-VC	1C-06-VC	1C-07-VC	1C-08-VC	3B-01-VC	8-01-COMP
Sample ID:	1A-01-VC-C1	1A-01-VC-C2	1B-01-VC-C1	1B-01-VC-C2	1C-01-VC-U-0-3.4	1C-03-VC-U-0-1	1C-05-VC-U-0-2.5	1C-06-VC-U	1C-07-VC-U	1C-08-VC-U	3B-01-VC-1-3	8-01-COMP
Sample Date:	7/17/08	7/17/08	7/17/08	7/17/08	7/21/08	7/22/08	7/22/08	7/23/08	7/23/08	7/23/08	7/21/08	1/21/09
In-situ Depth[1] (ft):	0-4	0-4	0-4	0-4	0-3.4	0-1	0-2.5	0-1	0-3	0-1	1-3	varies
TCLP (mg/l)												
Arsenic	--	--	--	--	--	--	--	--	--	--	--	0.2 U
Barium	--	--	--	--	--	--	--	--	--	--	--	0.19 U
Cadmium	--	--	--	--	--	--	--	--	--	--	--	0.01 U
Chromium	--	--	--	--	--	--	--	--	--	--	--	0.02 U
Lead	--	--	--	--	--	--	--	--	--	--	--	0.1 U
Mercury	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 UP
Selenium	--	--	--	--	--	--	--	--	--	--	--	0.2 U
Silver	--	--	--	--	--	--	--	--	--	--	--	0.02 U
TCLP (ug/l)												
1,2,4-Trichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
1,2-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
1,3-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
1,4-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
1-Methylnaphthalene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
2,4-Dimethylphenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
2-Methylnaphthalene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
2-Methylphenol (o-Cresol)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
4-Methylphenol (p-Cresol)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Acenaphthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Acenaphthylene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Anthracene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Benzo(a)anthracene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Benzo(a)pyrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Benzo(b)fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Benzo(g,h,i)perylene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Benzo(k)fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Benzoic acid	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	--
Benzyl alcohol	50 U	50 U	50 U	50 U	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ	--
Bis(2-ethylhexyl) phthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Butylbenzyl phthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Chrysene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Dibenzo(a,h)anthracene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Dibenzofuran	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Diethyl phthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Dimethyl phthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Di-n-butyl phthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Di-n-octyl phthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Fluorene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Hexachlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Hexachlorobutadiene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Hexachloroethane	10 U	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	--
Indeno(1,2,3-c,d)pyrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Naphthalene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--

Table 19
Subsurface Sediment Leachability Testing Results

Location ID:	1A-01-VC	1A-01-VC	1B-01-VC	1B-01-VC	1C-01-VC	1C-03-VC	1C-05-VC	1C-06-VC	1C-07-VC	1C-08-VC	3B-01-VC	8-01-COMP
Sample ID:	**1A-01-VC-C1**	**1A-01-VC-C2**	**1B-01-VC-C1**	**1B-01-VC-C2**	**1C-01-VC-U-0-3.4**	**1C-03-VC-U-0-1**	**1C-05-VC-U-0-2.5**	**1C-06-VC-U**	**1C-07-VC-U**	**1C-08-VC-U**	**3B-01-VC-1-3**	**8-01-COMP**
Sample Date:	**7/17/08**	**7/17/08**	**7/17/08**	**7/17/08**	**7/21/08**	**7/22/08**	**7/22/08**	**7/23/08**	**7/23/08**	**7/23/08**	**7/21/08**	**1/21/09**
In-situ Depth[1] (ft):	**0-4**	**0-4**	**0-4**	**0-4**	**0-3.4**	**0-1**	**0-2.5**	**0-1**	**0-3**	**0-1**	**1-3**	**varies**
N-Nitrosodiphenylamine	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	--
Pentachlorophenol	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	--
Phenanthrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Phenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Pyrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
SPLP (mg/l)												
Arsenic	--	--	--	--	--	--	--	--	--	--	--	0.05 U
Barium	--	--	--	--	--	--	--	--	--	--	--	**0.082**
Cadmium	--	--	--	--	--	--	--	--	--	--	--	0.002 U
Chromium	--	--	--	--	--	--	--	--	--	--	--	**0.009**
Lead	--	--	--	--	--	--	--	--	--	--	--	0.02 U
Mercury	**0.0001**	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	0.0001 U	**0.0001**	0.0001 U	0.0001 U	**0.0001 J**
Selenium	--	--	--	--	--	--	--	--	--	--	--	0.05 U
Silver	--	--	--	--	--	--	--	--	--	--	--	0.003 U
SPLP (ug/l)												
1,2,4-Trichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
1,2-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
1,3-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
1,4-Dichlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
1-Methylnaphthalene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
2,4-Dimethylphenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
2-Methylnaphthalene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
2-Methylphenol (o-Cresol)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
4-Methylphenol (p-Cresol)	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Acenaphthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Acenaphthylene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Anthracene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Benzo(a)anthracene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Benzo(a)pyrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Benzo(b)fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Benzo(g,h,i)perylene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Benzo(k)fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Benzoic acid	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 U	100 UJ	100 U	--
Benzyl alcohol	50 U	50 U	50 U	50 U	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ	50 UJ	--
Bis(2-ethylhexyl) phthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Butylbenzyl phthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Chrysene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Dibenzo(a,h)anthracene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Dibenzofuran	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Diethyl phthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Dimethyl phthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Di-n-butyl phthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Di-n-octyl phthalate	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Fluoranthene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Fluorene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--

Table 19
Subsurface Sediment Leachability Testing Results

Location ID:	1A-01-VC	1A-01-VC	1B-01-VC	1B-01-VC	1C-01-VC	1C-03-VC	1C-05-VC	1C-06-VC	1C-07-VC	1C-08-VC	3B-01-VC	8-01-COMP
Sample ID:	**1A-01-VC-C1**	**1A-01-VC-C2**	**1B-01-VC-C1**	**1B-01-VC-C2**	**1C-01-VC-U-0-3.4**	**1C-03-VC-U-0-1**	**1C-05-VC-U-0-2.5**	**1C-06-VC-U**	**1C-07-VC-U**	**1C-08-VC-U**	**3B-01-VC-1-3**	**8-01-COMP**
Sample Date:	**7/17/08**	**7/17/08**	**7/17/08**	**7/17/08**	**7/21/08**	**7/22/08**	**7/22/08**	**7/23/08**	**7/23/08**	**7/23/08**	**7/21/08**	**1/21/09**
In-situ Depth[1] (ft):	**0-4**	**0-4**	**0-4**	**0-4**	**0-3.4**	**0-1**	**0-2.5**	**0-1**	**0-3**	**0-1**	**1-3**	**varies**
Hexachlorobenzene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Hexachlorobutadiene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Hexachloroethane	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Indeno(1,2,3-c,d)pyrene	10 U	10 U	10 U	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	--
Naphthalene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
N-Nitrosodiphenylamine	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	10 UJ	--
Pentachlorophenol	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	50 U	--
Phenanthrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Phenol	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--
Pyrene	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--

Notes:
1. Sample depth is reported as below mudline.
Bold = Detected result
Sample ID 8-01-COMP is an ASB composite sample homogenized from both ASB core processing and grab collection.
U = Compound analyzed, but not detected above detection limit
UJ = Compound analyzed, but not detected above estimated detection limit
P = Professional judgement. Data considered usable; however, hold-times were exceeded.
mg/l = milligrams per liter, ug/l = micrograms per liter
TCLP = Toxicity Characteristic Leaching Procedure
SPLP = Synthetic Precipitation Leaching Procedure
-- Sample was not submitted for chemical analysis.

Table 20
Subsurface Sediment Composite Elutriate Testing Results

Analyte	Site Area	Unit 1A/1B - Outer Waterway				Unit 1C - Outer Waterway BST			
	Sample ID:	1A-1B-01-COMP	1A-1B-01-COMP	1A-1B-01-COMP	1A-1B-01-COMP	1C-01-VC-U-COMP	1C-01-VC-U-COMP	1C-01-VC-U-COMP	1C-01-VC-U-COMP
	Sample Date:	2/4/2009	2/4/2009	2/4/2009	2/4/2009	2/17/2009	2/17/2009	2/18/2009	2/18/2009
	Testing Method:	DRET	DRET	MET	MET	DRET	DRET	MET	MET
	Sample Type:	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total
Ammonia		**0.636**	**0.671**	**3.27**	**3**	**0.727**	**0.733**	**4.93**	**4.74**
Conventionals (mg/L)									
Total Suspended Solids		--	**188**	--	**5.2**	--	**185**	--	**4.6**
Metals dissolved (µg/L)									
Antimony		**0.8**	--	**2**	--	**0.8**	--	**3.7**	--
Arsenic		1.0 U	--	**6**	--	**2**	--	**3**	--
Cadmium		0.5 U	--	1.0 U	--	0.5 U	--	0.5 U	--
Chromium		1.0 U	--	5.0 U	--	1.0 U	--	**6**	--
Copper		**3**	--	**3**	--	**3**	--	**8**	--
Lead		2.0 U	--	5.0 U	--	2.0 U	--	2.0 U	--
Mercury		0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--
Nickel		**5**	--	**6**	--	**12**	--	**13**	--
Selenium		**6**	--	**14**	--	**10**	--	**8**	--
Silver		0.5 U	--	1.0 U	--	0.5 U	--	0.5 U	--
Zinc		10 U	--	20 U	--	10 U	--	**10**	--
Metals total (µg/L)									
Antimony		--	**0.7**	--	**2**	--	**0.7**	--	**4**
Arsenic		--	**3**	--	**5**	--	**2**	--	**3**
Cadmium		--	0.5 U	--	1.0 U	--	0.5 U	--	0.5 U
Chromium		--	**11**	--	5.0 U	--	**12**	--	**2**
Copper		--	**10**	--	**3**	--	**12**	--	**4**
Lead		--	2.0 U	--	5.0 U	--	**3**	--	2.0 U
Mercury		--	**0.11**	--	0.1 U	--	**0.11**	--	0.1 U
Nickel		--	**19**	--	**5**	--	**21**	--	**6**
Selenium		--	**7**	--	**13**	--	**6**	--	**9**
Silver		--	0.5 U	--	1.0 U	--	0.5 U	--	0.5 U
Zinc		--	**20**	--	20 U	--	**20**	--	10 U
Aromatic Hydrocarbons (µg/L)									
1-Methylnaphthalene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Methylnaphthalene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Acenaphthene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Acenaphthylene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Anthracene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(a)anthracene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(a)pyrene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(b)fluoranthene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(g,h,i)perylene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzo(k)fluoranthene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Chrysene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibenzo(a,h)anthracene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dibenzofuran		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Dimethyl phthalate		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 20
Subsurface Sediment Composite Elutriate Testing Results

Analyte	Site Area	Unit 1A/1B - Outer Waterway				Unit 1C - Outer Waterway BST			
	Sample ID:	1A-1B-01-COMP	1A-1B-01-COMP	1A-1B-01-COMP	1A-1B-01-COMP	1C-01-VC-U-COMP	1C-01-VC-U-COMP	1C-01-VC-U-COMP	1C-01-VC-U-COMP
	Sample Date:	2/4/2009	2/4/2009	2/4/2009	2/4/2009	2/17/2009	2/17/2009	2/18/2009	2/18/2009
	Testing Method:	DRET	DRET	MET	MET	DRET	DRET	MET	MET
	Sample Type:	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total
Fluoranthene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Fluorene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Indeno(1,2,3-c,d)pyrene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Naphthalene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Phenanthrene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pyrene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Semi-Volatiles (µg/L)									
1,2,4-Trichlorobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,2-Dichlorobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,3-Dichlorobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
1,4-Dichlorobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2,4-Dimethylphenol		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Methoxyphenol (Guaiacol)		2.0 U	2.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U
2-Methylphenol (o-Cresol)		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
3,4,5-Trichloroguaiacol		7.5 U	7.5 U	7.5 U	7.5 U	1.0 U	1.0 U	1.0 U	1.0 U
4,5,6-Trichloroguaiacol		5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4,5-Dichloroguaiacol		5.0 U	5.0 U	5.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U
4-Methylphenol (p-Cresol)		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Benzoic acid		10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Benzyl alcohol		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Bis(2-ethylhexyl) phthalate		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**24**	1.0 U	1.0 U
Butylbenzyl phthalate		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Diethyl phthalate		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-butyl phthalate		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Di-n-octyl phthalate		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachlorobutadiene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Hexachloroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
N-Nitrosodiphenylamine		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Pentachlorophenol		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U
Phenol		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U
Tetrachloroguaiacol		7.5 U	7.5 U	7.5 U	7.5 U	1.0 U	1.0 U	1.0 U	1.0 U

Table 20
Subsurface Sediment Composite Elutriate Testing Results

Analyte	Site Area	Unit 2A/3B - Inner Waterway				Unit 8 - ASB Solids				ASB WATER	WHATCOM WATERWAY SITE WATER
	Sample ID:	2A-3B-01-COMP	2A-3B-01-COMP	2A-3B-01-COMP	2A-3B-01-COMP	8-01-COMP	8-01-COMP	8-01-COMP	8-01-COMP		
	Sample Date:	2/10/2009	2/10/2009	2/6/2009	2/6/2009	2/13/2009	2/13/2009	2/11/2009	2/11/2009	1/8/2009	1/16/2009
	Testing Method:	DRET	DRET	MET	MET	DRET	DRET	MET	MET	Site Water	Site Water
	Sample Type:	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Total	Total
Ammonia		**3.74**	**3.75**	**33.4**	**31.3**	**60**	**62.2**	**354**	**360**	**0.892 J**	**0.082 J**
Conventionals (mg/L)											
Total Suspended Solids		--	**158**	--	**14.1**	--	**1950**	--	**3450**	**3.2 J**	**12.4 J**
Metals dissolved (µg/L)											
Antimony		**0.9**	--	**2**	--	**0.6**	--	**1**	--	**0.2**	0.5 U
Arsenic		**1.9**	--	**4**	--	**1.6**	--	**3.1**	--	**0.8**	1.0 U
Cadmium		0.5 U	--	1.0 U	--	0.2 U	--	0.2 U	--	0.2 U	0.5 U
Chromium		1.0 U	--	2.0 U	--	**8.3**	--	**39.7**	--	**1**	**1**
Copper		**2**	--	**3**	--	**1.5**	--	**1.9**	--	**1**	**3**
Lead		2.0 U	--	5.0 U	--	1.0 U	--	**1**	--	1.0 U	2.0 U
Mercury		0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 UP	0.1 UP
Nickel		**5**	--	**6**	--	**5.3**	--	**22.1**	--	**1.6**	**4**
Selenium		**7**	--	**11**	--	0.5 U	--	**0.9**	--	**0.7**	**5**
Silver		0.5 U	--	1.0 U	--	0.2 U	--	0.2 U	--	0.2 U	0.5 U
Zinc		10 U	--	20 U	--	**9**	--	**11**	--	4 U	10 U
Metals total (µg/L)											
Antimony		--	**1**	--	**2**	--	**2.2**	--	**4.1**	**0.2**	0.5 U
Arsenic		--	**2**	--	**3**	--	**20.9**	--	**32.1**	**0.9**	**2**
Cadmium		--	0.5 U	--	1.0 U	--	**35**	--	**60.8**	0.2 U	0.5 U
Chromium		--	**12**	--	**3**	--	**577**	--	**1,220**	**2.1**	**2**
Copper		--	**13**	--	**5**	--	**196**	--	**353**	**1.6**	**3**
Lead		--	**11**	--	5.0 U	--	**98**	--	**146**	1.0 U	2.0 U
Mercury		--	**0.13**	--	0.1 U	--	**10.3**	--	**28**	0.1 UP	0.1 UP
Nickel		--	**17**	--	**8**	--	**78.1**	--	**147**	**1.9**	**4**
Selenium		--	**8**	--	**10**	--	**3.5**	--	**7**	**0.7**	**6**
Silver		--	0.5 U	--	1.0 U	--	**1.7**	--	**2.4**	0.2 U	0.5 U
Zinc		--	**30**	--	20 U	--	**1,370**	--	**2,600**	**8**	10 U
Aromatic Hydrocarbons (µg/L)											
1-Methylnaphthalene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
2-Methylnaphthalene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Acenaphthene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Acenaphthylene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Anthracene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Benzo(a)anthracene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Benzo(a)pyrene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Benzo(b)fluoranthene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Benzo(g,h,i)perylene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Benzo(k)fluoranthene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Chrysene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Dibenzo(a,h)anthracene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Dibenzofuran		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Dimethyl phthalate		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP

Table 20
Subsurface Sediment Composite Elutriate Testing Results

Analyte	Site Area	Unit 2A/3B - Inner Waterway				Unit 8 - ASB Solids				ASB WATER	WHATCOM WATERWAY SITE WATER
	Sample ID:	2A-3B-01-COMP	2A-3B-01-COMP	2A-3B-01-COMP	2A-3B-01-COMP	8-01-COMP	8-01-COMP	8-01-COMP	8-01-COMP		
	Sample Date:	2/10/2009	2/10/2009	2/6/2009	2/6/2009	2/13/2009	2/13/2009	2/11/2009	2/11/2009	1/8/2009	1/16/2009
	Testing Method:	DRET	DRET	MET	MET	DRET	DRET	MET	MET	Site Water	Site Water
	Sample Type:	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Total	Total
Fluoranthene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**2.3**	1.0 U	1.0 U	1.0 UP	1.4 UP
Fluorene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Indeno(1,2,3-c,d)pyrene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Naphthalene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**4.4**	**2.2**	**4.3**	1.0 UP	1.4 UP
Phenanthrene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**2.3**	1.0 U	1.0 U	1.0 UP	1.4 UP
Pyrene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.4**	1.0 U	1.0 U	1.0 UP	1.4 UP
Semi-Volatiles (µg/L)											
1,2,4-Trichlorobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
1,2-Dichlorobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
1,3-Dichlorobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
1,4-Dichlorobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
2,4-Dimethylphenol		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
2-Methoxyphenol (Guaiacol)		1.0 U	1.0 U	2.0 U	2.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
2-Methylphenol (o-Cresol)		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
3,4,5-Trichloroguaiacol		1.0 U	1.0 U	7.5 U	7.5 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
4,5,6-Trichloroguaiacol		1.0 U	1.0 U	5.0 U	5.0 U	1.0 U	1.0 U	2.4 U	2.3 U	1.0 UP	1.4 UP
4,5-Dichloroguaiacol		1.0 U	1.0 U	5.0 U	5.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
4-Methylphenol (p-Cresol)		1.0 U	1.0 U	1.0 U	1.0 U	**1.1**	**20**	**130**	**140**	1.0 UP	1.4 UP
Benzoic acid		10 U	10 U	10 U	10 U	10 U	10 U	**19**	**22**	10 UP	1.4 UP
Benzyl alcohol		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UP	6.8 UP
Bis(2-ethylhexyl) phthalate		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**1.0**	1.0 U	**160**	**2.5 J**	1.4 UP
Butylbenzyl phthalate		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Diethyl phthalate		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Di-n-butyl phthalate		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Di-n-octyl phthalate		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Hexachlorobenzene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Hexachlorobutadiene		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Hexachloroethane		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
N-Nitrosodiphenylamine		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	1.0 UP	1.4 UP
Pentachlorophenol		5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 U	5.0 UP	6.8 UP
Phenol		1.0 U	1.0 U	1.0 U	1.0 U	1.0 U	**9.8**	**270**	**300**	1.0 UP	1.4 UP
Tetrachloroguaiacol		1.0 U	1.0 U	7.5 U	7.5 U	1.0 U	**1.1**	**1 .0**	**1.8**	1.0 UP	1.4 UP

Notes:
*- Samples exceeded holding times
Bold = Detected result
-- Sample was not submitted for chemical analysis.
J = Estimated value
U = Compound analyzed, but not detected above detection limit
P = Professional judgement. Data considered usable; however, hold-times were exceeded.
µg/L = micrograms per liter
mg/L = milligrams per liter

Table 21a
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-101A-HSA	8-101A-HSA	8-101A-HSA	8-101A-HSA	8-101A-HSA	8-101A-HSA	8-101A-HSA	8-101A-HSA	8-101A-HSA	8-101A-HSA	8-101A-HSA	8-101A-HSA	8-101B-HSA	8-101B-HSA
Sample ID:	8-101A-HSA-S1	8-101A-HSA-S5	8-101A-HSA-S6	8-101A-HSA-S7	8-101A-HSA-S8	8-101A-HSA-S9	8-101A-HSA-S10	8-101A-HSA-S11	8-101A-HSA-S12	8-101A-HSA-S13	8-101A-HSA-S14	8-101A-HSA-S15	8-101B-HSA-S3	8-101B-HSA-S6
Sample Date:	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/23/08	7/23/08	7/23/08	7/24/08	7/24/08
In-Situ Depth[1] (ft):	2.5 - 4 ft	10 - 11.5 ft	15 - 16.5 ft	20 - 21.5 ft	25 - 26.5 ft	30 - 31.5 ft	35 - 36.5 ft	40 - 41.5 ft	45 - 46.5 ft	50 - 51.5 ft	55 - 56.5 ft	60 - 63.5 ft	5.5 - 7 ft	12.5 - 14 ft
Physical Parameters														
Atterberg Classification	--	Non-Plastic	--	--	--	--	Non-Plastic	--	CL	--	CL	--	--	--
Specific gravity (su)	--	2.64	--	--	--	--	2.71	--	2.76	--	2.78	--	--	--
Liquid Limit (pct)	--	--	--	--	--	--	--	--	36.6	--	29.3	--	--	--
Plastic Limit (pct)	--	--	--	--	--	--	--	--	14.4	--	13.6	--	--	--
Plasticity Index (pct)	--	--	--	--	--	--	--	--	22.1	--	15.7	--	--	--
Moisture (water) Content (pct)	4.18	31.4	17.69	15.25	22.23	30.14	23.98	18.73	28.25	21.41	21.14	21.2	95.82	28.49
Grain Size (pct)														
Gravel	17.7	--	--	--	--	1.2	--	0.3	--	1.3	--	2.9	3.61	0.1
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	16.5	--	--	--	--	2.4	--	1.1	--	1.6	--	1.7	6.52	0.9
Sand, Fine	35.2	--	--	--	--	56.4	--	76.7	--	18.7	--	16.6	19.11	67.5
Sand, Medium	26.9	--	--	--	--	24.8	--	12.9	--	5.5	--	5.2	10.55	7
Silt, Coarse	--	--	--	--	--	--	--	--	--	5	--	5.1	4.06	1.6
Silt, Fine	--	--	--	--	--	--	--	--	--	8.6	--	8.8	10.16	1.6
Silt, Medium	--	--	--	--	--	--	--	--	--	7.1	--	8.1	8.13	1.6
Silt, Very Coarse	3.8	--	--	--	--	15.2	--	9	--	12.5	--	11.5	5.34	16.7
Silt, Very Fine	--	--	--	--	--	--	--	--	--	8.5	--	8.1	13.21	1.6
Clay	--	--	--	--	--	--	--	--	--	31.2	--	32.3	19.3	1.6
Total Gravel	17.7	--	--	--	--	1.2	--	0.3	--	1.3	--	2.9	3.61	0.1
Total Sand	78.6	--	--	--	--	83.6	--	90.7	--	25.8	--	23.5	36.18	75.4
Total Silt	3.8	--	--	--	--	15.2	--	9	--	41.7	--	41.6	40.9	23.1
Total Clay	--	--	--	--	--	--	--	--	--	31.2	--	32.3	19.3	1.6
Total Fines (Silt + Clay)	3.8	--	--	--	--	15.2	--	9	--	72.9	--	73.9	60.2	24.7
Total Grain Size	100.1	--	--	--	--	100	--	100	--	100	--	100.3	99.99	100.2
Percent passing < 1.3 micron sieve	--	--	--	--	--	--	--	--	--	23.4	--	24.2	0	1.6
Percent retained 1.3 micron sieve	--	--	--	--	--	--	--	--	--	7.8	--	8.1	19.3	0.1 U
Percent retained 3.2 micron sieve	--	--	--	--	--	--	--	--	--	8.5	--	8.1	13.21	1.6
Percent retained 7 micron sieve	--	--	--	--	--	--	--	--	--	4.3	--	5.1	6.1	0.1 U
Percent retained 9 micron sieve	--	--	--	--	--	--	--	--	--	4.3	--	3.7	4.06	1.6
Percent retained 13 micron sieve	--	--	--	--	--	--	--	--	--	7.1	--	8.1	8.13	1.6
Percent retained 22 micron sieve	--	--	--	--	--	--	--	--	--	5	--	5.1	4.06	1.6
Percent retained 32 micron sieve	3.8	--	--	--	--	15.2	--	9	--	12.5	--	11.5	5.34	16.7
Percent retained 75 micron sieve	6.1	--	--	--	--	19.1	--	22.5	--	8.2	--	7.8	8.32	29.2
Percent retained 150 micron sieve	12.6	--	--	--	--	16.7	--	26.2	--	5.6	--	4.7	5.13	31.2
Percent retained 250 micron sieve	16.5	--	--	--	--	20.6	--	28	--	4.9	--	4.1	5.66	7.1
Percent retained 425 micron sieve	13.8	--	--	--	--	15.9	--	9.8	--	3.2	--	2.9	5.36	3.5
Percent retained 850 micron sieve	13.1	--	--	--	--	8.9	--	3.1	--	2.3	--	2.3	5.19	3.5
Percent retained 2000 micron sieve	16.5	--	--	--	--	2.4	--	1.1	--	1.6	--	1.7	6.52	0.9
Percent retained 4750 micron sieve	16.5	--	--	--	--	1	--	0.3	--	1.3	--	2.9	1.94	0.1
Percent retained 9500 micron sieve	1.2	--	--	--	--	0.2	--	0.1 U	--	0.1 U	--	0.1 U	1.67	--
Percent retained 12500 micron sieve	0.1 U	--	--	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--
Percent retained 19000 micron sieve	0.1 U	--	--	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--
Percent retained 25K micron sieve	0.1 U	--	--	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--
Percent retained 37.5K micron sieve	0.1 U	--	--	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--
Percent retained 50K micron sieve	0.1 U	--	--	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--
Percent retained 75K micron sieve	0.1 U	--	--	--	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--

Table 21a
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-101B-HSA	8-101B-HSA	8-101B-HSA	8-101B-HSA	8-101B-HSA	8-101B-HSA	8-102A-HSA	8-102A-HSA	8-102A-HSA	8-102A-HSA	8-102A-HSA	8-102A-HSA	8-102A-HSA
Sample ID:	8-101B-HSA-S7	8-101B-HSA-S8	8-101B-HSA-S9	8-101B-HSA-S10	8-101B-HSA-S11	8-101B-HSA-S14	8-102A-HSA-S-1	8-102A-HSA-S-2	8-102A-HSA-S-4	8-102A-HSA-S-6	8-102A-HSA-S-7	8-102A-HSA-S-8	8-102A-HSA-S-9
Sample Date:	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08
In-Situ Depth[1] (ft):	17.5 - 19 ft	22.5 - 24 ft	27.5 - 29 ft	32.5 - 34 ft	37.5 - 39 ft	52.5 - 54 ft	2.5 - 4 ft	5 - 6.5 ft	7.5 - 9 ft	15 - 16.5 ft	20 - 21.5 ft	25 - 26.5 ft	30 - 31.5 ft
Physical Parameters													
Atterberg Classification	--	--	--	CL	--	--	--	--	Non-Plastic	--	--	--	--
Specific gravity (su)	2.71	--	--	2.79	--	--	--	--	2.79	--	--	--	--
Liquid Limit (pct)	--	--	--	32.2	--	--	--	--	--	--	--	--	--
Plastic Limit (pct)	--	--	--	13.9	--	--	--	--	--	--	--	--	--
Plasticity Index (pct)	--	--	--	18.3	--	--	--	--	--	--	--	--	--
Moisture (water) Content (pct)	24.54	17.98	24.74	21.65	20.83	24.74	2.61	2.79	3.4	7.8	27.12	28.42	24.6
Grain Size (pct)													
Gravel	--	--	3.7	--	--	--	8.1	--	--	30.8	--	--	4.1
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	--	0.9	--	--	--	11.6	--	--	6.9	--	--	4.6
Sand, Fine	--	--	5	--	--	19.3	44.2	--	--	23.7	--	--	55.5
Sand, Medium	--	--	0.4	--	--	6.3	30.5	--	--	32.9	--	--	22.1
Silt, Coarse	--	--	7.2	--	--	3.4	--	--	--	--	--	--	--
Silt, Fine	--	--	8.7	--	--	10.2	--	--	--	--	--	--	--
Silt, Medium	--	--	8.7	--	--	8.5	--	--	--	--	--	--	--
Silt, Very Coarse	--	--	27.8	--	--	18.2	5.5	--	--	5.6	--	--	13.5
Silt, Very Fine	--	--	8.7	--	--	6.8	--	--	--	--	--	--	--
Clay	--	--	28.9	--	--	27.3	--	--	--	--	--	--	--
Total Gravel	--	--	3.7	--	--	--	8.1	--	--	30.8	--	--	4.1
Total Sand	--	--	6.3	--	--	25.6	86.3	--	--	63.5	--	--	82.2
Total Silt	--	--	61.1	--	--	47.1	5.5	--	--	5.6	--	--	13.5
Total Clay	--	--	28.9	--	--	27.3	--	--	--	--	--	--	--
Total Fines (Silt + Clay)	--	--	90	--	--	74.4	5.5	--	--	5.6	--	--	13.5
Total Grain Size	--	--	100	--	--	100	99.9	--	--	99.9	--	--	99.8
Percent passing < 1.3 micron sieve	--	--	21.7	--	--	17.9	--	--	--	--	--	--	0.1 U
Percent retained 1.3 micron sieve	--	--	7.2	--	--	9.4	--	--	--	--	--	--	0.1 U
Percent retained 3.2 micron sieve	--	--	8.7	--	--	6.8	--	--	--	--	--	--	0.1 U
Percent retained 7 micron sieve	--	--	2.9	--	--	5.1	--	--	--	--	--	--	0.1 U
Percent retained 9 micron sieve	--	--	5.8	--	--	5.1	--	--	--	--	--	--	0.1 U
Percent retained 13 micron sieve	--	--	8.7	--	--	8.5	--	--	--	--	--	--	0.1 U
Percent retained 22 micron sieve	--	--	7.2	--	--	3.4	--	--	--	--	--	--	0.1 U
Percent retained 32 micron sieve	--	--	27.8	--	--	18.2	5.5	--	--	5.6	--	--	13.5
Percent retained 75 micron sieve	--	--	3.3	--	--	8.5	7.2	--	--	3.8	--	--	18
Percent retained 150 micron sieve	--	--	0.9	--	--	5.6	15.4	--	--	5.6	--	--	24.1
Percent retained 250 micron sieve	--	--	0.8	--	--	5.2	21.6	--	--	14.3	--	--	13.4
Percent retained 425 micron sieve	--	--	0.3	--	--	3.6	18.4	--	--	20.4	--	--	12.4
Percent retained 850 micron sieve	--	--	0.1	--	--	2.7	12.1	--	--	12.5	--	--	9.7
Percent retained 2000 micron sieve	--	--	0.9	--	--	--	11.6	--	--	6.9	--	--	4.6
Percent retained 4750 micron sieve	--	--	3.7	--	--	--	8.1	--	--	25.9	--	--	1.4
Percent retained 9500 micron sieve	--	--	--	--	--	--	0.1 U	--	--	4.9	--	--	2.7
Percent retained 12500 micron sieve	--	--	--	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 19000 micron sieve	--	--	--	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 25K micron sieve	--	--	--	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 37.5K micron sieve	--	--	--	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 50K micron sieve	--	--	--	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 75K micron sieve	--	--	--	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U

Table 21a
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-102A-HSA	8-102A-HSA	8-102A-HSA	8-102A-HSA	8-102A-HSA	8-102A-HSA	8-102C-HSA	8-102C-HSA	8-102C-HSA	8-102C-HSA	8-102C-HSA	8-102C-HSA	8-102C-HSA
Sample ID:	8-102A-HSA-S-10	8-102A-HSA-S-11	8-102A-HSA-S-12	8-102A-HSA-S-13	8-102A-HSA-S-14	8-102A-HSA-S-15	8-102C-HSA-S3	8-102C-HSA-S5	8-102C-HSA-S7	8-102C-HSA-S8	8-102C-HSA-S9	8-102C-HSA-S10	8-102C-HSA-S12
Sample Date:	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/22/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08
In-Situ Depth[1] (ft):	35 - 36.5 ft	40 - 41.5 ft	45 - 46.5 ft	50 - 51.5 ft	55 - 56.5 ft	60 - 63.5 ft	5 - 6.5 ft	10 - 11.5 ft	15 - 16.5 ft	20 - 21.5 ft	25 - 26.5 ft	30 - 31.5 ft	45 - 46.5 ft
Physical Parameters													
Atterberg Classification	Non-Plastic	--	Non-Plastic	--	CL	--	--	--	--	CL	CL	--	--
Specific gravity (su)	2.72	--	2.76	--	2.78	2.79	--	2.71	--	2.78	--	--	--
Liquid Limit (pct)	--	--	--	--	46.7	--	--	--	--	27	46.4	--	--
Plastic Limit (pct)	--	--	--	--	17	--	--	--	--	11.5	18.2	--	--
Plasticity Index (pct)	--	--	--	--	29.6	--	--	--	--	15.4	28.2	--	--
Moisture (water) Content (pct)	33.96	24.97	20.51	25.38	31.63	22.41	24.69	25.12	21.92	26.2	30.94	33.59	21.53
Grain Size (pct)													
Gravel	--	--	--	--	--	--	1.8	--	1.6	--	--	--	7.4
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	1.8	--	--	--	--	3.3	--	1.6	--	--	0.1	1.6
Sand, Fine	--	75.7	--	--	--	--	64.6	--	77.9	--	--	4.6	16.5
Sand, Medium	--	10.4	--	--	--	--	14	--	1.3	--	--	0.6	4.2
Silt, Coarse	--	--	--	--	--	--	--	--	--	--	--	5.5	4.2
Silt, Fine	--	--	--	--	--	--	1.4	--	--	--	--	13.4	9.8
Silt, Medium	--	--	--	--	--	--	1.5	--	--	--	--	8.7	6.3
Silt, Very Coarse	--	12.2	--	--	--	--	10.4	--	17.6	--	--	8.8	11.8
Silt, Very Fine	--	--	--	--	--	--	0.7	--	--	--	--	11.8	7.7
Clay	--	--	--	--	--	--	1.2	--	--	--	--	46.5	30.2
Total Gravel	--	--	--	--	--	--	1.8	--	1.6	--	--	--	7.4
Total Sand	--	87.9	--	--	--	--	81.9	--	80.8	--	--	5.3	22.3
Total Silt	--	12.2	--	--	--	--	14	--	17.6	--	--	48.2	39.8
Total Clay	--	--	--	--	--	--	1.2	--	--	--	--	46.5	30.2
Total Fines (Silt + Clay)	--	12.2	--	--	--	--	15.2	--	17.6	--	--	94.7	70
Total Grain Size	--	100.1	--	--	--	--	98.9	--	100	--	--	100	99.7
Percent passing < 1.3 micron sieve	--	--	--	--	--	--	0.5	--	--	--	--	33.9	22.5
Percent retained 1.3 micron sieve	--	--	--	--	--	--	0.7	--	--	--	--	12.6	7.7
Percent retained 3.2 micron sieve	--	--	--	--	--	--	0.7	--	--	--	--	11.8	7.7
Percent retained 7 micron sieve	--	--	--	--	--	--	0.7	--	--	--	--	6.3	4.9
Percent retained 9 micron sieve	--	--	--	--	--	--	0.7	--	--	--	--	7.1	4.9
Percent retained 13 micron sieve	--	--	--	--	--	--	1.5	--	--	--	--	8.7	6.3
Percent retained 22 micron sieve	--	--	--	--	--	--	0.1 U	--	--	--	--	5.5	4.2
Percent retained 32 micron sieve	--	12.2	--	--	--	--	10.4	--	17.6	--	--	8.8	11.8
Percent retained 75 micron sieve	--	39.3	--	--	--	--	24.3	--	52.6	--	--	2.6	7.9
Percent retained 150 micron sieve	--	22.7	--	--	--	--	26.4	--	21	--	--	1.4	4.8
Percent retained 250 micron sieve	--	13.7	--	--	--	--	13.9	--	4.3	--	--	0.6	3.8
Percent retained 425 micron sieve	--	6.3	--	--	--	--	8.3	--	0.8	--	--	0.3	2.4
Percent retained 850 micron sieve	--	4.1	--	--	--	--	5.7	--	0.5	--	--	0.3	1.8
Percent retained 2000 micron sieve	--	1.8	--	--	--	--	3.3	--	1.6	--	--	0.1	1.6
Percent retained 4750 micron sieve	--	0.1 U	--	--	--	--	1.8	--	1.6	--	--	--	2.8
Percent retained 9500 micron sieve	--	0.1 U	--	--	--	--	--	--	--	--	--	--	4.6
Percent retained 12500 micron sieve	--	0.1 U	--	--	--	--	--	--	--	--	--	--	--
Percent retained 19000 micron sieve	--	0.1 U	--	--	--	--	--	--	--	--	--	--	--
Percent retained 25K micron sieve	--	0.1 U	--	--	--	--	--	--	--	--	--	--	--
Percent retained 37.5K micron sieve	--	0.1 U	--	--	--	--	--	--	--	--	--	--	--
Percent retained 50K micron sieve	--	0.1 U	--	--	--	--	--	--	--	--	--	--	--
Percent retained 75K micron sieve	--	0.1 U	--	--	--	--	--	--	--	--	--	--	--

Table 21a
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-103A-HSA	8-103A-HSA	8-103A-HSA	8-103A-HSA	8-103A-HSA	8-103A-HSA	8-103A-HSA	8-103A-HSA	8-103A-HSA	8-103A-HSA	8-103A-HSA	8-103A-HSA	8-103A-HSA
Sample ID:	8-103A-HSA-S-2	8-103A-HSA-S-3	8-103A-HSA-S-5	8-103A-HSA-S-6	8-103A-HSA-S-7	8-103A-HSA-S-8	8-103A-HSA-S-9	8-103A-HSA-S-10	8-103A-HSA-S-11	8-103A-HSA-S-12	8-103A-HSA-S-13	8-103A-HSA S14	8-103A-HSA S16
Sample Date:	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08	7/21/08
In-Situ Depth[1] (ft):	2.4 - 4 ft	5 - 6.5 ft	10 - 11.5 ft	15 - 16.5 ft	20 - 21.5 ft	25 - 26.5 ft	30 - 31.5 ft	35 - 36.5 ft	40 - 41.5 ft	45 - 46.5 ft	50 - 51.5 ft	55 - 56.5 ft	62 - 63.5 ft
Physical Parameters													
Atterberg Classification	--	--	Non-Plastic	--	--	--	--	Non-Plastic	--	Non-Plastic	--	CH	--
Specific gravity (su)	--	--	2.78	--	--	--	--	2.71	--	2.7	--	2.77	--
Liquid Limit (pct)	--	--	--	--	--	--	--	--	--	--	--	50.5	--
Plastic Limit (pct)	--	--	--	--	--	--	--	--	--	--	--	19.7	--
Plasticity Index (pct)	--	--	--	--	--	--	--	--	--	--	--	30.9	--
Moisture (water) Content (pct)	1.84	2.21	3.14	3.77	8.12	19.18	38.02	19.59	22.11	23.13	21.69	26.78	32.96
Grain Size (pct)													
Gravel	--	14	--	1.5	--	22.2	--	--	--	--	--	--	--
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	22	--	8.7	--	4.6	--	--	1.3	--	--	--	--
Sand, Fine	--	25.9	--	50	--	36.5	--	--	54	--	--	--	--
Sand, Medium	--	33	--	36.2	--	21.7	--	--	25.2	--	--	--	--
Silt, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Silt, Fine	--	--	--	--	--	--	--	--	--	--	--	--	--
Silt, Medium	--	--	--	--	--	--	--	--	--	--	--	--	--
Silt, Very Coarse	--	5.1	--	3.5	--	15	--	--	19.5	--	--	--	--
Silt, Very Fine	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Gravel	--	14	--	1.5	--	22.2	--	--	--	--	--	--	--
Total Sand	--	80.9	--	94.9	--	62.8	--	--	80.5	--	--	--	--
Total Silt	--	5.1	--	3.5	--	15	--	--	19.5	--	--	--	--
Total Clay	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Fines (Silt + Clay)	--	5.1	--	3.5	--	15	--	--	19.5	--	--	--	--
Total Grain Size	--	100	--	99.9	--	100	--	--	100	--	--	--	--
Percent passing < 1.3 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 1.3 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 3.2 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 7 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 9 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 13 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 22 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 32 micron sieve	--	5.1	--	3.5	--	15	--	--	19.5	--	--	--	--
Percent retained 75 micron sieve	--	4.5	--	7.5	--	14.8	--	--	19.4	--	--	--	--
Percent retained 150 micron sieve	--	7.6	--	17.2	--	8.7	--	--	11.4	--	--	--	--
Percent retained 250 micron sieve	--	13.8	--	25.3	--	13	--	--	23.2	--	--	--	--
Percent retained 425 micron sieve	--	15.8	--	21.3	--	13.3	--	--	17.9	--	--	--	--
Percent retained 850 micron sieve	--	17.2	--	14.9	--	8.4	--	--	7.3	--	--	--	--
Percent retained 2000 micron sieve	--	22	--	8.7	--	4.6	--	--	1.3	--	--	--	--
Percent retained 4750 micron sieve	--	14	--	1.5	--	2.7	--	--	0.1 U	--	--	--	--
Percent retained 9500 micron sieve	--	0.1 U	--	0.1 U	--	1.5	--	--	0.1 U	--	--	--	--
Percent retained 12500 micron sieve	--	0.1 U	--	0.1 U	--	7.5	--	--	0.1 U	--	--	--	--
Percent retained 19000 micron sieve	--	0.1 U	--	0.1 U	--	10.5	--	--	0.1 U	--	--	--	--
Percent retained 25K micron sieve	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--	--
Percent retained 37.5K micron sieve	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--	--
Percent retained 50K micron sieve	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--	--
Percent retained 75K micron sieve	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--	--

Table 21a
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-103A-HSA	8-103A-HSA	8-104A-HSA	8-104A-HSA	8-104A-HSA	8-104A-HSA	8-104A-HSA	8-104A-HSA	8-104A-HSA	8-104A-HSA	8-104A-HSA	8-104A-HSA	8-104A-HSA	8-104A-HSA
Sample ID:	8-103A-HSA S17	8-103A-HSA S18	8-104A-HSA-S1	8-104A-HSA-S2	8-104A-HSA-S3	8-104A-HSA-S5	8-104A-HSA-S6	8-104A-HSA-S7	8-104A-HSA-S8	8-104A-HSA-S9	8-104A-HSA-S10	8-104A-HSA-S11	8-104A-HSA-S12	8-104A-HSA-S13
Sample Date:	7/21/08	7/21/08	7/31/08	7/31/08	7/31/08	7/31/08	7/31/08	7/31/08	7/31/08	7/31/08	7/31/08	7/31/08	7/31/08	7/31/08
In-Situ Depth[1] (ft):	65 - 66.5 ft	70 - 71.5 ft	0 - 1.5 ft	2.5 - 4 ft	5 - 6.5 ft	10 - 11.5 ft	15 - 16.5 ft	20 - 21.5 ft	25 - 26.5 ft	30 - 31.5 ft	35 - 36.5 ft	40 - 41.5 ft	45 - 46.5 ft	50 - 51.5 ft
Physical Parameters														
Atterberg Classification	CH	--	--	--	--	--	--	--	--	--	Non-Plastic	--	Non-Plastic	--
Specific gravity (su)	2.8	--	--	--	--	--	--	--	--	--	2.71	--	2.75	--
Liquid Limit (pct)	51.6	--	--	--	--	--	--	--	--	--	--	--	--	--
Plastic Limit (pct)	20.8	--	--	--	--	--	--	--	--	--	--	--	--	--
Plasticity Index (pct)	30.7	--	--	--	--	--	--	--	--	--	--	--	--	--
Moisture (water) Content (pct)	34.93	30.19	1.95	2.73	2.68	3.64	4.85	7.32	27.47	18.26	20.43	23.62	20.11	25.52
Grain Size (pct)														
Gravel	--	--	--	--	14.1	--	2.8	--	--	7.3	--	0.7	--	--
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	0.2	--	--	16.5	--	15.3	--	--	10.2	--	1.9	--	--
Sand, Fine	--	4.6	--	--	31.5	--	31.2	--	--	39.4	--	53.5	--	--
Sand, Medium	--	0.6	--	--	32.7	--	44.8	--	--	37.1	--	26.4	--	--
Silt, Coarse	--	2.9	--	--	--	--	--	--	--	--	--	1.1	--	--
Silt, Fine	--	10.3	--	--	--	--	--	--	--	--	--	1.2	--	--
Silt, Medium	--	2.3	--	--	--	--	--	--	--	--	--	0.6	--	--
Silt, Very Coarse	--	25.5	--	--	5.3	--	5.8	--	--	6	--	8.3	--	--
Silt, Very Fine	--	10.8	--	--	--	--	--	--	--	--	--	--	--	--
Clay	--	42.8	--	--	--	--	--	--	--	--	--	6.3	--	--
Total Gravel	--	--	--	--	14.1	--	2.8	--	--	7.3	--	0.7	--	--
Total Sand	--	5.4	--	--	80.7	--	91.3	--	--	86.7	--	81.8	--	--
Total Silt	--	51.8	--	--	5.3	--	5.8	--	--	6	--	11.2	--	--
Total Clay	--	42.8	--	--	--	--	--	--	--	--	--	6.3	--	--
Total Fines (Silt + Clay)	--	94.6	--	--	5.3	--	5.8	--	--	6	--	17.5	--	--
Total Grain Size	--	100	--	--	100.1	--	99.9	--	--	100	--	100	--	--
Percent passing < 1.3 micron sieve	--	32	--	--	--	--	--	--	--	--	--	4.6	--	--
Percent retained 1.3 micron sieve	--	10.8	--	--	--	--	--	--	--	--	--	1.7	--	--
Percent retained 3.2 micron sieve	--	10.8	--	--	--	--	--	--	--	--	--	0.1 U	--	--
Percent retained 7 micron sieve	--	5.7	--	--	--	--	--	--	--	--	--	0.6	--	--
Percent retained 9 micron sieve	--	4.6	--	--	--	--	--	--	--	--	--	0.6	--	--
Percent retained 13 micron sieve	--	2.3	--	--	--	--	--	--	--	--	--	0.6	--	--
Percent retained 22 micron sieve	--	2.9	--	--	--	--	--	--	--	--	--	1.1	--	--
Percent retained 32 micron sieve	--	25.5	--	--	5.3	--	5.8	--	--	6	--	8.3	--	--
Percent retained 75 micron sieve	--	3.2	--	--	5.5	--	4.3	--	--	10.4	--	15.7	--	--
Percent retained 150 micron sieve	--	0.9	--	--	10	--	8.9	--	--	11.8	--	15.8	--	--
Percent retained 250 micron sieve	--	0.5	--	--	16	--	18	--	--	17.2	--	22	--	--
Percent retained 425 micron sieve	--	0.3	--	--	17.2	--	22.5	--	--	20.1	--	18	--	--
Percent retained 850 micron sieve	--	0.3	--	--	15.5	--	22.3	--	--	17	--	8.4	--	--
Percent retained 2000 micron sieve	--	0.2	--	--	16.5	--	15.3	--	--	10.2	--	1.9	--	--
Percent retained 4750 micron sieve	--	0.1 U	--	--	13.1	--	2.8	--	--	7.3	--	0.7	--	--
Percent retained 9500 micron sieve	--	0.1 U	--	--	1	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--
Percent retained 12500 micron sieve	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--
Percent retained 19000 micron sieve	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--
Percent retained 25K micron sieve	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--
Percent retained 37.5K micron sieve	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--
Percent retained 50K micron sieve	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--
Percent retained 75K micron sieve	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--

Table 21a
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-104B-HSA	8-104B-HSA	8-104B-HSA	8-104B-HSA	8-104B-HSA	8-104B-HSA	8-104B-HSA	8-104B-HSA	8-104B-HSA	8-105A-HSA	8-105A-HSA	8-105A-HSA	8-105A-HSA	8-105A-HSA
Sample ID:	8-104B-HSA-0-1	8-104B-HSA-S5	8-104B-HSA-S6	8-104B-HSA-S9	8-104B-HSA-S10	8-104B-HSA-S11	8-104B-HSA-S12	8-104B-HSA-S13	8-104B-HSA-S15	8-105A-HSA-S1	8-105A-HSA-S2	8-105A-HSA-S3	8-105A-HSA-S5	8-105A-HSA-S7
Sample Date:	7/31/08	7/31/08	7/31/08	7/31/08	7/31/08	7/31/08	7/31/08	7/31/08	7/31/08	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08
In-Situ Depth[1] (ft):	0 - 1 ft	10 - 11.5 ft	16 - 17.5 ft	31 - 32.5 ft	36 - 37.5 ft	41 - 42.5 ft	46 - 47.5 ft	51 - 52.5 ft	58 - 59.5 ft	0 - 1.5 ft	2.5 - 4 ft	5 - 6.5 ft	10 - 11.5 ft	20 - 21.5 ft
Physical Parameters														
Atterberg Classification	--	--	--	--	Non-Plastic	--	--	--	--	--	--	--	--	--
Specific gravity (su)	--	--	--	--	2.77	--	--	--	--	--	--	--	--	--
Liquid Limit (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Plastic Limit (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Plasticity Index (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Moisture (water) Content (pct)	357.2	17.14	20.74	20.65	25.81	29.56	37.3	31.87	25.8	2.44	1.0	1.68	4.55	4.5
Grain Size (pct)														
Gravel	--	--	0.4	0.3	--	--	--	--	--	--	--	8.5	--	--
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	--	1.6	0.3	--	--	--	--	0.1	--	--	19.1	--	--
Sand, Fine	--	--	63	84.3	--	--	6.6	--	14.3	--	--	34.7	--	--
Sand, Medium	--	--	15.8	2.9	--	--	0.2	--	0.7	--	--	33.7	--	--
Silt, Coarse	--	--	0.7	--	--	--	7.7	--	5.7	--	--	--	--	--
Silt, Fine	--	--	0.7	0.8	--	--	10.8	--	9.8	--	--	--	--	--
Silt, Medium	--	--	0.7	1.5	--	--	9.3	--	8.9	--	--	--	--	--
Silt, Very Coarse	--	--	11.9	7.7	--	--	24.2	--	15.1	--	--	4	--	--
Silt, Very Fine	--	--	0.7	0.8	--	--	9.3	--	9.7	--	--	--	--	--
Clay	--	--	4.4	1.5	--	--	31.7	--	35.6	--	--	--	--	--
Total Gravel	--	--	0.4	0.3	--	--	--	--	--	--	--	8.5	--	--
Total Sand	--	--	80.4	87.5	--	--	6.8	--	15.1	--	--	87.5	--	--
Total Silt	--	--	14.7	10.8	--	--	61.3	--	49.2	--	--	4	--	--
Total Clay	--	--	4.4	1.5	--	--	31.7	--	35.6	--	--	--	--	--
Total Fines (Silt + Clay)	--	--	19.1	12.3	--	--	93	--	84.8	--	--	4	--	--
Total Grain Size	--	--	99.9	100.1	--	--	99.8	--	99.9	--	--	100	--	--
Percent passing < 1.3 micron sieve	--	--	2.9	1.5	--	--	23.2	--	25.9	--	--	--	--	--
Percent retained 1.3 micron sieve	--	--	1.5	0.1 U	--	--	8.5	--	9.7	--	--	--	--	--
Percent retained 3.2 micron sieve	--	--	0.7	0.8	--	--	9.3	--	9.7	--	--	--	--	--
Percent retained 7 micron sieve	--	--	0.7	0.8	--	--	6.2	--	4.9	--	--	--	--	--
Percent retained 9 micron sieve	--	--	0.1 U	0.1 U	--	--	4.6	--	4.9	--	--	--	--	--
Percent retained 13 micron sieve	--	--	0.7	1.5	--	--	9.3	--	8.9	--	--	--	--	--
Percent retained 22 micron sieve	--	--	0.7	0.1 U	--	--	7.7	--	5.7	--	--	--	--	--
Percent retained 32 micron sieve	--	--	11.9	7.7	--	--	24.2	--	15.1	--	--	4	--	--
Percent retained 75 micron sieve	--	--	18.8	42.6	--	--	4.8	--	9.2	--	--	4.6	--	--
Percent retained 150 micron sieve	--	--	19.4	32.8	--	--	1.2	--	3.8	--	--	11.5	--	--
Percent retained 250 micron sieve	--	--	24.8	8.9	--	--	0.6	--	1.3	--	--	18.6	--	--
Percent retained 425 micron sieve	--	--	11.6	2	--	--	0.2	--	0.5	--	--	17.3	--	--
Percent retained 850 micron sieve	--	--	4.2	0.9	--	--	0.1 U	--	0.2	--	--	16.4	--	--
Percent retained 2000 micron sieve	--	--	1.6	0.3	--	--	0.1 U	--	0.1	--	--	19.1	--	--
Percent retained 4750 micron sieve	--	--	0.4	0.3	--	--	0.1 U	--	0.1 U	--	--	8.5	--	--
Percent retained 9500 micron sieve	--	--	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--
Percent retained 12500 micron sieve	--	--	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--
Percent retained 19000 micron sieve	--	--	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--
Percent retained 25K micron sieve	--	--	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--
Percent retained 37.5K micron sieve	--	--	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--
Percent retained 50K micron sieve	--	--	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--
Percent retained 75K micron sieve	--	--	0.1 U	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--

Table 21a
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-105A-HSA	8-105A-HSA	8-105A-HSA	8-105A-HSA	8-105A-HSA	8-105A-HSA	8-105A-HSA	8-105A-HSA	8-105A-HSA	8-105A-HSA	8-105A-HSA	8-105C-HSA	8-105C-HSA
Sample ID:	8-105A-HSA-S8	8-105A-HSA-S9	8-105A-HSA-S10	8-105A-HSA-S11	8-105A-HSA-S12	8-105A-HSA-S13	8-105A-HSA-S14	8-105A-HSA-S15	8-105A-HSA-S16	8-105A-HSA-S17	8-105A-HSA-S18	8-105C-HSA-0-1	8-105C-HSA-S3
Sample Date:	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08
In-Situ Depth[1] (ft):	25 - 26.5 ft	30 - 31.5 ft	35 - 36.5 ft	40 - 41.5 ft	45 - 46.5 ft	50 - 51.5 ft	55 - 56.5 ft	60 - 61.5 ft	65 - 66.5 ft	70 - 71.5 ft	75 - 78.5 ft	0 - 1 ft	5 - 6.5 ft
Physical Parameters													
Atterberg Classification	--	--	Non-Plastic	--	Non-Plastic	--	Non-Plastic	--	--	CL	--	--	--
Specific gravity (su)	--	--	2.76	--	2.75	--	2.73	--	--	2.73	--	--	--
Liquid Limit (pct)	--	--	--	--	--	--	--	--	--	33.4	--	--	--
Plastic Limit (pct)	--	--	--	--	--	--	--	--	--	17.7	--	--	--
Plasticity Index (pct)	--	--	--	--	--	--	--	--	--	15.7	--	--	--
Moisture (water) Content (pct)	8.5	21.78	22.69	19.35	21.78	24.55	23.05	20.4	33.62	23.41	35.83	250	24.41
Grain Size (pct)													
Gravel	--	5.2	--	1.1	--	--	--	0.8	--	--	--	--	0.4
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	3.9	--	1.9	--	--	--	1	--	--	--	--	3
Sand, Fine	--	64.7	--	64.1	--	--	--	84.2	--	--	11.6	--	67
Sand, Medium	--	20.4	--	18.2	--	--	--	4	--	--	0.6	--	19
Silt, Coarse	--	--	--	--	--	--	--	--	--	--	4	--	--
Silt, Fine	--	--	--	--	--	--	--	--	--	--	12	--	--
Silt, Medium	--	--	--	--	--	--	--	--	--	--	7.2	--	--
Silt, Very Coarse	--	5.8	--	14.7	--	--	--	10	--	--	14	--	10.6
Silt, Very Fine	--	--	--	--	--	--	--	--	--	--	8.8	--	--
Clay	--	--	--	--	--	--	--	--	--	--	41.6	--	--
Total Gravel	--	5.2	--	1.1	--	--	--	0.8	--	--	--	--	0.4
Total Sand	--	89	--	84.2	--	--	--	89.2	--	--	12.2	--	89
Total Silt	--	5.8	--	14.7	--	--	--	10	--	--	46	--	10.6
Total Clay	--	--	--	--	--	--	--	--	--	--	41.6	--	--
Total Fines (Silt + Clay)	--	5.8	--	14.7	--	--	--	10	--	--	87.6	--	10.6
Total Grain Size	--	100	--	100	--	--	--	100	--	--	99.8	--	100
Percent passing < 1.3 micron sieve	--	--	--	--	--	--	--	--	--	--	32	--	--
Percent retained 1.3 micron sieve	--	--	--	--	--	--	--	--	--	--	9.6	--	--
Percent retained 3.2 micron sieve	--	--	--	--	--	--	--	--	--	--	8.8	--	--
Percent retained 7 micron sieve	--	--	--	--	--	--	--	--	--	--	5.6	--	--
Percent retained 9 micron sieve	--	--	--	--	--	--	--	--	--	--	6.4	--	--
Percent retained 13 micron sieve	--	--	--	--	--	--	--	--	--	--	7.2	--	--
Percent retained 22 micron sieve	--	--	--	--	--	--	--	--	--	--	4	--	--
Percent retained 32 micron sieve	--	5.8	--	14.7	--	--	--	10	--	--	14	--	10.6
Percent retained 75 micron sieve	--	11.2	--	16	--	--	--	31.8	--	--	7.6	--	16.1
Percent retained 150 micron sieve	--	24.7	--	22.7	--	--	--	43.4	--	--	2.9	--	22.1
Percent retained 250 micron sieve	--	28.8	--	25.4	--	--	--	9	--	--	1.1	--	28.8
Percent retained 425 micron sieve	--	14.3	--	13.5	--	--	--	2.6	--	--	0.4	--	13.4
Percent retained 850 micron sieve	--	6.1	--	4.7	--	--	--	1.4	--	--	0.2	--	5.6
Percent retained 2000 micron sieve	--	3.9	--	1.9	--	--	--	1	--	--	0.1 U	--	3
Percent retained 4750 micron sieve	--	1.9	--	0.8	--	--	--	0.8	--	--	0.1 U	--	0.2
Percent retained 9500 micron sieve	--	0.3	--	0.3	--	--	--	0.1 U	--	--	0.1 U	--	0.2
Percent retained 12500 micron sieve	--	3	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--	0.1 U
Percent retained 19000 micron sieve	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--	0.1 U
Percent retained 25K micron sieve	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--	0.1 U
Percent retained 37.5K micron sieve	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--	0.1 U
Percent retained 50K micron sieve	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--	0.1 U
Percent retained 75K micron sieve	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--	0.1 U

Table 21a
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-105C-HSA	8-105C-HSA	8-105C-HSA	8-105C-HSA	8-105C-HSA	8-105C-HSA	8-105C-HSA	8-105C-HSA	8-105C-HSA	8-105C-HSA	8-106A-HSA	8-106A-HSA	8-106A-HSA
Sample ID:	8-105C-HSA-S5	8-105C-HSA-S6	8-105C-HSA-S7	8-105C-HSA-S8	8-105C-HSA-S9	8-105C-HSA-S10	8-105C-HSA-S11	8-105C-HSA-S12	8-105C-HSA-S13	8-105C-HSA-S15	8-106A-HSA-S1	8-106A-HSA-S2	8-106A-HSA-S3
Sample Date:	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08	7/29/08	7/29/08	7/29/08
In-Situ Depth[1] (ft):	9 - 10.5 ft	11.5 - 13 ft	14 - 15.5 ft	19 - 20.5 ft	24 - 25.5 ft	29 - 30.5 ft	34 - 35.5 ft	39 - 40.5 ft	44 - 45.5 ft	51 - 52.5 ft	0 - 1.5 ft	2.5 - 4 ft	5 - 6.5 ft
Physical Parameters													
Atterberg Classification	**Non-Plastic**	--	--	**Non-Plastic**	--	--	--	--	--	--	--	--	--
Specific gravity (su)	**2.72**	--	--	**2.73**	--	--	--	--	--	--	--	--	--
Liquid Limit (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--
Plastic Limit (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--
Plasticity Index (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--
Moisture (water) Content (pct)	**28.49**	**26.1**	**19.13**	**20.93**	**18.64**	**21.21**	**19.22**	**31.29**	**37.97**	**29.6**	**3.01**	**2.87**	**3.31**
Grain Size (pct)													
Gravel	--	--	**1.4**	--	--	**0.2**	--	--	--	--	--	--	**14.3**
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	--	**2.1**	--	--	**1.3**	--	--	--	**0.3**	--	--	**26.2**
Sand, Fine	--	--	**65.6**	--	--	**85.5**	--	**5**	--	**4.7**	--	--	**18.9**
Sand, Medium	--	--	**15.9**	--	--	**6.1**	--	**0.6**	--	**0.9**	--	--	**32.5**
Silt, Coarse	--	--	--	--	--	--	--	**1.5**	--	**7**	--	--	--
Silt, Fine	--	--	--	--	--	--	--	**8.7**	--	**11**	--	--	--
Silt, Medium	--	--	--	--	--	--	--	**2.2**	--	**9.4**	--	--	--
Silt, Very Coarse	--	--	**14.8**	--	--	**6.9**	--	**2.7**	--	**2.5**	--	--	**8.2**
Silt, Very Fine	--	--	--	--	--	--	--	**8.7**	--	**12.5**	--	--	--
Clay	--	--	--	--	--	--	--	**70.6**	--	**51.6**	--	--	--
Total Gravel	--	--	**1.4**	--	--	**0.2**	--	--	--	--	--	--	**14.3**
Total Sand	--	--	**83.6**	--	--	**92.9**	--	**5.6**	--	**5.9**	--	--	**77.6**
Total Silt	--	--	**14.8**	--	--	**6.9**	--	**23.8**	--	**42.4**	--	--	**8.2**
Total Clay	--	--	--	--	--	--	--	**70.6**	--	**51.6**	--	--	--
Total Fines (Silt + Clay)	--	--	**14.8**	--	--	**6.9**	--	**94.4**	--	**94**	--	--	**8.2**
Total Grain Size	--	--	**99.8**	--	--	**100**	--	**100**	--	**99.9**	--	--	**100.1**
Percent passing < 1.3 micron sieve	--	--	--	--	--	--	--	**61.1**	--	**39.9**	--	--	--
Percent retained 1.3 micron sieve	--	--	--	--	--	--	--	**9.5**	--	**11.7**	--	--	--
Percent retained 3.2 micron sieve	--	--	--	--	--	--	--	**8.7**	--	**12.5**	--	--	--
Percent retained 7 micron sieve	--	--	--	--	--	--	--	**5.8**	--	**4.7**	--	--	--
Percent retained 9 micron sieve	--	--	--	--	--	--	--	**2.9**	--	**6.3**	--	--	--
Percent retained 13 micron sieve	--	--	--	--	--	--	--	**2.2**	--	**9.4**	--	--	--
Percent retained 22 micron sieve	--	--	--	--	--	--	--	**1.5**	--	**7**	--	--	--
Percent retained 32 micron sieve	--	--	**14.8**	--	--	**6.9**	--	**2.7**	--	**2.5**	--	--	**8.2**
Percent retained 75 micron sieve	--	--	**17.2**	--	--	**45.6**	--	**3.4**	--	**2.3**	--	--	**3.5**
Percent retained 150 micron sieve	--	--	**23.5**	--	--	**28.8**	--	**0.9**	--	**1.6**	--	--	**5.3**
Percent retained 250 micron sieve	--	--	**24.9**	--	--	**11.1**	--	**0.7**	--	**0.8**	--	--	**10.1**
Percent retained 425 micron sieve	--	--	**12.1**	--	--	**4.3**	--	**0.5**	--	**0.5**	--	--	**13.5**
Percent retained 850 micron sieve	--	--	**3.8**	--	--	**1.8**	--	**0.1**	--	**0.4**	--	--	**19**
Percent retained 2000 micron sieve	--	--	**2.1**	--	--	**1.3**	--	0.1 U	--	**0.3**	--	--	**26.2**
Percent retained 4750 micron sieve	--	--	**1**	--	--	**0.2**	--	0.1 U	--	0.1 U	--	--	**6**
Percent retained 9500 micron sieve	--	--	**0.4**	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--	**8.3**
Percent retained 12500 micron sieve	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--	--
Percent retained 19000 micron sieve	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--	--
Percent retained 25K micron sieve	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--	--
Percent retained 37.5K micron sieve	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--	--
Percent retained 50K micron sieve	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--	--
Percent retained 75K micron sieve	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--	--

Table 21a
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-106A-HSA	8-106A-HSA	8-106A-HSA	8-106A-HSA	8-106A-HSA	8-106A-HSA	8-106A-HSA	8-106A-HSA	8-106A-HSA	8-106A-HSA	8-106A-HSA	8-106A-HSA	8-106A-HSA
Sample ID:	8-106A-HSA-S5	8-106A-HSA-S6	8-106A-HSA-S8	8-106A-HSA-S9	8-106A-HSA-S10	8-106A-HSA-S11	8-106A-HSA-S12	8-106A-HSA-S13	8-106A-HSA-S14	8-106A-HSA-S15	8-106A-HSA-S16	8-106A-HSA-S17	8-106A-HSA-S18
Sample Date:	7/29/08	7/29/08	7/29/08	7/29/08	7/29/08	7/29/08	7/29/08	7/29/08	7/30/08	7/30/08	7/30/08	7/30/08	7/30/08
In-Situ Depth[1] (ft):	10 - 11.5 ft	15 - 16.5 ft	25 - 26.5 ft	30 - 31.5 ft	35 - 36.5 ft	40 - 41.5 ft	45 - 46.5 ft	50 - 51.5 ft	55 - 56.5 ft	60 - 61.5 ft	65 - 66.5 ft	70 - 71.5 ft	75 - 78.5 ft
Physical Parameters													
Atterberg Classification	--	--	--	--	**Non-Plastic**	--	**Non-Plastic**	--	**Non-Plastic**	--	--	**CL**	--
Specific gravity (su)	--	--	--	--	**2.73**	--	**2.6**	--	**2.72**	--	--	**2.76**	--
Liquid Limit (pct)	--	--	--	--	--	--	--	--	--	--	--	**37.6**	--
Plastic Limit (pct)	--	--	--	--	--	--	--	--	--	--	--	**19.6**	--
Plasticity Index (pct)	--	--	--	--	--	--	--	--	--	--	--	**18**	--
Moisture (water) Content (pct)	**4.16**	**3.8**	**9.25**	**68.96**	**29.67**	**38.99**	**22.25**	**21.22**	**21.19**	**28.93**	**17.75**	**23.59**	**27.87**
Grain Size (pct)													
Gravel	--	**11.1**	--	**15.3**	--	**0.1**	--	--	--	**1.3**	--	--	--
Gravel, Coarse	--	--	--	**20.7**	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	**18.6**	--	**7.4**	--	**0.3**	--	--	--	**0.4**	--	--	**0.1**
Sand, Fine	--	**27.9**	--	**24.8**	--	**48.1**	--	--	--	**85.6**	--	--	**10**
Sand, Medium	--	**38**	--	**14.4**	--	**1.8**	--	--	--	**2**	--	--	**0.8**
Silt, Coarse	--	--	--	**0.9**	--	**6.2**	--	--	--	**0.8**	--	--	**4.7**
Silt, Fine	--	--	--	**2.7**	--	**5.4**	--	--	--	**1.6**	--	--	**10.2**
Silt, Medium	--	--	--	**2.7**	--	**3.9**	--	--	--	--	--	--	**7.8**
Silt, Very Coarse	--	**4.3**	--	**4.3**	--	**13.1**	--	--	--	**6.8**	--	--	**14**
Silt, Very Fine	--	--	--	**2.7**	--	**6.2**	--	--	--	--	--	--	**9.4**
Clay	--	--	--	**4.1**	--	**14.7**	--	--	--	**1.6**	--	--	**43.1**
Total Gravel	--	**11.1**	--	**36**	--	**0.1**	--	--	--	**1.3**	--	--	--
Total Sand	--	**84.5**	--	**46.6**	--	**50.2**	--	--	--	**88**	--	--	**10.9**
Total Silt	--	**4.3**	--	**13.3**	--	**34.8**	--	--	--	**9.2**	--	--	**46.1**
Total Clay	--	--	--	**4.1**	--	**14.7**	--	--	--	**1.6**	--	--	**43.1**
Total Fines (Silt + Clay)	--	**4.3**	--	**17.4**	--	**49.5**	--	--	--	**10.8**	--	--	**89.2**
Total Grain Size	--	**99.9**	--	**100**	--	**99.8**	--	--	--	**100.1**	--	--	**100.1**
Percent passing < 1.3 micron sieve	--	--	--	**3.2**	--	**13.2**	--	--	--	**1.6**	--	--	**32.1**
Percent retained 1.3 micron sieve	--	--	--	**0.9**	--	**1.5**	--	--	--	0.1 U	--	--	**11**
Percent retained 3.2 micron sieve	--	--	--	**2.7**	--	**6.2**	--	--	--	0.1 U	--	--	**9.4**
Percent retained 7 micron sieve	--	--	--	**1.8**	--	**1.5**	--	--	--	**0.8**	--	--	**5.5**
Percent retained 9 micron sieve	--	--	--	**0.9**	--	**3.9**	--	--	--	**0.8**	--	--	**4.7**
Percent retained 13 micron sieve	--	--	--	**2.7**	--	**3.9**	--	--	--	0.1 U	--	--	**7.8**
Percent retained 22 micron sieve	--	--	--	**0.9**	--	**6.2**	--	--	--	**0.8**	--	--	**4.7**
Percent retained 32 micron sieve	--	**4.3**	--	**4.3**	--	**13.1**	--	--	--	**6.8**	--	--	**14**
Percent retained 75 micron sieve	--	**4.4**	--	**7.9**	--	**28.6**	--	--	--	**29.9**	--	--	**6.3**
Percent retained 150 micron sieve	--	**8.6**	--	**7.4**	--	**14.7**	--	--	--	**45.5**	--	--	**2.5**
Percent retained 250 micron sieve	--	**14.9**	--	**9.5**	--	**4.8**	--	--	--	**10.2**	--	--	**1.2**
Percent retained 425 micron sieve	--	**18.5**	--	**8**	--	**1.1**	--	--	--	**1.6**	--	--	**0.6**
Percent retained 850 micron sieve	--	**19.5**	--	**6.4**	--	**0.7**	--	--	--	**0.4**	--	--	**0.2**
Percent retained 2000 micron sieve	--	**18.6**	--	**7.4**	--	**0.3**	--	--	--	**0.4**	--	--	**0.1**
Percent retained 4750 micron sieve	--	**11.1**	--	**4**	--	**0.1**	--	--	--	**0.3**	--	--	0.1 U
Percent retained 9500 micron sieve	--	--	--	**5.7**	--	--	--	--	--	0.1 U	--	--	0.1 U
Percent retained 12500 micron sieve	--	--	--	**4.8**	--	--	--	--	--	**1**	--	--	0.1 U
Percent retained 19000 micron sieve	--	--	--	**0.8**	--	--	--	--	--	0.1 U	--	--	0.1 U
Percent retained 25K micron sieve	--	--	--	**20.7**	--	--	--	--	--	0.1 U	--	--	0.1 U
Percent retained 37.5K micron sieve	--	--	--	--	--	--	--	--	--	0.1 U	--	--	0.1 U
Percent retained 50K micron sieve	--	--	--	--	--	--	--	--	--	0.1 U	--	--	0.1 U
Percent retained 75K micron sieve	--	--	--	--	--	--	--	--	--	0.1 U	--	--	0.1 U

Notes:
1. Sample depth is reported as below mudline.
Bold = Detected result
U = Compound analyzed, but not detected above detection limit
pct = percent
su = standard units
-- Sample was not submitted for chemical analysis.

Table 21b
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-107A-HSA	8-107A-HSA	8-107A-HSA	8-107A-HSA	8-107A-HSA	8-107A-HSA	8-107A-HSA	8-107A-HSA	8-107A-HSA	8-107A-HSA	8-107A-HSA	8-107A-HSA
Sample ID:	8-107A-HSA-S1	8-107A-HSA-S2	8-107A-HSA-S3	8-107A-HSA-S4	8-107A-HSA-S5	8-107A-HSA-S6	8-107A-HSA-S7	8-107A-HSA-S8	8-107A-HSA-S10	8-107A-HSA-S11	8-107A-HSA-S12	8-107A-HSA-S13
Sample Date:	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08
In-Situ Depth[1] (ft):	0 - 1.5 ft	2.5 - 4 ft	5 - 6.5 ft	7.5 - 9 ft	10 - 11.5 ft	15 - 16.5 ft	20 - 21.5 ft	25 - 26.5 ft	35 - 36.5 ft	40 - 41.5 ft	45 - 46.5 ft	50 - 51.5 ft
Physical Parameters												
Atterberg Classification	--	--	--	Non-Plastic	--	--	--	--	Non-Plastic	--	CL	--
Specific gravity (su)	--	--	--	2.78	--	--	--	--	2.68	--	2.72	--
Liquid Limit (pct)	--	--	--	--	--	--	--	--	--	--	34.4	--
Plastic Limit (pct)	--	--	--	--	--	--	--	--	--	--	23.4	--
Plasticity Index (pct)	--	--	--	--	--	--	--	--	--	--	11.1	--
Moisture (water) Content (pct)	2.02	2.26	2.95	3.43	4.41	5.17	26.87	18.54	30.9	31.57	39.28	39.46
Grain Size (pct)												
Gravel	--	--	0.7	--	--	4.4	--	43.1	--	1.8	--	--
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	--	15.7	--	--	12.8	--	8.9	--	0.7	--	--
Sand, Fine	--	--	32.4	--	--	41.8	--	25.4	--	54.1	--	--
Sand, Medium	--	--	47.6	--	--	35.8	--	18.2	--	6.1	--	--
Silt, Coarse	--	--	--	--	--	--	--	--	--	2.9	--	--
Silt, Fine	--	--	--	--	--	--	--	--	--	4	--	--
Silt, Medium	--	--	--	--	--	--	--	--	--	3.5	--	--
Silt, Very Coarse	--	--	3.5	--	--	5.2	--	4.3	--	13.6	--	--
Silt, Very Fine	--	--	--	--	--	--	--	--	--	1.2	--	--
Clay	--	--	--	--	--	--	--	--	--	12.1	--	--
Total Gravel	--	--	0.7	--	--	4.4	--	43.1	--	1.8	--	--
Total Sand	--	--	95.7	--	--	90.4	--	52.5	--	60.9	--	--
Total Silt	--	--	3.5	--	--	5.2	--	4.3	--	25.2	--	--
Total Clay	--	--	--	--	--	--	--	--	--	12.1	--	--
Total Fines (Silt + Clay)	--	--	3.5	--	--	5.2	--	4.3	--	37.3	--	--
Total Grain Size	--	--	99.9	--	--	100	--	99.9	--	100	--	--
Percent passing < 1.3 micron sieve	--	--	--	--	--	--	--	--	--	6.9	--	--
Percent retained 1.3 micron sieve	--	--	--	--	--	--	--	--	--	5.2	--	--
Percent retained 3.2 micron sieve	--	--	--	--	--	--	--	--	--	1.2	--	--
Percent retained 7 micron sieve	--	--	--	--	--	--	--	--	--	1.7	--	--
Percent retained 9 micron sieve	--	--	--	--	--	--	--	--	--	2.3	--	--
Percent retained 13 micron sieve	--	--	--	--	--	--	--	--	--	3.5	--	--
Percent retained 22 micron sieve	--	--	--	--	--	--	--	--	--	2.9	--	--
Percent retained 32 micron sieve	--	--	3.5	--	--	5.2	--	4.3	--	13.6	--	--
Percent retained 75 micron sieve	--	--	3.3	--	--	6.6	--	5.4	--	31.4	--	--
Percent retained 150 micron sieve	--	--	8.5	--	--	13.8	--	9	--	14.6	--	--
Percent retained 250 micron sieve	--	--	20.6	--	--	21.4	--	11	--	8.1	--	--
Percent retained 425 micron sieve	--	--	26.5	--	--	20.1	--	9.8	--	4.5	--	--
Percent retained 850 micron sieve	--	--	21.1	--	--	15.7	--	8.4	--	1.6	--	--
Percent retained 2000 micron sieve	--	--	15.7	--	--	12.8	--	8.9	--	0.7	--	--
Percent retained 4750 micron sieve	--	--	0.7	--	--	4.4	--	9.7	--	0.1	--	--
Percent retained 9500 micron sieve	--	--	0.1 U	--	--	0.1 U	--	8.9	--	0.4	--	--
Percent retained 12500 micron sieve	--	--	0.1 U	--	--	0.1 U	--	20.1	--	1.3	--	--
Percent retained 19000 micron sieve	--	--	0.1 U	--	--	0.1 U	--	4.4	--	0.1 U	--	--
Percent retained 25K micron sieve	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--
Percent retained 37.5K micron sieve	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--
Percent retained 50K micron sieve	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--
Percent retained 75K micron sieve	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--

Table 21b
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-107A-HSA	8-107A-HSA	8-107A-HSA	8-107A-HSA	8-107A-HSA	8-107A-HSA	8-107A-HSA	8-107B-HSA	8-107B-HSA	8-107B-HSA	8-107B-HSA	8-107B-HSA
Sample ID:	8-107A-HSA-S14	8-107A-HSA-S15	8-107A-HSA-S16	8-107A-HSA-S17	8-107A-HSA-S18	8-107A-HSA-S19	8-107A-HSA-S20	8-107B-HSA-0-1	8-107B-HSA-S-6	8-107B-HSA-S-8	8-107B-HSA-S-9	8-107B-HSA-S-10
Sample Date:	7/29/08	7/29/08	7/29/08	7/29/08	7/29/08	7/29/08	7/29/08	7/29/08	7/29/08	7/29/08	7/29/08	7/29/08
In-Situ Depth[1] (ft):	55 - 56.5 ft	60 - 61.5 ft	65 - 66.5 ft	70 - 71.5 ft	75 - 76.5 ft	80 - 81.5 ft	83 - 86.5 ft	0 - 1 ft	12.5 - 14 ft	22.5 - 24 ft	27.5 - 29 ft	32.5 - 34 ft
Physical Parameters												
Atterberg Classification	Non-Plastic	--	--	CL	--	--	CL	Non-Plastic	--	CL	--	Non-Plastic
Specific gravity (su)	2.72	--	--	2.8	--	--	--	--	--	2.68	--	2.7
Liquid Limit (pct)	--	--	--	32.7	--	--	36.4	--	--	45.4	--	--
Plastic Limit (pct)	--	--	--	17	--	--	15.3	--	--	26	--	--
Plasticity Index (pct)	--	--	--	15.7	--	--	21.2	--	--	19.4	--	--
Moisture (water) Content (pct)	25.68	22.17	28.01	28.57	22.73	25.29	22.83	74.02	26.92	38.73	38	24.68
Grain Size (pct)												
Gravel	--	0.2	--	--	1.1	--	3.7	--	2.6	--	1.7	--
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	0.6	--	--	1.3	--	0.8	--	2.8	--	0.6	--
Sand, Fine	--	64.2	--	--	10	--	15	--	63.7	--	23.9	--
Sand, Medium	--	3	--	--	2.3	--	2.5	--	21.3	--	1.3	--
Silt, Coarse	--	--	--	--	4.6	--	5.2	--	--	--	6.1	--
Silt, Fine	--	--	--	--	11.4	--	10.5	--	--	--	7.6	--
Silt, Medium	--	--	--	--	8.4	--	6	--	--	--	7.6	--
Silt, Very Coarse	--	32	--	--	10.2	--	17.3	--	9.4	--	26.8	--
Silt, Very Fine	--	--	--	--	10.6	--	8.9	--	--	--	6.1	--
Clay	--	--	--	--	40.3	--	29.9	--	--	--	18.3	--
Total Gravel	--	0.2	--	--	1.1	--	3.7	--	2.6	--	1.7	--
Total Sand	--	67.8	--	--	13.6	--	18.3	--	87.8	--	25.8	--
Total Silt	--	32	--	--	45.2	--	47.9	--	9.4	--	54.2	--
Total Clay	--	--	--	--	40.3	--	29.9	--	--	--	18.3	--
Total Fines (Silt + Clay)	--	32	--	--	85.5	--	77.8	--	9.4	--	72.5	--
Total Grain Size	--	100	--	--	100.2	--	99.8	--	99.8	--	100	--
Percent passing < 1.3 micron sieve	--	--	--	--	30.4	--	22.4	--	--	--	16	--
Percent retained 1.3 micron sieve	--	--	--	--	9.9	--	7.5	--	--	--	2.3	--
Percent retained 3.2 micron sieve	--	--	--	--	10.6	--	8.9	--	--	--	6.1	--
Percent retained 7 micron sieve	--	--	--	--	6.1	--	4.5	--	--	--	3	--
Percent retained 9 micron sieve	--	--	--	--	5.3	--	6	--	--	--	4.6	--
Percent retained 13 micron sieve	--	--	--	--	8.4	--	6	--	--	--	7.6	--
Percent retained 22 micron sieve	--	--	--	--	4.6	--	5.2	--	--	--	6.1	--
Percent retained 32 micron sieve	--	32	--	--	10.2	--	17.3	--	9.4	--	26.8	--
Percent retained 75 micron sieve	--	33.8	--	--	5.1	--	9.5	--	10.5	--	18	--
Percent retained 150 micron sieve	--	22.5	--	--	2.7	--	3.4	--	23.4	--	4.5	--
Percent retained 250 micron sieve	--	7.9	--	--	2.2	--	2.1	--	29.8	--	1.4	--
Percent retained 425 micron sieve	--	1.8	--	--	1.3	--	1.4	--	15.2	--	0.7	--
Percent retained 850 micron sieve	--	1.2	--	--	1	--	1.1	--	6.1	--	0.6	--
Percent retained 2000 micron sieve	--	0.6	--	--	1.3	--	0.8	--	2.8	--	0.6	--
Percent retained 4750 micron sieve	--	0.2	--	--	1.1	--	0.3	--	2.6	--	0.4	--
Percent retained 9500 micron sieve	--	--	--	--	--	--	3.4	--	--	--	1.3	--
Percent retained 12500 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 19000 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 25K micron sieve	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 37.5K micron sieve	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 50K micron sieve	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 75K micron sieve	--	--	--	--	--	--	--	--	--	--	--	--

Table 21b
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-107B-HSA	8-107B-HSA	8-107B-HSA	8-107B-HSA	8-107B-HSA	8-107B-HSA	8-108A-HSA	8-108A-HSA	8-108A-HSA	8-108A-HSA	8-108A-HSA	8-108A-HSA
Sample ID:	8-107B-HSA-S-11	8-107B-HSA-S-12	8-107B-HSA-S-13	8-107B-HSA-S-14	8-107B-HSA-S-15	8-107B-HSA-S-17	8-108A-HSA-S1	8-108A-HSA-S2	8-108A-HSA-S3	8-108A-HSA-S4	8-108A-HSA-S5	8-108A-HSA-S6
Sample Date:	7/29/08	7/29/08	7/29/08	7/29/08	7/29/08	7/29/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08
In-Situ Depth[1] (ft):	37.5 - 39 ft	42.5 - 44 ft	47.5 - 49 ft	52.5 - 54 ft	57.5 - 59 ft	69.5 - 71 ft	0 - 1.5 ft	2.5 - 4 ft	5 - 6.5 ft	7.5 - 9 ft	10 - 11.5 ft	15 - 16.5 ft
Physical Parameters												
Atterberg Classification	--	--	CL	--	CL	CL	--	--	--	Non-Plastic	--	--
Specific gravity (su)	--	--	2.74	--	2.78	2.8	--	--	--	2.8	--	--
Liquid Limit (pct)	--	--	43.8	--	42.9	40.1	--	--	--	--	--	--
Plastic Limit (pct)	--	--	19.5	--	16	16.1	--	--	--	--	--	--
Plasticity Index (pct)	--	--	24.3	--	26.9	24	--	--	--	--	--	--
Moisture (water) Content (pct)	23.17	23.4	28.02	30.64	27.24	25.63	1.79	2.89	2.24	2.17	4.01	4.14
Grain Size (pct)												
Gravel	--	--	--	0.2	--	--	--	--	8.4	--	--	2
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	0.6	--	--	--	--	--	--	16.1	--	--	13
Sand, Fine	--	85.6	--	10.5	--	--	--	--	31.7	--	--	40.1
Sand, Medium	--	2.8	--	0.9	--	--	--	--	37	--	--	39.8
Silt, Coarse	--	--	--	7.8	--	--	--	--	--	--	--	--
Silt, Fine	--	--	--	10.1	--	--	--	--	--	--	--	--
Silt, Medium	--	--	--	8.6	--	--	--	--	--	--	--	--
Silt, Very Coarse	--	11	--	21.6	--	--	--	--	6.8	--	--	5.1
Silt, Very Fine	--	--	--	9.3	--	--	--	--	--	--	--	--
Clay	--	--	--	31.1	--	--	--	--	--	--	--	--
Total Gravel	--	--	--	0.2	--	--	--	--	8.4	--	--	2
Total Sand	--	89	--	11.4	--	--	--	--	84.8	--	--	92.9
Total Silt	--	11	--	57.4	--	--	--	--	6.8	--	--	5.1
Total Clay	--	--	--	31.1	--	--	--	--	--	--	--	--
Total Fines (Silt + Clay)	--	11	--	88.5	--	--	--	--	6.8	--	--	5.1
Total Grain Size	--	100	--	100.1	--	--	--	--	100	--	--	100
Percent passing < 1.3 micron sieve	--	--	--	23.3	--	--	--	--	--	--	--	--
Percent retained 1.3 micron sieve	--	--	--	7.8	--	--	--	--	--	--	--	--
Percent retained 3.2 micron sieve	--	--	--	9.3	--	--	--	--	--	--	--	--
Percent retained 7 micron sieve	--	--	--	5.4	--	--	--	--	--	--	--	--
Percent retained 9 micron sieve	--	--	--	4.7	--	--	--	--	--	--	--	--
Percent retained 13 micron sieve	--	--	--	8.6	--	--	--	--	--	--	--	--
Percent retained 22 micron sieve	--	--	--	7.8	--	--	--	--	--	--	--	--
Percent retained 32 micron sieve	--	11	--	21.6	--	--	--	--	6.8	--	--	5.1
Percent retained 75 micron sieve	--	26.6	--	6	--	--	--	--	5.6	--	--	6.3
Percent retained 150 micron sieve	--	47.3	--	2.9	--	--	--	--	10.1	--	--	13.2
Percent retained 250 micron sieve	--	11.7	--	1.6	--	--	--	--	16	--	--	20.6
Percent retained 425 micron sieve	--	1.5	--	0.6	--	--	--	--	18	--	--	20.8
Percent retained 850 micron sieve	--	1.3	--	0.3	--	--	--	--	19	--	--	19
Percent retained 2000 micron sieve	--	0.6	--	0.1 U	--	--	--	--	16.1	--	--	13
Percent retained 4750 micron sieve	--	--	--	0.2	--	--	--	--	8.4	--	--	2
Percent retained 9500 micron sieve	--	--	--	--	--	--	--	--	0.1 U	--	--	0.1 U
Percent retained 12500 micron sieve	--	--	--	--	--	--	--	--	0.1 U	--	--	0.1 U
Percent retained 19000 micron sieve	--	--	--	--	--	--	--	--	0.1 U	--	--	0.1 U
Percent retained 25K micron sieve	--	--	--	--	--	--	--	--	0.1 U	--	--	0.1 U
Percent retained 37.5K micron sieve	--	--	--	--	--	--	--	--	0.1 U	--	--	0.1 U
Percent retained 50K micron sieve	--	--	--	--	--	--	--	--	0.1 U	--	--	0.1 U
Percent retained 75K micron sieve	--	--	--	--	--	--	--	--	0.1 U	--	--	0.1 U

Table 21b
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-108A-HSA	8-108A-HSA	8-108A-HSA	8-108A-HSA	8-108A-HSA	8-108A-HSA	8-108A-HSA	8-108A-HSA	8-108A-HSA	8-108A-HSA	8-108A-HSA	8-108A-HSA	8-108A-HSA
Sample ID:	8-108A-HSA-S7	8-108A-HSA-S8	8-108A-HSA-S9	8-108A-HSA-S10	8-108A-HSA-S11	8-108A-HSA-S12	8-108A-HSA-S13	8-108A-HSA-S14	8-108A-HSA-S15	8-108A-HSA-S16	8-108A-HSA-S17	8-108A-HSA-S18	8-108A-HSA-S19
Sample Date:	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08
In-Situ Depth[1] (ft):	20 - 21.5 ft	25 - 26.5 ft	30 - 31.5 ft	35 - 36.5 ft	40 - 41.5 ft	45 - 46.5 ft	50 - 51.5 ft	55 - 56.5 ft	60 - 61.5 ft	65 - 66.5 ft	70 - 71.5 ft	75 - 78.5 ft	80 - 81.5 ft
Physical Parameters													
Atterberg Classification	--	--	--	Non-Plastic	--	Non-Plastic	--	Non-Plastic	--	--	CL	--	--
Specific gravity (su)	--	--	--	2.75	--	2.72	--	2.78	--	--	2.78	--	--
Liquid Limit (pct)	--	--	--	--	--	--	--	--	--	--	38.4	--	--
Plastic Limit (pct)	--	--	--	--	--	--	--	--	--	--	14.3	--	--
Plasticity Index (pct)	--	--	--	--	--	--	--	--	--	--	24.1	--	--
Moisture (water) Content (pct)	5.43	1.61	14.43	21.85	34.56	38.89	37.85	26.22	24.32	22.49	22.04	26.12	25.83
Grain Size (pct)													
Gravel	--	--	56	--	--	--	--	--	5.9	--	--	2.5	--
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	--	7.4	--	0.1	--	--	--	11.7	--	--	1.1	--
Sand, Fine	--	--	17.8	--	54.7	--	--	--	36.2	--	--	9.2	--
Sand, Medium	--	--	13	--	1.3	--	--	--	38.3	--	--	2.6	--
Silt, Coarse	--	--	--	--	2.6	--	--	--	--	--	--	5.5	--
Silt, Fine	--	--	--	--	2.1	--	--	--	--	--	--	9.6	--
Silt, Medium	--	--	--	--	5.2	--	--	--	--	--	--	9.7	--
Silt, Very Coarse	--	--	5.7	--	17.1	--	--	--	7.9	--	--	14.2	--
Silt, Very Fine	--	--	--	--	3.6	--	--	--	--	--	--	9	--
Clay	--	--	--	--	13.4	--	--	--	--	--	--	36.6	--
Total Gravel	--	--	56	--	--	--	--	--	5.9	--	--	2.5	--
Total Sand	--	--	38.2	--	56.1	--	--	--	86.2	--	--	12.9	--
Total Silt	--	--	5.7	--	30.6	--	--	--	7.9	--	--	48	--
Total Clay	--	--	--	--	13.4	--	--	--	--	--	--	36.6	--
Total Fines (Silt + Clay)	--	--	5.7	--	44	--	--	--	7.9	--	--	84.6	--
Total Grain Size	--	--	99.9	--	100.1	--	--	--	100	--	--	100	--
Percent passing < 1.3 micron sieve	--	--	--	--	9.3	--	--	--	--	--	--	27.6	--
Percent retained 1.3 micron sieve	--	--	--	--	4.1	--	--	--	--	--	--	9	--
Percent retained 3.2 micron sieve	--	--	--	--	3.6	--	--	--	--	--	--	9	--
Percent retained 7 micron sieve	--	--	--	--	2.1	--	--	--	--	--	--	5.5	--
Percent retained 9 micron sieve	--	--	--	--	0.1 U	--	--	--	--	--	--	4.1	--
Percent retained 13 micron sieve	--	--	--	--	5.2	--	--	--	--	--	--	9.7	--
Percent retained 22 micron sieve	--	--	--	--	2.6	--	--	--	--	--	--	5.5	--
Percent retained 32 micron sieve	--	--	5.7	--	17.1	--	--	--	7.9	--	--	14.2	--
Percent retained 75 micron sieve	--	--	6.4	--	45.3	--	--	--	3.6	--	--	4.4	--
Percent retained 150 micron sieve	--	--	5.2	--	7.7	--	--	--	11.6	--	--	2.6	--
Percent retained 250 micron sieve	--	--	6.2	--	1.7	--	--	--	21	--	--	2.2	--
Percent retained 425 micron sieve	--	--	7.3	--	0.8	--	--	--	23.3	--	--	1.4	--
Percent retained 850 micron sieve	--	--	5.7	--	0.5	--	--	--	15	--	--	1.2	--
Percent retained 2000 micron sieve	--	--	7.4	--	0.1	--	--	--	11.7	--	--	1.1	--
Percent retained 4750 micron sieve	--	--	10.7	--	0.1 U	--	--	--	3.6	--	--	2.5	--
Percent retained 9500 micron sieve	--	--	13	--	0.1 U	--	--	--	2.3	--	--	0.1 U	--
Percent retained 12500 micron sieve	--	--	18.8	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--
Percent retained 19000 micron sieve	--	--	13.5	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--
Percent retained 25K micron sieve	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--
Percent retained 37.5K micron sieve	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--
Percent retained 50K micron sieve	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--
Percent retained 75K micron sieve	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--

Table 21b
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-108C-HSA	8-108C-HSA	8-108C-HSA	8-108C-HSA	8-108C-HSA	8-108C-HSA	8-108C-HSA	8-108C-HSA	8-108C-HSA	8-108C-HSA	8-109A-HSA	8-109A-HSA
Sample ID:	8-108C-HSA-0-1	8-108C-HSA-S3	8-108C-HSA-S5	8-108C-HSA-S7	8-108C-HSA-S8	8-108C-HSA-S9	8-108C-HSA-S10	8-108C-HSA-S11	8-108C-HSA-S12	8-108C-HSA-S14	8-109A-HSA-S1	8-109A-HSA-S2
Sample Date:	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/28/08	7/25/08	7/25/08
In-Situ Depth[1] (ft):	0 - 1 ft	5 - 7.5 ft	10 - 11.5 ft	16.5 - 18 ft	21.5 - 23 ft	26.5 - 28 ft	31.5 - 33 ft	36.5 - 38 ft	41.5 - 43 ft	48.5 - 50 ft	0 - 1.5 ft	2.5 - 4 ft
Physical Parameters												
Atterberg Classification	--	--	--	--	CH	--	--	CL	--	CL	--	--
Specific gravity (su)	--	--	2.71	--	2.72	--	--	2.73	--	2.78	--	--
Liquid Limit (pct)	--	--	--	--	56.1	--	--	35.2	--	34.6	--	--
Plastic Limit (pct)	--	--	--	--	19.4	--	--	12.8	--	12.7	--	--
Plasticity Index (pct)	--	--	--	--	36.7	--	--	22.5	--	21.9	--	--
Moisture (water) Content (pct)	265	22.22	28.33	25.26	46.51	32.4	17.94	34.46	30.81	19.66	2.1	2.48
Grain Size (pct)												
Gravel	--	3.9	--	--	--	--	2.7	--	--	--	--	10.4
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	4.5	--	0.1	--	--	8.5	--	--	--	--	30
Sand, Fine	--	54.9	--	73.4	--	--	36.7	--	7.4	--	--	19
Sand, Medium	--	30.8	--	5.7	--	--	17.2	--	0.3	--	--	33.6
Silt, Coarse	--	0.5	--	1.9	--	--	3.5	--	1.7	--	--	--
Silt, Fine	--	1	--	0.6	--	--	3	--	11.7	--	--	--
Silt, Medium	--	0.9	--	1.3	--	--	3	--	3.9	--	--	--
Silt, Very Coarse	--	0.4	--	9.5	--	--	17.5	--	24.8	--	--	6.9
Silt, Very Fine	--	0.9	--	3.1	--	--	3	--	10.6	--	--	--
Clay	--	2.3	--	4.4	--	--	5	--	39.5	--	--	--
Total Gravel	--	3.9	--	--	--	--	2.7	--	--	--	--	10.4
Total Sand	--	90.2	--	79.2	--	--	62.4	--	7.7	--	--	82.6
Total Silt	--	3.7	--	16.4	--	--	30	--	52.7	--	--	6.9
Total Clay	--	2.3	--	4.4	--	--	5	--	39.5	--	--	--
Total Fines (Silt + Clay)	--	6	--	20.8	--	--	35	--	92.2	--	--	6.9
Total Grain Size	--	100.1	--	100	--	--	100.1	--	99.9	--	--	99.9
Percent passing < 1.3 micron sieve	--	1.4	--	3.8	--	--	4.5	--	29.5	--	--	--
Percent retained 1.3 micron sieve	--	0.9	--	0.6	--	--	0.5	--	10	--	--	--
Percent retained 3.2 micron sieve	--	0.9	--	3.1	--	--	3	--	10.6	--	--	--
Percent retained 7 micron sieve	--	0.5	--	0.6	--	--	2	--	5.6	--	--	--
Percent retained 9 micron sieve	--	0.5	--	0.1 U	--	--	1	--	6.1	--	--	--
Percent retained 13 micron sieve	--	0.9	--	1.3	--	--	3	--	3.9	--	--	--
Percent retained 22 micron sieve	--	0.5	--	1.9	--	--	3.5	--	1.7	--	--	--
Percent retained 32 micron sieve	--	0.4	--	9.5	--	--	17.5	--	24.8	--	--	6.9
Percent retained 75 micron sieve	--	5.6	--	35.3	--	--	14.6	--	5.2	--	--	3.3
Percent retained 150 micron sieve	--	19.6	--	20.6	--	--	11.6	--	1.6	--	--	5.3
Percent retained 250 micron sieve	--	29.7	--	17.5	--	--	10.5	--	0.6	--	--	10.4
Percent retained 425 micron sieve	--	20.4	--	5	--	--	7.5	--	0.2	--	--	14.3
Percent retained 850 micron sieve	--	10.4	--	0.7	--	--	9.7	--	0.1	--	--	19.3
Percent retained 2000 micron sieve	--	4.5	--	0.1	--	--	8.5	--	0.1 U	--	--	30
Percent retained 4750 micron sieve	--	3.9	--	0.1 U	--	--	2.7	--	0.1 U	--	--	7.2
Percent retained 9500 micron sieve	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	3.2
Percent retained 12500 micron sieve	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--
Percent retained 19000 micron sieve	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--
Percent retained 25K micron sieve	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--
Percent retained 37.5K micron sieve	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--
Percent retained 50K micron sieve	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--
Percent retained 75K micron sieve	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--

Table 21b
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-109A-HSA	8-109A-HSA	8-109A-HSA	8-109A-HSA	8-109A-HSA	8-109A-HSA	8-109A-HSA	8-109A-HSA	8-109A-HSA	8-109A-HSA	8-109A-HSA	8-109A-HSA
Sample ID:	8-109A-HSA-S3	8-109A-HSA-S6	8-109A-HSA-S7	8-109A-HSA-S8	8-109A-HSA-S9	8-109A-HSA-S10	8-109A-HSA-S11	8-109A-HSA-S12	8-109A-HSA-S13	8-109A-HSA-S14	8-109A-HSA-S15	8-109A-HSA-S16
Sample Date:	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08
In-Situ Depth[1] (ft):	5 - 6.5 ft	15 - 17.5 ft	20 - 21.5 ft	25 - 26.5 ft	30 - 31.5 ft	35 - 36.5 ft	40 - 41.5 ft	45 - 46.5 ft	50 - 51.5 ft	55 - 56.5 ft	60 - 61.5 ft	65 - 66.5 ft
Physical Parameters												
Atterberg Classification	--	--	Non-Plastic	--	--	Non-Plastic	--	CL	--	CL	--	--
Specific gravity (su)	--	--	3.32	--	--	2.79	--	2.72	--	2.75	--	--
Liquid Limit (pct)	--	--	--	--	--	--	--	44.9	--	30.8	--	--
Plastic Limit (pct)	--	--	--	--	--	--	--	23.5	--	13.4	--	--
Plasticity Index (pct)	--	--	--	--	--	--	--	21.4	--	17.4	--	--
Moisture (water) Content (pct)	3.05	4.7	19.74	14.72	18.34	32.77	32.75	38.47	26.8	10.81	31.97	39.8
Grain Size (pct)												
Gravel	--	3.4	--	--	10.1	--	0.1	--	--	--	0.3	--
Gravel, Coarse	--	--	--	--	17	--	--	--	--	--	--	--
Sand, Coarse	--	10.9	--	--	5.5	--	0.7	--	--	--	0.7	--
Sand, Fine	--	47.7	--	--	33	--	38.1	--	--	--	1.4	0.9
Sand, Medium	--	33.7	--	--	24.6	--	7.5	--	--	--	1.7	0.1
Silt, Coarse	--	--	--	--	--	--	5.6	--	--	--	5.4	--
Silt, Fine	--	--	--	--	--	--	4.4	--	--	--	10.8	14
Silt, Medium	--	--	--	--	--	--	3.7	--	--	--	8.5	4.7
Silt, Very Coarse	--	4.2	--	--	9.9	--	13.8	--	--	--	3.2	1.2
Silt, Very Fine	--	--	--	--	--	--	3.1	--	--	--	9.3	11.6
Clay	--	--	--	--	--	--	23.1	--	--	--	58.8	67.5
Total Gravel	--	3.4	--	--	27.1	--	0.1	--	--	--	0.3	--
Total Sand	--	92.3	--	--	63.1	--	46.3	--	--	--	3.8	1
Total Silt	--	4.2	--	--	9.9	--	30.6	--	--	--	37.2	31.5
Total Clay	--	--	--	--	--	--	23.1	--	--	--	58.8	67.5
Total Fines (Silt + Clay)	--	4.2	--	--	9.9	--	53.7	--	--	--	96	99
Total Grain Size	--	99.9	--	--	100.1	--	100.1	--	--	--	100.1	100
Percent passing < 1.3 micron sieve	--	--	--	--	--	--	15	--	--	--	46.4	54.3
Percent retained 1.3 micron sieve	--	--	--	--	--	--	8.1	--	--	--	12.4	13.2
Percent retained 3.2 micron sieve	--	--	--	--	--	--	3.1	--	--	--	9.3	11.6
Percent retained 7 micron sieve	--	--	--	--	--	--	2.5	--	--	--	4.6	6.2
Percent retained 9 micron sieve	--	--	--	--	--	--	1.9	--	--	--	6.2	7.8
Percent retained 13 micron sieve	--	--	--	--	--	--	3.7	--	--	--	8.5	4.7
Percent retained 22 micron sieve	--	--	--	--	--	--	5.6	--	--	--	5.4	0.1 U
Percent retained 32 micron sieve	--	4.2	--	--	9.9	--	13.8	--	--	--	3.2	1.2
Percent retained 75 micron sieve	--	6	--	--	8.1	--	23.3	--	--	--	0.1 U	0.4
Percent retained 150 micron sieve	--	15.5	--	--	10.7	--	7.5	--	--	--	0.1 U	0.3
Percent retained 250 micron sieve	--	26.2	--	--	14.2	--	7.3	--	--	--	1.4	0.2
Percent retained 425 micron sieve	--	20.3	--	--	13.4	--	5	--	--	--	0.9	0.1
Percent retained 850 micron sieve	--	13.4	--	--	11.2	--	2.5	--	--	--	0.8	0.1 U
Percent retained 2000 micron sieve	--	10.9	--	--	5.5	--	0.7	--	--	--	0.7	0.1 U
Percent retained 4750 micron sieve	--	3.4	--	--	3.6	--	0.1	--	--	--	0.3	0.1 U
Percent retained 9500 micron sieve	--	--	--	--	1.1	--	--	--	--	--	0.1 U	0.1 U
Percent retained 12500 micron sieve	--	--	--	--	5.4	--	--	--	--	--	0.1 U	0.1 U
Percent retained 19000 micron sieve	--	--	--	--	0.1 U	--	--	--	--	--	0.1 U	0.1 U
Percent retained 25K micron sieve	--	--	--	--	17	--	--	--	--	--	0.1 U	0.1 U
Percent retained 37.5K micron sieve	--	--	--	--	--	--	--	--	--	--	0.1 U	0.1 U
Percent retained 50K micron sieve	--	--	--	--	--	--	--	--	--	--	0.1 U	0.1 U
Percent retained 75K micron sieve	--	--	--	--	--	--	--	--	--	--	0.1 U	0.1 U

Table 21b
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-109A-HSA	8-110A-HSA	8-110A-HSA	8-110A-HSA	8-110A-HSA	8-110A-HSA	8-110A-HSA	8-110A-HSA	8-110A-HSA	8-110A-HSA	8-110A-HSA	8-110A-HSA
Sample ID:	8-109A-HSA-S17	8-110A-HSA-S1	8-110A-HSA-S2	8-110A-HSA-S5	8-110A-HSA-S6	8-110A-HSA-S7	8-110A-HSA-S8	8-110A-HSA-S9	8-110A-HSA-S10	8-110A-HSA-S11	8-110A-HSA-S12	8-110A-HSA-S13
Sample Date:	7/25/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08
In-Situ Depth[1] (ft):	70 - 73.5 ft	0 - 1.5 ft	2.5 - 4 ft	10 - 11.5 ft	15 - 16.5 ft	20 - 21.5 ft	25 - 26.5 ft	30 - 31.5 ft	35 - 36.5 ft	40 - 41.5 ft	45 - 46.5 ft	50 - 51.5 ft
Physical Parameters												
Atterberg Classification	Non-Plastic	--	--	--	--	--	--	--	CL	--	CL	--
Specific gravity (su)	2.77	--	--	--	--	--	--	--	2.72	--	2.74	--
Liquid Limit (pct)	--	--	--	--	--	--	--	--	37.7	--	30.1	--
Plastic Limit (pct)	--	--	--	--	--	--	--	--	19.4	--	11.8	--
Plasticity Index (pct)	--	--	--	--	--	--	--	--	18.4	--	18.3	--
Moisture (water) Content (pct)	20.66	3.31	3.05	6.29	6.76	24.72	19.14	31.12	33.35	23.51	18.88	34.05
Grain Size (pct)												
Gravel	--	--	--	--	40.9	--	--	0.2	--	0.4	--	--
Gravel, Coarse	--	--	--	--	34	--	--	--	--	--	--	--
Sand, Coarse	--	--	--	--	6.3	--	--	0.2	--	2.1	--	0.2
Sand, Fine	--	--	--	--	7.2	--	--	49.4	--	62.1	--	2.5
Sand, Medium	--	--	--	--	8.9	--	--	0.6	--	5.3	--	0.9
Silt, Coarse	--	--	--	--	--	--	--	3.5	--	2.1	--	5.8
Silt, Fine	--	--	--	--	--	--	--	3.5	--	2.7	--	9.9
Silt, Medium	--	--	--	--	--	--	--	3.5	--	2.1	--	9.4
Silt, Very Coarse	--	--	--	--	2.7	--	--	25.3	--	13	--	12.2
Silt, Very Fine	--	--	--	--	--	--	--	5.2	--	3.7	--	9.4
Clay	--	--	--	--	--	--	--	8.8	--	6.5	--	49.7
Total Gravel	--	--	--	--	74.9	--	--	0.2	--	0.4	--	--
Total Sand	--	--	--	--	22.4	--	--	50.2	--	69.5	--	3.6
Total Silt	--	--	--	--	2.7	--	--	41	--	23.6	--	46.7
Total Clay	--	--	--	--	--	--	--	8.8	--	6.5	--	49.7
Total Fines (Silt + Clay)	--	--	--	--	2.7	--	--	49.8	--	30.1	--	96.4
Total Grain Size	--	--	--	--	100	--	--	100.2	--	100	--	100
Percent passing < 1.3 micron sieve	--	--	--	--	--	--	--	7.6	--	5.4	--	38.6
Percent retained 1.3 micron sieve	--	--	--	--	--	--	--	1.2	--	1.1	--	11.1
Percent retained 3.2 micron sieve	--	--	--	--	--	--	--	5.2	--	3.7	--	9.4
Percent retained 7 micron sieve	--	--	--	--	--	--	--	2.3	--	1.1	--	4.1
Percent retained 9 micron sieve	--	--	--	--	--	--	--	1.2	--	1.6	--	5.8
Percent retained 13 micron sieve	--	--	--	--	--	--	--	3.5	--	2.1	--	9.4
Percent retained 22 micron sieve	--	--	--	--	--	--	--	3.5	--	2.1	--	5.8
Percent retained 32 micron sieve	--	--	--	--	2.7	--	--	25.3	--	13	--	12.2
Percent retained 75 micron sieve	--	--	--	--	1.9	--	--	41.3	--	26.6	--	1
Percent retained 150 micron sieve	--	--	--	--	2.3	--	--	7.2	--	27.3	--	0.7
Percent retained 250 micron sieve	--	--	--	--	3	--	--	0.9	--	8.2	--	0.8
Percent retained 425 micron sieve	--	--	--	--	3.8	--	--	0.3	--	2.7	--	0.5
Percent retained 850 micron sieve	--	--	--	--	5.1	--	--	0.3	--	2.6	--	0.4
Percent retained 2000 micron sieve	--	--	--	--	6.3	--	--	0.2	--	2.1	--	0.2
Percent retained 4750 micron sieve	--	--	--	--	9.1	--	--	0.2	--	0.4	--	0.1 U
Percent retained 9500 micron sieve	--	--	--	--	5.8	--	--	0.1 U	--	0.1 U	--	0.1 U
Percent retained 12500 micron sieve	--	--	--	--	6.6	--	--	0.1 U	--	0.1 U	--	0.1 U
Percent retained 19000 micron sieve	--	--	--	--	19.4	--	--	0.1 U	--	0.1 U	--	0.1 U
Percent retained 25K micron sieve	--	--	--	--	34	--	--	0.1 U	--	0.1 U	--	0.1 U
Percent retained 37.5K micron sieve	--	--	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U
Percent retained 50K micron sieve	--	--	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U
Percent retained 75K micron sieve	--	--	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U

Table 21b
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-110A-HSA	8-110A-HSA	8-110B-HSA	8-110B-HSA	8-110B-HSA	8-110B-HSA	8-110B-HSA	8-110B-HSA	8-110B-HSA	8-110B-HSA	8-111A-HSA	8-111A-HSA
Sample ID:	8-110A-HSA-S14	8-110A-HSA-S15	8-110B-HSA-S6	8-110B-HSA-S8	8-110B-HSA-S9	8-110B-HSA-S10	8-110B-HSA-S11	8-110B-HSA-S12	8-110B-HSA-S13	8-110B-HSA-S14	8-111A-HSA-S1	8-111A-HSA-S2
Sample Date:	7/24/08	7/24/08	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08	7/25/08	7/24/08	7/24/08
In-Situ Depth[1] (ft):	55 - 56.5 ft	60 - 63.5 ft	11.5 - 13 ft	21.5 - 25 ft	26.5 - 28 ft	31.5 - 33 ft	36.5 - 38 ft	41.5 - 43 ft	46.5 - 48.5 ft	51.5 - 53 ft	0 - 1.5 ft	2.5 - 4 ft
Physical Parameters												
Atterberg Classification	CL	CL	--	CL	--	CL	CL	--	CL	--	--	--
Specific gravity (su)	2.78	--	--	2.71	--	2.77	2.76	--	2.76	--	--	--
Liquid Limit (pct)	43.7	31.9	--	41.2	--	29.4	38.1	--	40.4	--	--	--
Plastic Limit (pct)	16.7	12.6	--	22.3	--	13.8	19	--	15.4	--	--	--
Plasticity Index (pct)	27.1	19.3	--	18.9	--	15.6	19.1	--	25	--	--	--
Moisture (water) Content (pct)	24.94	21.22	25.23	37.31	21.9	26.19	30.1	30.55	23.09	24.84	2.01	4.43
Grain Size (pct)												
Gravel	--	--	1.4	--	6.4	--	--	0.2	--	0.8	--	--
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	--	4.7	--	5.1	--	--	--	--	1.7	--	--
Sand, Fine	--	--	50.1	--	53.8	--	--	1.7	--	18.6	--	--
Sand, Medium	--	--	35.5	--	11	--	--	1.1	--	5.5	--	--
Silt, Coarse	--	--	--	--	1	--	--	6.9	--	5.4	--	--
Silt, Fine	--	--	--	--	2.5	--	--	10.4	--	9.7	--	--
Silt, Medium	--	--	--	--	3	--	--	10.4	--	5.4	--	--
Silt, Very Coarse	--	--	8.3	--	6.7	--	--	11.4	--	11.5	--	--
Silt, Very Fine	--	--	--	--	2.5	--	--	9.8	--	7.6	--	--
Clay	--	--	--	--	8.1	--	--	48	--	33.7	--	--
Total Gravel	--	--	1.4	--	6.4	--	--	0.2	--	0.8	--	--
Total Sand	--	--	90.3	--	69.9	--	--	2.8	--	25.8	--	--
Total Silt	--	--	8.3	--	15.7	--	--	48.9	--	39.6	--	--
Total Clay	--	--	--	--	8.1	--	--	48	--	33.7	--	--
Total Fines (Silt + Clay)	--	--	8.3	--	23.8	--	--	96.9	--	73.3	--	--
Total Grain Size	--	--	100	--	100.1	--	--	99.9	--	99.9	--	--
Percent passing < 1.3 micron sieve	--	--	--	--	7.1	--	--	37.6	--	27.2	--	--
Percent retained 1.3 micron sieve	--	--	--	--	1	--	--	10.4	--	6.5	--	--
Percent retained 3.2 micron sieve	--	--	--	--	2.5	--	--	9.8	--	7.6	--	--
Percent retained 7 micron sieve	--	--	--	--	1.5	--	--	4.6	--	4.3	--	--
Percent retained 9 micron sieve	--	--	--	--	1	--	--	5.8	--	5.4	--	--
Percent retained 13 micron sieve	--	--	--	--	3	--	--	10.4	--	5.4	--	--
Percent retained 22 micron sieve	--	--	--	--	1	--	--	6.9	--	5.4	--	--
Percent retained 32 micron sieve	--	--	8.3	--	6.7	--	--	11.4	--	11.5	--	--
Percent retained 75 micron sieve	--	--	14.5	--	22.3	--	--	0.7	--	8.7	--	--
Percent retained 150 micron sieve	--	--	17.3	--	22.4	--	--	0.5	--	5.3	--	--
Percent retained 250 micron sieve	--	--	18.3	--	9.1	--	--	0.5	--	4.6	--	--
Percent retained 425 micron sieve	--	--	20.2	--	6.1	--	--	0.6	--	3.2	--	--
Percent retained 850 micron sieve	--	--	15.3	--	4.9	--	--	0.5	--	2.3	--	--
Percent retained 2000 micron sieve	--	--	4.7	--	5.1	--	--	0.1 U	--	1.7	--	--
Percent retained 4750 micron sieve	--	--	0.7	--	3.5	--	--	0.2	--	0.8	--	--
Percent retained 9500 micron sieve	--	--	0.1 U	--	0.7	--	--	--	--	--	--	--
Percent retained 12500 micron sieve	--	--	0.7	--	1.9	--	--	--	--	--	--	--
Percent retained 19000 micron sieve	--	--	--	--	0.3	--	--	--	--	--	--	--
Percent retained 25K micron sieve	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 37.5K micron sieve	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 50K micron sieve	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 75K micron sieve	--	--	--	--	--	--	--	--	--	--	--	--

Table 21b
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-111A-HSA	8-111A-HSA	8-111A-HSA	8-111A-HSA	8-111A-HSA	8-111A-HSA	8-111A-HSA	8-111A-HSA	8-111A-HSA	8-111A-HSA	8-111A-HSA	8-111A-HSA
Sample ID:	8-111A-HSA-S3	8-111A-HSA-S5	8-111A-HSA-S6	8-111A-HSA-S7	8-111A-HSA-S8	8-111A-HSA-S9	8-111A-HSA-S10	8-111A-HSA-S11	8-111A-HSA-S12	8-111A-HSA-S13	8-111A-HSA-S14	8-111A-HSA-S15
Sample Date:	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08
In-Situ Depth[1] (ft):	5 - 6.5 ft	10 - 11.5 ft	15 - 16.5 ft	20 - 21.5 ft	25 - 26.5 ft	30 - 30.5 ft	35 - 36.5 ft	40 - 41.5 ft	45 - 46.5 ft	50 - 51.5 ft	55 - 56.5 ft	60 - 63.5 ft
Physical Parameters												
Atterberg Classification	--	Non-Plastic	--	--	--	--	Non-Plastic	--	Non-Plastic	--	CL	--
Specific gravity (su)	--	2.79	--	--	--	--	2.72	--	2.72	--	2.77	--
Liquid Limit (pct)	--	--	--	--	--	--	--	--	--	--	31.2	--
Plastic Limit (pct)	--	--	--	--	--	--	--	--	--	--	19.4	--
Plasticity Index (pct)	--	--	--	--	--	--	--	--	--	--	11.8	--
Moisture (water) Content (pct)	4.01	4.2	5.28	17.97	31.44	24.32	24.48	22.97	25.02	33.35	23.81	19.93
Grain Size (pct)												
Gravel	6.2	--	7.4	--	--	13.4	--	4.7	--	--	--	3.2
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	12.7	--	13.5	--	--	11.8	--	11.2	--	--	--	2.2
Sand, Fine	38.4	--	40.2	--	--	61.8	--	68.1	--	--	--	21.1
Sand, Medium	32.4	--	33.1	--	--	9.2	--	10.3	--	--	--	4.8
Silt, Coarse	--	--	--	--	--	0.5	--	--	--	--	--	4.2
Silt, Fine	--	--	--	--	--	--	--	--	--	--	--	9.8
Silt, Medium	--	--	--	--	--	--	--	--	--	--	--	6.9
Silt, Very Coarse	10.3	--	5.8	--	--	1.2	--	5.7	--	--	--	11.1
Silt, Very Fine	--	--	--	--	--	--	--	--	--	--	--	7.6
Clay	--	--	--	--	--	2.2	--	--	--	--	--	29.1
Total Gravel	6.2	--	7.4	--	--	13.4	--	4.7	--	--	--	3.2
Total Sand	83.5	--	86.8	--	--	82.8	--	89.6	--	--	--	28.1
Total Silt	10.3	--	5.8	--	--	1.7	--	5.7	--	--	--	39.6
Total Clay	--	--	--	--	--	2.2	--	--	--	--	--	29.1
Total Fines (Silt + Clay)	10.3	--	5.8	--	--	3.9	--	5.7	--	--	--	68.7
Total Grain Size	100	--	100	--	--	100.1	--	100	--	--	--	100
Percent passing < 1.3 micron sieve	--	--	--	--	--	1.1	--	--	--	--	--	22.2
Percent retained 1.3 micron sieve	--	--	--	--	--	1.1	--	--	--	--	--	6.9
Percent retained 3.2 micron sieve	--	--	--	--	--	0.1 U	--	--	--	--	--	7.6
Percent retained 7 micron sieve	--	--	--	--	--	0.1 U	--	--	--	--	--	4.9
Percent retained 9 micron sieve	--	--	--	--	--	0.1 U	--	--	--	--	--	4.9
Percent retained 13 micron sieve	--	--	--	--	--	0.1 U	--	--	--	--	--	6.9
Percent retained 22 micron sieve	--	--	--	--	--	0.5	--	--	--	--	--	4.2
Percent retained 32 micron sieve	10.3	--	5.8	--	--	1.2	--	5.7	--	--	--	11.1
Percent retained 75 micron sieve	6.8	--	6.8	--	--	23.6	--	26.7	--	--	--	9.3
Percent retained 150 micron sieve	12.6	--	13.5	--	--	26.4	--	28.6	--	--	--	7.1
Percent retained 250 micron sieve	19	--	19.9	--	--	11.8	--	12.8	--	--	--	4.7
Percent retained 425 micron sieve	17.5	--	18.5	--	--	4.8	--	5.8	--	--	--	2.8
Percent retained 850 micron sieve	14.9	--	14.6	--	--	4.4	--	4.5	--	--	--	2
Percent retained 2000 micron sieve	12.7	--	13.5	--	--	11.8	--	11.2	--	--	--	2.2
Percent retained 4750 micron sieve	6.2	--	7.4	--	--	9.2	--	4.7	--	--	--	1.1
Percent retained 9500 micron sieve	0.1 U	--	0.1 U	--	--	3.2	--	0.1 U	--	--	--	2.1
Percent retained 12500 micron sieve	0.1 U	--	0.1 U	--	--	1	--	0.1 U	--	--	--	0.1 U
Percent retained 19000 micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U
Percent retained 25K micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U
Percent retained 37.5K micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U
Percent retained 50K micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U
Percent retained 75K micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U

Table 21b
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-111A-HSA	8-111C-HSA	8-111C-HSA	8-111C-HSA	8-111C-HSA	8-111C-HSA	8-111C-HSA	8-111C-HSA	8-112A-HSA	8-112A-HSA	8-112A-HSA	8-112A-HSA
Sample ID:	8-111A-HSA-S16	8-111C-HSA-S3	8-111C-HSA-S5	8-111C-HSA-S6	8-111C-HSA-S7	8-111C-HSA-S8	8-111C-HSA-S9	8-111C-HSA-S11	8-112A-HSA-S1	8-112A-HSA-S2	8-112A-HSA-S3	8-112A-HSA-S5
Sample Date:	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/24/08	7/23/08	7/23/08	7/23/08	7/23/08
In-Situ Depth[1] (ft):	65 - 66.5 ft	4 - 5.5 ft	10 - 11.5 ft	12.5 - 14 ft	15 - 16.5 ft	25 - 26.5 ft	30 - 31.5 ft	40 - 41.5 ft	0 - 1.5 ft	2.5 - 4 ft	5 - 6.5 ft	10 - 11.5 ft
Physical Parameters												
Atterberg Classification	CL	--	Non-Plastic	--	--	CL	--	CL	--	Non-Plastic	--	--
Specific gravity (su)	2.79	--	2.73	--	--	2.79	--	--	--	2.73	--	--
Liquid Limit (pct)	35.4	--	--	--	--	34.4	--	33.9	--	--	--	--
Plastic Limit (pct)	14	--	--	--	--	14.7	--	15.4	--	--	--	--
Plasticity Index (pct)	21.5	--	--	--	--	19.6	--	18.4	--	--	--	--
Moisture (water) Content (pct)	21.54	17.11	26.08	19.21	14.27	22.2	21.87	23.34	4.81	7.31	3.4	6.39
Grain Size (pct)												
Gravel	--	7.6	--	--	12.7	--	0.5	1.6	--	--	4.4	--
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	11.4	--	--	15.6	--	1.5	1	--	--	12.2	--
Sand, Fine	--	33	--	--	50.2	--	18.1	13.7	--	--	42.7	--
Sand, Medium	--	41.6	--	--	13	--	5.9	2.7	--	--	33.2	--
Silt, Coarse	--	--	--	--	--	--	4.4	6.5	--	--	--	--
Silt, Fine	--	--	--	--	--	--	9.5	10.1	--	--	--	--
Silt, Medium	--	--	--	--	--	--	8.7	10.1	--	--	--	--
Silt, Very Coarse	--	6.3	--	--	8.6	--	15.9	22.4	--	--	7.4	--
Silt, Very Fine	--	--	--	--	--	--	9.4	9.4	--	--	--	--
Clay	--	--	--	--	--	--	26.2	22.3	--	--	--	--
Total Gravel	--	7.6	--	--	12.7	--	0.5	1.6	--	--	4.4	--
Total Sand	--	86	--	--	78.8	--	25.5	17.4	--	--	88.1	--
Total Silt	--	6.3	--	--	8.6	--	47.9	58.5	--	--	7.4	--
Total Clay	--	--	--	--	--	--	26.2	22.3	--	--	--	--
Total Fines (Silt + Clay)	--	6.3	--	--	8.6	--	74.1	80.8	--	--	7.4	--
Total Grain Size	--	99.9	--	--	100.1	--	100.1	99.8	--	--	99.9	--
Percent passing < 1.3 micron sieve	--	--	--	--	--	--	18.9	14.4	--	--	--	--
Percent retained 1.3 micron sieve	--	--	--	--	--	--	7.3	7.9	--	--	--	--
Percent retained 3.2 micron sieve	--	--	--	--	--	--	9.4	9.4	--	--	--	--
Percent retained 7 micron sieve	--	--	--	--	--	--	5.1	4.3	--	--	--	--
Percent retained 9 micron sieve	--	--	--	--	--	--	4.4	5.8	--	--	--	--
Percent retained 13 micron sieve	--	--	--	--	--	--	8.7	10.1	--	--	--	--
Percent retained 22 micron sieve	--	--	--	--	--	--	4.4	6.5	--	--	--	--
Percent retained 32 micron sieve	--	6.3	--	--	8.6	--	15.9	22.4	--	--	7.4	--
Percent retained 75 micron sieve	--	8.1	--	--	25.1	--	8.2	6.8	--	--	8.3	--
Percent retained 150 micron sieve	--	9.8	--	--	13.6	--	5.3	4.1	--	--	14.6	--
Percent retained 250 micron sieve	--	15.1	--	--	11.5	--	4.6	2.8	--	--	19.8	--
Percent retained 425 micron sieve	--	21.3	--	--	5.7	--	3.3	1.6	--	--	18.1	--
Percent retained 850 micron sieve	--	20.3	--	--	7.3	--	2.6	1.1	--	--	15.1	--
Percent retained 2000 micron sieve	--	11.4	--	--	15.6	--	1.5	1	--	--	12.2	--
Percent retained 4750 micron sieve	--	7.6	--	--	12.7	--	0.5	1.6	--	--	3.4	--
Percent retained 9500 micron sieve	--	--	--	--	--	--	--	--	--	--	1	--
Percent retained 12500 micron sieve	--	--	--	--	--	--	--	--	--	--	0.1 U	--
Percent retained 19000 micron sieve	--	--	--	--	--	--	--	--	--	--	0.1 U	--
Percent retained 25K micron sieve	--	--	--	--	--	--	--	--	--	--	0.1 U	--
Percent retained 37.5K micron sieve	--	--	--	--	--	--	--	--	--	--	0.1 U	--
Percent retained 50K micron sieve	--	--	--	--	--	--	--	--	--	--	0.1 U	--
Percent retained 75K micron sieve	--	--	--	--	--	--	--	--	--	--	0.1 U	--

Table 21b
Subsurface Sediment Geotechnical Testing Results - ASB Interior Sloping Berm

Location ID:	8-112A-HSA	8-112A-HSA	8-112A-HSA	8-112A-HSA	8-112A-HSA	8-112A-HSA	8-112A-HSA	8-112A-HSA	8-112A-HSA	8-112A-HSA	8-112A-HSA	8-112A-HSA	8-112A-HSA
Sample ID:	8-112A-HSA-S6	8-112A-HSA-S7	8-112A-HSA-S8	8-112A-HSA-S9	8-112A-HSA-S10	8-112A-HSA-S11	8-112A-HSA-S12	8-112A-HSA-S13	8-112A-HSA-S14	8-112A-HSA-S15	8-112A-HSA-S16	8-112A-HSA-S17	8-112A-HSA-S18
Sample Date:	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08	7/23/08
In-Situ Depth[1] (ft):	15 - 16.5 ft	20 - 21.5 ft	25 - 26.5 ft	30 - 31.5 ft	35 - 36.5 ft	40 - 41.5 ft	45 - 46.5 ft	50 - 51.5 ft	55 - 56.5 ft	60 - 63.5 ft	65 - 66.5 ft	70 - 71.5 ft	75 - 76.5 ft
Physical Parameters													
Atterberg Classification	--	--	--	--	**Non-Plastic**	--	**CL**	--	**CL**	--	--	**CL**	--
Specific gravity (su)	--	--	--	--	**2.68**	--	**2.77**	--	**2.74**	--	--	**2.79**	--
Liquid Limit (pct)	--	--	--	--	--	--	**28.1**	--	**29.3**	--	--	**33.2**	--
Plastic Limit (pct)	--	--	--	--	--	--	**12.9**	--	**12.8**	--	--	**14.8**	--
Plasticity Index (pct)	--	--	--	--	--	--	**15.2**	--	**16.4**	--	--	**18.5**	--
Moisture (water) Content (pct)	**14.01**	**15.43**	**25.23**	**29**	**27.11**	**25.78**	**29.78**	**22.09**	**21.8**	**11.26**	**19.55**	**19.76**	**22.51**
Grain Size (pct)													
Gravel	**16.9**	--	--	**0.7**	--	**3.8**	--	--	--	**8.1**	--	--	**17**
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	**9**	--	--	**2**	--	**3.9**	--	--	--	**10.9**	--	--	**1.7**
Sand, Fine	**20**	--	--	**66**	--	**70.9**	--	--	--	**21.1**	--	--	**14.7**
Sand, Medium	**22.5**	--	--	**23.4**	--	**9.5**	--	--	--	**25.7**	--	--	**4.7**
Silt, Coarse	**1.7**	--	--	--	--	**1.2**	--	--	--	**1.9**	--	--	**2.5**
Silt, Fine	**5.8**	--	--	--	--	**2**	--	--	--	**4.4**	--	--	**7.6**
Silt, Medium	**2.9**	--	--	--	--	**0.8**	--	--	--	**3.7**	--	--	**6.9**
Silt, Very Coarse	**2.3**	--	--	**7.9**	--	**2.2**	--	--	--	**3.2**	--	--	**11.4**
Silt, Very Fine	**4.6**	--	--	--	--	**0.8**	--	--	--	**5**	--	--	**7.5**
Clay	**14.4**	--	--	--	--	**4.9**	--	--	--	**16.1**	--	--	**26.3**
Total Gravel	**16.9**	--	--	**0.7**	--	**3.8**	--	--	--	**8.1**	--	--	**17**
Total Sand	**51.5**	--	--	**91.4**	--	**84.3**	--	--	--	**57.7**	--	--	**21.1**
Total Silt	**17.3**	--	--	**7.9**	--	**7**	--	--	--	**18.2**	--	--	**35.9**
Total Clay	**14.4**	--	--	--	--	**4.9**	--	--	--	**16.1**	--	--	**26.3**
Total Fines (Silt + Clay)	**31.7**	--	--	**7.9**	--	**11.9**	--	--	--	**34.3**	--	--	**62.2**
Total Grain Size	**100.1**	--	--	**100**	--	**100**	--	--	--	**100.1**	--	--	**100.3**
Percent passing < 1.3 micron sieve	**11.5**	--	--	--	--	**4.1**	--	--	--	**12.4**	--	--	**20**
Percent retained 1.3 micron sieve	**2.9**	--	--	--	--	**0.8**	--	--	--	**3.7**	--	--	**6.3**
Percent retained 3.2 micron sieve	**4.6**	--	--	--	--	**0.8**	--	--	--	**5**	--	--	**7.5**
Percent retained 7 micron sieve	**2.9**	--	--	--	--	**0.8**	--	--	--	**1.9**	--	--	**3.8**
Percent retained 9 micron sieve	**2.9**	--	--	--	--	**1.2**	--	--	--	**2.5**	--	--	**3.8**
Percent retained 13 micron sieve	**2.9**	--	--	--	--	**0.8**	--	--	--	**3.7**	--	--	**6.9**
Percent retained 22 micron sieve	**1.7**	--	--	--	--	**1.2**	--	--	--	**1.9**	--	--	**2.5**
Percent retained 32 micron sieve	**2.3**	--	--	**7.9**	--	**2.2**	--	--	--	**3.2**	--	--	**11.4**
Percent retained 75 micron sieve	**3.4**	--	--	**12.9**	--	**28.3**	--	--	--	**5.3**	--	--	**6.6**
Percent retained 150 micron sieve	**5.4**	--	--	**20.8**	--	**32**	--	--	--	**5.3**	--	--	**4.3**
Percent retained 250 micron sieve	**11.2**	--	--	**32.3**	--	**10.6**	--	--	--	**10.5**	--	--	**3.8**
Percent retained 425 micron sieve	**11.4**	--	--	**15.4**	--	**5.5**	--	--	--	**13.7**	--	--	**2.7**
Percent retained 850 micron sieve	**11.1**	--	--	**8**	--	**4**	--	--	--	**12**	--	--	**2**
Percent retained 2000 micron sieve	**9**	--	--	**2**	--	**3.9**	--	--	--	**10.9**	--	--	**1.7**
Percent retained 4750 micron sieve	**9**	--	--	**0.7**	--	**1.3**	--	--	--	**6.7**	--	--	0.1 U
Percent retained 9500 micron sieve	**5.8**	--	--	0.1 U	--	0.1 U	--	--	--	**1.4**	--	--	**9.6**
Percent retained 12500 micron sieve	**2.1**	--	--	0.1 U	--	**2.5**	--	--	--	0.1 U	--	--	**7.4**
Percent retained 19000 micron sieve	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U
Percent retained 25K micron sieve	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U
Percent retained 37.5K micron sieve	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U
Percent retained 50K micron sieve	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U
Percent retained 75K micron sieve	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U

Notes:
1. Sample depth is reported as below mudline.
Bold = Detected result
U = Compound analyzed, but not detected above detection limit
pct = percent
su = standard units
-- Sample was not submitted for chemical analysis.

Table 22
Subsurface Sediment Geotechnical Testing Results - Inner Waterway

Location ID:	2A-101A-HSA	2A-101A-HSA	2A-101A-HSA	2A-101A-HSA	2A-101A-HSA	2A-101A-HSA	2A-101A-HSA	2A-101A-HSA	2A-101A-HSA	2A-101A-HSA	2A-101A-HSA	2A-101C-HSA	2A-101C-HSA
Sample ID:	2A-101A-HSA-S2	2A-101A-HSA-S3	2A-101A-HSA-S4	2A-101A-HSA-S5	2A-101A-HSA-S6	2A-101A-HSA-S7	2A-101A-HSA-S8	2A-101A-HSA-S9	2A-101A-HSA-S10	2A-101A-HSA-S11	2A-101A-HSA-S13	2A-101C-HSA-S2	2A-101C-HSA-S4
Sample Date:	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08
In-Situ Depth[1] (ft):	2.5 - 4 ft	4 - 5.5 ft	7.5 - 9 ft	9 - 10.5 ft	14 - 15.5 ft	19 - 20.5 ft	24 - 25.5 ft	29 - 30.5 ft	34 - 35.5 ft	39 - 40.5 ft	49 - 50.5 ft	3 - 4.5 ft	8 - 9.5 ft
Physical Parameters													
Atterberg Classification	--	--	Non-Plastic	--	--	--	Non-Plastic	--	--	CL	--	--	OH
Specific gravity (su)	--	--	2.66	--	--	--	--	--	--	--	--	--	2.51
Plastic Limit (pct)	--	--	--	--	--	--	--	--	--	16.4	--	--	55.9
Plasticity Index (pct)	--	--	--	--	--	--	--	--	--	22.7	--	--	57.1
Liquid Limit (pct)	--	--	--	--	--	--	--	--	--	39.2	--	--	113
Moisture (water) Content (pct)	9.84	7.02	32.42	29.15	14.6	20.17	23.86	37.01	31.77	33.04	20.5	20.79	128.4
Moisture, percent (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--
Grain Size (pct)													
Gravel	--	7.6	--	--	28.6	--	--	--	--	--	--	21	--
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	5	--	--	10.8	--	--	0.3	--	--	--	18	--
Sand, Medium	--	42.8	--	--	21.3	--	--	0.9	--	--	--	45.4	--
Sand, Fine	--	42.4	--	--	26.8	--	--	13.9	--	--	--	10.8	--
Silt, Very Coarse	--	2.2	--	--	5.4	--	--	24.1	--	--	--	4.8	--
Silt, Coarse	--	--	--	--	0.5	--	--	7.5	--	--	--	--	--
Silt, Medium	--	--	--	--	1	--	--	8.3	--	--	--	--	--
Silt, Fine	--	--	--	--	1	--	--	10	--	--	--	--	--
Silt, Very Fine	--	--	--	--	1.4	--	--	6.7	--	--	--	--	--
Clay	--	--	--	--	3.3	--	--	28.3	--	--	--	--	--
Total Gravel	--	7.6	--	--	28.6	--	--	--	--	--	--	21	--
Total Sand	--	90.2	--	--	58.9	--	--	15.1	--	--	--	74.2	--
Total Silt	--	2.2	--	--	9.3	--	--	56.6	--	--	--	4.8	--
Total Clay	--	--	--	--	3.3	--	--	28.3	--	--	--	--	--
Total Fines (Silt + Clay)	--	2.2	--	--	12.6	--	--	84.9	--	--	--	4.8	--
Total Grain Size	--	100	--	--	100.1	--	--	100	--	--	--	100	--
Percent passing < 1.3 micron sieve	--	--	--	--	1.9	--	--	20	--	--	--	--	--
Percent retained 1.3 micron sieve	--	--	--	--	1.4	--	--	8.3	--	--	--	--	--
Percent retained 3.2 micron sieve	--	--	--	--	1.4	--	--	6.7	--	--	--	--	--
Percent retained 7 micron sieve	--	--	--	--	0.5	--	--	4.2	--	--	--	--	--
Percent retained 9 micron sieve	--	--	--	--	0.5	--	--	5.8	--	--	--	--	--
Percent retained 13 micron sieve	--	--	--	--	1	--	--	8.3	--	--	--	--	--
Percent retained 22 micron sieve	--	--	--	--	0.5	--	--	7.5	--	--	--	--	--
Percent retained 32 micron sieve	--	2.2	--	--	5.4	--	--	24.1	--	--	--	4.8	--
Percent retained 75 micron sieve	--	2.1	--	--	10.2	--	--	10.1	--	--	--	1.4	--
Percent retained 150 micron sieve	--	8.6	--	--	5.5	--	--	2.9	--	--	--	2.7	--
Percent retained 250 micron sieve	--	31.7	--	--	11.1	--	--	0.9	--	--	--	6.7	--
Percent retained 425 micron sieve	--	31.1	--	--	11.8	--	--	0.6	--	--	--	14.8	--
Percent retained 850 micron sieve	--	11.7	--	--	9.5	--	--	0.3	--	--	--	30.6	--
Percent retained 2000 micron sieve	--	5	--	--	10.8	--	--	0.3	--	--	--	18	--
Percent retained 4750 micron sieve	--	3.7	--	--	14	--	--	0.1 U	--	--	--	10.6	--
Percent retained 9500 micron sieve	--	3.9	--	--	4.8	--	--	0.1 U	--	--	--	3.1	--
Percent retained 12500 micron sieve	--	0.1 U	--	--	9.8	--	--	0.1 U	--	--	--	7.3	--
Percent retained 19000 micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	--	0.1 U	--
Percent retained 25K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	--	0.1 U	--
Percent retained 37.5K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	--	0.1 U	--
Percent retained 50K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	--	0.1 U	--
Percent retained 75K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	--	0.1 U	--

Table 22
Subsurface Sediment Geotechnical Testing Results - Inner Waterway

Location ID:	2A-101C-HSA	2A-101C-HSA	2A-101C-HSA	2A-101C-HSA	2A-101C-HSA	2A-102A-HSA	2A-102A-HSA	2A-102A-HSA	2A-102A-HSA	2A-102A-HSA	2A-102A-HSA	2A-102A-HSA	2A-102A-HSA
Sample ID:	2A-101C-HSA-S5	2A-101C-HSA-S6	2A-101C-HSA-S7	2A-101C-HSA-S9	2A-101C-HSA-S11	2A-102A-HSA-S2	2A-102A-HSA-S3	2A-102A-HSA-S4	2A-102A-HSA-S5	2A-102A-HSA-S6	2A-102A-HSA-S7	2A-102A-HSA-S8	2A-102A-HSA-S9
Sample Date:	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08
In-Situ Depth[1] (ft):	10.5 - 12 ft	13 - 14.5 ft	18 - 19.5 ft	28 - 29.5 ft	35 - 36.5 ft	2.5 - 3 ft	5 - 5.5 ft	7.5 - 9 ft	9 - 10.5 ft	14 - 15.5 ft	19 - 20.5 ft	24 - 25.5 ft	29 - 30.5 ft
Physical Parameters													
Atterberg Classification	--	--	CL	--	CL	--	--	CL	--	--	--	Non-Plastic	--
Specific gravity (su)	--	--	2.79	--	2.77	--	--	2.8	--	--	--	--	--
Plastic Limit (pct)	--	--	13.6	--	15	--	--	15.7	--	--	--	--	--
Plasticity Index (pct)	--	--	17.4	--	20.7	--	--	21.7	--	--	--	--	--
Liquid Limit (pct)	--	--	31	--	35.8	--	--	37.4	--	--	--	--	--
Moisture (water) Content (pct)	107	55.86	20.33	22.38	22.81	4.26	4.92	26.28	30.99	33.95	25.49	25.14	24.71
Moisture, percent (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--
Grain Size (pct)													
Gravel	5.7	--	--	--	--	--	1.6	--	--	--	--	--	0.6
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	4.3	--	--	--	--	--	3.3	--	--	1.3	--	--	0.7
Sand, Medium	16.6	--	--	--	--	--	28.8	--	--	5.9	--	--	2.3
Sand, Fine	21.9	--	--	--	--	--	64.3	--	--	52	--	--	76
Silt, Very Coarse	3.6	--	--	--	--	--	1.9	--	--	12	--	--	20.3
Silt, Coarse	6.4	--	--	--	--	--	--	--	--	2.3	--	--	--
Silt, Medium	6.4	--	--	--	--	--	--	--	--	3	--	--	--
Silt, Fine	13.8	--	--	--	--	--	--	--	--	3.8	--	--	--
Silt, Very Fine	7.4	--	--	--	--	--	--	--	--	4.6	--	--	--
Clay	13.8	--	--	--	--	--	--	--	--	15.2	--	--	--
Total Gravel	5.7	--	--	--	--	--	1.6	--	--	--	--	--	0.6
Total Sand	42.8	--	--	--	--	--	96.4	--	--	59.2	--	--	79
Total Silt	37.6	--	--	--	--	--	1.9	--	--	25.7	--	--	20.3
Total Clay	13.8	--	--	--	--	--	--	--	--	15.2	--	--	--
Total Fines (Silt + Clay)	51.4	--	--	--	--	--	1.9	--	--	40.9	--	--	20.3
Total Grain Size	99.9	--	--	--	--	--	99.9	--	--	100.1	--	--	99.9
Percent passing < 1.3 micron sieve	9.2	--	--	--	--	--	--	--	--	10.6	--	--	--
Percent retained 1.3 micron sieve	4.6	--	--	--	--	--	--	--	--	4.6	--	--	--
Percent retained 3.2 micron sieve	7.4	--	--	--	--	--	--	--	--	4.6	--	--	--
Percent retained 7 micron sieve	6.4	--	--	--	--	--	--	--	--	1.5	--	--	--
Percent retained 9 micron sieve	7.4	--	--	--	--	--	--	--	--	2.3	--	--	--
Percent retained 13 micron sieve	6.4	--	--	--	--	--	--	--	--	3	--	--	--
Percent retained 22 micron sieve	6.4	--	--	--	--	--	--	--	--	2.3	--	--	--
Percent retained 32 micron sieve	3.6	--	--	--	--	--	1.9	--	--	12	--	--	20.3
Percent retained 75 micron sieve	6.4	--	--	--	--	--	5.9	--	--	32.8	--	--	47.2
Percent retained 150 micron sieve	5.9	--	--	--	--	--	20.1	--	--	12.4	--	--	23.2
Percent retained 250 micron sieve	9.6	--	--	--	--	--	38.3	--	--	6.8	--	--	5.6
Percent retained 425 micron sieve	8.9	--	--	--	--	--	21.3	--	--	3.5	--	--	1.5
Percent retained 850 micron sieve	7.7	--	--	--	--	--	7.5	--	--	2.4	--	--	0.8
Percent retained 2000 micron sieve	4.3	--	--	--	--	--	3.3	--	--	1.3	--	--	0.7
Percent retained 4750 micron sieve	3.9	--	--	--	--	--	1.6	--	--	0.1 U	--	--	0.6
Percent retained 9500 micron sieve	1.8	--	--	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 12500 micron sieve	0.1 U	--	--	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 19000 micron sieve	0.1 U	--	--	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 25K micron sieve	0.1 U	--	--	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 37.5K micron sieve	0.1 U	--	--	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 50K micron sieve	0.1 U	--	--	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 75K micron sieve	0.1 U	--	--	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U

Table 22
Subsurface Sediment Geotechnical Testing Results - Inner Waterway

Location ID:	2A-102A-HSA	2A-102A-HSA	2A-102A-HSA	2A-102A-HSA	2A-102A-HSA	2A-102A-HSA	2A-102A-HSA	2A-102C-HSA	2A-102C-HSA	2A-102C-HSA	2A-102C-HSA	2A-102C-HSA	2A-102C-HSA
Sample ID:	2A-102A-HSA-S10	2A-102A-HSA-S11	2A-102A-HSA-S12	2A-102A-HSA-S13	2A-102A-HSA-S14	2A-102A-HSA-S15	2A-102A-HSA-S17	2A-102C-HSA-S2	2A-102C-HSA-S3	2A-102C-HSA-S4	2A-102C-HSA-S5	2A-102C-HSA-S6	2A-102C-HSA-S7
Sample Date:	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/14/08	8/14/08	8/14/08	8/14/08	8/14/08	8/14/08
In-Situ Depth[1] (ft):	34 - 35.5 ft	39 - 40.5 ft	44 - 45.5 ft	49 - 50.5 ft	54 - 55.5 ft	59 - 60.5 ft	69 - 70.5 ft	10 - 11.5 ft	12.5 - 14 ft	15 - 16.5 ft	17.5 - 19 ft	21 - 22.5 ft	26 - 27.5 ft
Physical Parameters													
Atterberg Classification	--	CL	--	--	CL	--	CL	--	MH	--	--	--	CL
Specific gravity (su)	--	--	--	--	2.76	--	--	--	2.03	--	--	--	2.77
Plastic Limit (pct)	--	19.2	--	--	18	--	14.3	--	85.6	--	--	--	15.6
Plasticity Index (pct)	--	18.8	--	--	29.4	--	22.4	--	20.4	--	--	--	15.9
Liquid Limit (pct)	--	38	--	--	47.4	--	36.7	--	106	--	--	--	31.5
Moisture (water) Content (pct)	35.98	38.24	30.21	35.23	32.16	20.96	21.14	--	--	--	--	--	--
Moisture, percent (pct)	--	--	--	--	--	--	--	223.8	202.2	394.3	101.3	28.09	26.43
Grain Size (pct)													
Gravel	--	--	--	--	--	4.4	--	0.1	--	--	2.9	--	--
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	--	--	--	--	1.8	--	1.2	--	--	1.7	--	--
Sand, Medium	--	--	0.2	--	--	5.3	--	15	--	--	6.7	--	--
Sand, Fine	--	--	10.4	--	--	18.5	--	18.5	--	--	10.6	--	--
Silt, Very Coarse	--	--	23.4	--	--	12.3	--	6	--	--	8.1	--	--
Silt, Coarse	--	--	6.2	--	--	4.4	--	12	--	--	3	--	--
Silt, Medium	--	--	8.5	--	--	7.3	--	13.5	--	--	9	--	--
Silt, Fine	--	--	10.1	--	--	8.8	--	16.5	--	--	10.6	--	--
Silt, Very Fine	--	--	8.5	--	--	8.8	--	3	--	--	9.8	--	--
Clay	--	--	32.6	--	--	28.6	--	14.2	--	--	37.6	--	--
Total Gravel	--	--	--	--	--	4.4	--	0.1	--	--	2.9	--	--
Total Sand	--	--	10.6	--	--	25.6	--	34.7	--	--	19	--	--
Total Silt	--	--	56.7	--	--	41.6	--	51	--	--	40.5	--	--
Total Clay	--	--	32.6	--	--	28.6	--	14.2	--	--	37.6	--	--
Total Fines (Silt + Clay)	--	--	89.3	--	--	70.2	--	65.2	--	--	78.1	--	--
Total Grain Size	--	--	99.9	--	--	100.2	--	100	--	--	100	--	--
Percent passing < 1.3 micron sieve	--	--	24.8	--	--	20.5	--	9.7	--	--	26.3	--	--
Percent retained 1.3 micron sieve	--	--	7.8	--	--	8.1	--	4.5	--	--	11.3	--	--
Percent retained 3.2 micron sieve	--	--	8.5	--	--	8.8	--	3	--	--	9.8	--	--
Percent retained 7 micron sieve	--	--	5.4	--	--	4.4	--	3	--	--	5.3	--	--
Percent retained 9 micron sieve	--	--	4.7	--	--	4.4	--	13.5	--	--	5.3	--	--
Percent retained 13 micron sieve	--	--	8.5	--	--	7.3	--	13.5	--	--	9	--	--
Percent retained 22 micron sieve	--	--	6.2	--	--	4.4	--	12	--	--	3	--	--
Percent retained 32 micron sieve	--	--	23.4	--	--	12.3	--	6	--	--	8.1	--	--
Percent retained 75 micron sieve	--	--	9.6	--	--	8.5	--	5.8	--	--	4.5	--	--
Percent retained 150 micron sieve	--	--	0.5	--	--	5.3	--	4.9	--	--	2.8	--	--
Percent retained 250 micron sieve	--	--	0.3	--	--	4.7	--	7.8	--	--	3.3	--	--
Percent retained 425 micron sieve	--	--	0.1	--	--	3.3	--	9.1	--	--	3.6	--	--
Percent retained 850 micron sieve	--	--	0.1	--	--	2	--	5.9	--	--	3.1	--	--
Percent retained 2000 micron sieve	--	--	0.1 U	--	--	1.8	--	1.2	--	--	1.7	--	--
Percent retained 4750 micron sieve	--	--	0.1 U	--	--	2.6	--	0.1	--	--	0.6	--	--
Percent retained 9500 micron sieve	--	--	0.1 U	--	--	1.8	--	0.1 U	--	--	2.3	--	--
Percent retained 12500 micron sieve	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--
Percent retained 19000 micron sieve	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--
Percent retained 25K micron sieve	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--
Percent retained 37.5K micron sieve	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--
Percent retained 50K micron sieve	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--
Percent retained 75K micron sieve	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--

Table 22
Subsurface Sediment Geotechnical Testing Results - Inner Waterway

Location ID:	2A-103A-HSA	2A-103A-HSA	2A-103A-HSA	2A-103A-HSA	2A-103A-HSA	2A-103A-HSA	2A-103A-HSA	2A-103A-HSA	2A-103A-HSA	2A-103A-HSA	2A-103A-HSA	2A-103A-HSA	2A-103A-HSA
Sample ID:	2A-103A-HSA-S2	2A-103A-HSA-S3	2A-103A-HSA-S4	2A-103A-HSA-S5	2A-103A-HSA-S6	2A-103A-HSA-S7	2A-103A-HSA-S8	2A-103A-HSA-S9	2A-103A-HSA-S10	2A-103A-HSA-S11	2A-103A-HSA-S12	2A-103A-HSA-S13	2A-103A-HSA-S14
Sample Date:	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08
In-Situ Depth[1] (ft):	2.5 - 4 ft	5 - 6.5 ft	8 - 9.5 ft	10 - 11.5 ft	13 - 14.5 ft	19 - 20.5 ft	24 - 25.5 ft	29 - 30.5 ft	34 - 35.5 ft	39 - 40.5 ft	44 - 45.5 ft	49 - 50.5 ft	54 - 55.5 ft
Physical Parameters													
Atterberg Classification	--	--	--	--	--	--	Non-Plastic	--	--	Non-Plastic	--	--	CL
Specific gravity (su)	--	--	2.67	--	--	--	--	--	--	--	--	--	2.79
Plastic Limit (pct)	--	--	--	--	--	--	--	--	--	--	--	--	11.5
Plasticity Index (pct)	--	--	--	--	--	--	--	--	--	--	--	--	11
Liquid Limit (pct)	--	--	--	--	--	--	--	--	--	--	--	--	22.5
Moisture (water) Content (pct)	69.59	65.78	36.43	20.52	20.87	22.31	17.55	27.1	14.98	22.7	27.13	28.31	20.85
Moisture, percent (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--
Grain Size (pct)													
Gravel	--	22.3	--	--	17.8	--	--	--	--	--	0.5	--	--
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	9.8	--	--	6.6	--	--	--	--	--	0.4	--	--
Sand, Medium	--	19.6	--	--	30.6	--	--	0.7	--	--	1.3	--	--
Sand, Fine	--	33.7	--	--	32.6	--	--	26.7	--	--	8.7	--	--
Silt, Very Coarse	--	7.4	--	--	7.1	--	--	15.9	--	--	13	--	--
Silt, Coarse	--	--	--	--	--	--	--	2.3	--	--	5.4	--	--
Silt, Medium	--	0.5	--	--	1.1	--	--	6.2	--	--	9.2	--	--
Silt, Fine	--	1.5	--	--	2.2	--	--	8.6	--	--	12.4	--	--
Silt, Very Fine	--	1.6	--	--	1.1	--	--	8.5	--	--	10	--	--
Clay	--	3.7	--	--	1.1	--	--	31.1	--	--	39.3	--	--
Total Gravel	--	22.3	--	--	17.8	--	--	--	--	--	0.5	--	--
Total Sand	--	63.1	--	--	69.8	--	--	27.4	--	--	10.4	--	--
Total Silt	--	11	--	--	11.5	--	--	41.5	--	--	50	--	--
Total Clay	--	3.7	--	--	1.1	--	--	31.1	--	--	39.3	--	--
Total Fines (Silt + Clay)	--	14.7	--	--	12.6	--	--	72.6	--	--	89.3	--	--
Total Grain Size	--	100.1	--	--	100.2	--	--	100	--	--	100.2	--	--
Percent passing < 1.3 micron sieve	--	2.1	--	--	1.1	--	--	23.3	--	--	29.3	--	--
Percent retained 1.3 micron sieve	--	1.6	--	--	0.1 U	--	--	7.8	--	--	10	--	--
Percent retained 3.2 micron sieve	--	1.6	--	--	1.1	--	--	8.5	--	--	10	--	--
Percent retained 7 micron sieve	--	1	--	--	1.1	--	--	4.7	--	--	6.2	--	--
Percent retained 9 micron sieve	--	0.5	--	--	1.1	--	--	3.9	--	--	6.2	--	--
Percent retained 13 micron sieve	--	0.5	--	--	1.1	--	--	6.2	--	--	9.2	--	--
Percent retained 22 micron sieve	--	0.1 U	--	--	0.1 U	--	--	2.3	--	--	5.4	--	--
Percent retained 32 micron sieve	--	7.4	--	--	7.1	--	--	15.9	--	--	13	--	--
Percent retained 75 micron sieve	--	12.6	--	--	6.8	--	--	16.7	--	--	5	--	--
Percent retained 150 micron sieve	--	9.7	--	--	6.5	--	--	7.7	--	--	2.2	--	--
Percent retained 250 micron sieve	--	11.4	--	--	19.3	--	--	2.3	--	--	1.5	--	--
Percent retained 425 micron sieve	--	10.5	--	--	18.9	--	--	0.5	--	--	0.8	--	--
Percent retained 850 micron sieve	--	9.1	--	--	11.7	--	--	0.2	--	--	0.5	--	--
Percent retained 2000 micron sieve	--	9.8	--	--	6.6	--	--	0.1 U	--	--	0.4	--	--
Percent retained 4750 micron sieve	--	11.4	--	--	4.7	--	--	0.1 U	--	--	0.5	--	--
Percent retained 9500 micron sieve	--	5.7	--	--	2.3	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 12500 micron sieve	--	5.2	--	--	10.8	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 19000 micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 25K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 37.5K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 50K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 75K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--

Table 22
Subsurface Sediment Geotechnical Testing Results - Inner Waterway

Location ID:	2A-103A-HSA	2A-103A-HSA	2A-103A-HSA	2A-103C-HSA	2A-103C-HSA	2A-103C-HSA	2C-101C-HSA	2C-101C-HSA	2C-101C-HSA	2C-101C-HSA	2C-101C-HSA	2C-101C-HSA	3B-101A-HSA
Sample ID:	2A-103A-HSA-S15	2A-103A-HSA-S16	2A-103A-HSA-S18	2A-103C-HSA-S5	2A-103C-HSA-S6	2A-103C-HSA-S7	2C-101C-HSA-S2	2C-101C-HSA-S3	2C-101C-HSA-S4	2C-101C-HSA-S5	2C-101C-HSA-S6	2C-101C-HSA-S7	3B-101A-HSA-S2
Sample Date:	8/6/08	8/6/08	8/6/08	8/15/08	8/15/08	8/15/08	8/13/08	8/13/08	8/13/08	8/13/08	8/13/08	8/13/08	8/5/08
In-Situ Depth[1] (ft):	59 - 60.5 ft	64 - 65.5 ft	74 - 75.5 ft	14.5 - 16 ft	19.5 - 21 ft	24.5 - 26 ft	10 - 11.5 ft	12.5 - 14 ft	15 - 16.5 ft	17.5 - 19 ft	22.5 - 24 ft	27.5 - 29 ft	2.5 - 4 ft
Physical Parameters													
Atterberg Classification	--	--	--	CL	--	CL	--	--	CL	--	--	CL	--
Specific gravity (su)	--	--	--	2.78	--	2.76	--	--	2.78	--	--	2.78	--
Plastic Limit (pct)	--	--	--	19.2	--	16.5	--	--	18.6	--	--	18.6	--
Plasticity Index (pct)	--	--	--	28.3	--	18.9	--	--	18.4	--	--	18.4	--
Liquid Limit (pct)	--	--	--	47.5	--	35.4	--	--	37	--	--	37	--
Moisture (water) Content (pct)	28.11	18.13	16.21	--	--	--	--	--	--	--	--	--	19.18
Moisture, percent (pct)	--	--	--	40.86	34.04	27.63	25.58	39.14	30.7	33.42	30.62	28.98	--
Grain Size (pct)													
Gravel	0.2	--	3.4	--	--	--	--	--	--	--	--	--	--
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	--	1.9	--	0.1	--	--	--	--	--	--	--	--
Sand, Medium	0.3	--	8	--	0.2	--	0.3	--	--	0.3	--	--	--
Sand, Fine	3.3	--	22.6	--	2.9	--	18.2	--	--	4.3	--	--	--
Silt, Very Coarse	13.7	--	12.4	--	3.7	--	18.8	--	--	28.6	--	--	--
Silt, Coarse	7.8	--	4.4	--	7.2	--	4.6	--	--	6.2	--	--	--
Silt, Medium	7.1	--	5.9	--	8.8	--	7.7	--	--	8.6	--	--	--
Silt, Fine	12.6	--	8.1	--	12	--	8.5	--	--	8.6	--	--	--
Silt, Very Fine	11	--	7.4	--	12	--	7	--	--	7	--	--	--
Clay	43.9	--	25.8	--	53	--	34.8	--	--	36.6	--	--	--
Total Gravel	0.2	--	3.4	--	--	--	--	--	--	--	--	--	--
Total Sand	3.6	--	32.5	--	3.2	--	18.5	--	--	4.6	--	--	--
Total Silt	52.2	--	38.2	--	43.7	--	46.6	--	--	59	--	--	--
Total Clay	43.9	--	25.8	--	53	--	34.8	--	--	36.6	--	--	--
Total Fines (Silt + Clay)	96.1	--	64	--	96.7	--	81.4	--	--	95.6	--	--	--
Total Grain Size	99.9	--	99.9	--	99.9	--	99.9	--	--	100.2	--	--	--
Percent passing < 1.3 micron sieve	33.7	--	19.2	--	39.3	--	25.5	--	--	26.5	--	--	--
Percent retained 1.3 micron sieve	10.2	--	6.6	--	13.7	--	9.3	--	--	10.1	--	--	--
Percent retained 3.2 micron sieve	11	--	7.4	--	12	--	7	--	--	7	--	--	--
Percent retained 7 micron sieve	6.3	--	3.7	--	5.6	--	4.6	--	--	4.7	--	--	--
Percent retained 9 micron sieve	6.3	--	4.4	--	6.4	--	3.9	--	--	3.9	--	--	--
Percent retained 13 micron sieve	7.1	--	5.9	--	8.8	--	7.7	--	--	8.6	--	--	--
Percent retained 22 micron sieve	7.8	--	4.4	--	7.2	--	4.6	--	--	6.2	--	--	--
Percent retained 32 micron sieve	13.7	--	12.4	--	3.7	--	18.8	--	--	28.6	--	--	--
Percent retained 75 micron sieve	2.3	--	9.8	--	2.1	--	14.7	--	--	3.9	--	--	--
Percent retained 150 micron sieve	0.6	--	6.6	--	0.5	--	2.5	--	--	0.2	--	--	--
Percent retained 250 micron sieve	0.4	--	6.2	--	0.3	--	1	--	--	0.2	--	--	--
Percent retained 425 micron sieve	0.2	--	4.3	--	0.1	--	0.2	--	--	0.2	--	--	--
Percent retained 850 micron sieve	0.1	--	3.7	--	0.1	--	0.1	--	--	0.1	--	--	--
Percent retained 2000 micron sieve	0.1 U	--	1.9	--	0.1	--	0.1 U	--	--	0.1 U	--	--	--
Percent retained 4750 micron sieve	0.2	--	2.4	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--
Percent retained 9500 micron sieve	0.1 U	--	1	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--
Percent retained 12500 micron sieve	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--
Percent retained 19000 micron sieve	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--
Percent retained 25K micron sieve	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--
Percent retained 37.5K micron sieve	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--
Percent retained 50K micron sieve	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--
Percent retained 75K micron sieve	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--

Table 22
Subsurface Sediment Geotechnical Testing Results - Inner Waterway

Location ID:	3B-101A-HSA	3B-101A-HSA	3B-101A-HSA	3B-101A-HSA	3B-101A-HSA	3B-101A-HSA	3B-101A-HSA	3B-101A-HSA	3B-101A-HSA	3B-101A-HSA	3B-101A-HSA	3B-101A-HSA	3B-101A-HSA
Sample ID:	3B-101A-HSA-S3	3B-101A-HSA-S4	3B-101A-HSA-S5	3B-101A-HSA-S6	3B-101A-HSA-S7	3B-101A-HSA-S8	3B-101A-HSA-S9	3B-101A-HSA-S10	3B-101A-HSA-S11	3B-101A-HSA-S12	3B-101A-HSA-S14	3B-101A-HSA-S15	3B-101A-HSA-S16
Sample Date:	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08	8/5/08
In-Situ Depth[1] (ft):	4 - 5.5 ft	7.5 - 9 ft	9 - 10.5 ft	14 - 15.5 ft	19 - 20.5 ft	24 - 25.5 ft	29 - 30.5 ft	34 - 35.5 ft	39 - 40.5 ft	44 - 45.5 ft	54 - 55.5 ft	59 - 60.5 ft	64 - 68 ft
Physical Parameters													
Atterberg Classification	--	Non-Plastic	--	--	--	CL	--	--	CL	--	CL	--	--
Specific gravity (su)	--	2.7	--	--	--	--	--	--	--	--	2.79	--	--
Plastic Limit (pct)	--	--	--	--	--	15.4	--	--	13.8	--	14.4	--	--
Plasticity Index (pct)	--	--	--	--	--	19.4	--	--	17.9	--	20.5	--	--
Liquid Limit (pct)	--	--	--	--	--	34.9	--	--	31.6	--	35	--	--
Moisture (water) Content (pct)	20.8	20.59	18.44	21	18.87	36.15	23.56	22.53	22.78	26.64	20.34	24.23	--
Moisture, percent (pct)	--	--	--	--	--	--	--	--	--	--	--	--	28.77
Grain Size (pct)													
Gravel	33.9	--	--	28	--	--	--	--	--	1.4	--	1	--
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	10.7	--	--	8.8	--	--	--	--	--	0.4	--	0.1	--
Sand, Medium	26.6	--	--	21	--	--	2	--	--	2.8	--	0.4	0.5
Sand, Fine	20.9	--	--	33.4	--	--	41.5	--	--	7.3	--	15	9.6
Silt, Very Coarse	7.9	--	--	9	--	--	25.5	--	--	8.9	--	19.2	18.8
Silt, Coarse	--	--	--	--	--	--	4.6	--	--	5.3	--	6.1	6.2
Silt, Medium	--	--	--	--	--	--	4.6	--	--	8.4	--	7.7	8.5
Silt, Fine	--	--	--	--	--	--	5.4	--	--	12.2	--	10.8	10.8
Silt, Very Fine	--	--	--	--	--	--	3.9	--	--	10.7	--	7.7	10
Clay	--	--	--	--	--	--	12.4	--	--	42.7	--	32.2	35.6
Total Gravel	33.9	--	--	28	--	--	--	--	--	1.4	--	1	--
Total Sand	58.2	--	--	63.2	--	--	43.5	--	--	10.5	--	15.5	10.1
Total Silt	7.9	--	--	9	--	--	44	--	--	45.5	--	51.5	54.3
Total Clay	--	--	--	--	--	--	12.4	--	--	42.7	--	32.2	35.6
Total Fines (Silt + Clay)	7.9	--	--	9	--	--	56.4	--	--	88.2	--	83.7	89.9
Total Grain Size	100	--	--	100.2	--	--	99.9	--	--	100.1	--	100.2	100
Percent passing < 1.3 micron sieve	--	--	--	--	--	--	10.1	--	--	32.8	--	24.5	26.3
Percent retained 1.3 micron sieve	--	--	--	--	--	--	2.3	--	--	9.9	--	7.7	9.3
Percent retained 3.2 micron sieve	--	--	--	--	--	--	3.9	--	--	10.7	--	7.7	10
Percent retained 7 micron sieve	--	--	--	--	--	--	3.1	--	--	6.1	--	5.4	5.4
Percent retained 9 micron sieve	--	--	--	--	--	--	2.3	--	--	6.1	--	5.4	5.4
Percent retained 13 micron sieve	--	--	--	--	--	--	4.6	--	--	8.4	--	7.7	8.5
Percent retained 22 micron sieve	--	--	--	--	--	--	4.6	--	--	5.3	--	6.1	6.2
Percent retained 32 micron sieve	7.9	--	--	9	--	--	25.5	--	--	8.9	--	19.2	18.8
Percent retained 75 micron sieve	3.8	--	--	13.2	--	--	28.5	--	--	3.3	--	10.7	7.3
Percent retained 150 micron sieve	5.5	--	--	8	--	--	8.3	--	--	2	--	3.1	1.6
Percent retained 250 micron sieve	11.6	--	--	12.2	--	--	4.7	--	--	2	--	1.2	0.7
Percent retained 425 micron sieve	14.2	--	--	12	--	--	1.7	--	--	1.5	--	0.3	0.3
Percent retained 850 micron sieve	12.4	--	--	9	--	--	0.3	--	--	1.3	--	0.1	0.2
Percent retained 2000 micron sieve	10.7	--	--	8.8	--	--	0.1 U	--	--	0.4	--	0.1	0.1 U
Percent retained 4750 micron sieve	13.8	--	--	12.3	--	--	0.1 U	--	--	1.4	--	0.1 U	0.1 U
Percent retained 9500 micron sieve	16.1	--	--	8.6	--	--	0.1 U	--	--	0.1 U	--	1	0.1 U
Percent retained 12500 micron sieve	4	--	--	7.1	--	--	0.1 U	--	--	0.1 U	--	0.1 U	0.1 U
Percent retained 19000 micron sieve	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	0.1 U	0.1 U
Percent retained 25K micron sieve	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	0.1 U	0.1 U
Percent retained 37.5K micron sieve	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	0.1 U	0.1 U
Percent retained 50K micron sieve	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	0.1 U	0.1 U
Percent retained 75K micron sieve	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	0.1 U	0.1 U

Table 22
Subsurface Sediment Geotechnical Testing Results - Inner Waterway

Location ID:	3B-101C-HSA	3B-101C-HSA	3B-101C-HSA	3B-101C-HSA	3B-101C-HSA	3B-101C-HSA	3B-102A-HSA	3B-102A-HSA	3B-102A-HSA	3B-102A-HSA	3B-102A-HSA	3B-102A-HSA	3B-102A-HSA
Sample ID:	3B-101C-HSA-S2	3B-101C-HSA-S3	3B-101C-HSA-S4	3B-101C-HSA-S5	3B-101C-HSA-S6	3B-101C-HSA-S7	3B-102A-HSA-S2	3B-102A-HSA-S3	3B-102A-HSA-S4	3B-102A-HSA-S5	3B-102A-HSA-S6	3B-102A-HSA-S7	3B-102A-HSA-S8
Sample Date:	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08
In-Situ Depth[1] (ft):	2.5 - 4 ft	5 - 6.5 ft	7.5 - 9 ft	10 - 11.5 ft	15 - 16.5 ft	20 - 21.5 ft	2.5 - 4 ft	4 - 5.5 ft	7.5 - 9 ft	9 - 10.5 ft	14 - 15.5 ft	19 - 20.5 ft	24 - 25.5 ft
Physical Parameters													
Atterberg Classification	--	OH	--	--	--	CL	--	--	Non-Plastic	--	--	--	CL
Specific gravity (su)	--	2.6	--	--	--	2.78	--	--	2.67	--	--	--	--
Plastic Limit (pct)	--	83.3	--	--	--	18	--	--	--	--	--	--	16.3
Plasticity Index (pct)	--	77.4	--	--	--	15.2	--	--	--	--	--	--	22.7
Liquid Limit (pct)	--	161	--	--	--	33.2	--	--	--	--	--	--	38.9
Moisture (water) Content (pct)	33.15	192	34.08	28.92	28.72	27.23	10.2	13.25	23.66	28.33	17.49	33.74	32.2
Moisture, percent (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--
Grain Size (pct)													
Gravel	--	--	0.4	2.3	--	--	--	37	--	--	25	--	--
Gravel, Coarse	--	--	--	--	--	--	--	23.3	--	--	--	--	--
Sand, Coarse	--	--	0.3	0.6	--	--	--	8.8	--	--	14.1	--	--
Sand, Medium	--	--	2.05	1.8	--	--	--	17.2	--	--	31	--	--
Sand, Fine	--	--	16.7	5.3	--	--	--	10	--	--	24.8	--	--
Silt, Very Coarse	--	--	7.4	16.1	--	--	--	3.8	--	--	5.1	--	--
Silt, Coarse	--	--	4.7	6.8	--	--	--	--	--	--	--	--	--
Silt, Medium	--	--	8.7	9.1	--	--	--	--	--	--	--	--	--
Silt, Fine	--	--	11.8	12.9	--	--	--	--	--	--	--	--	--
Silt, Very Fine	--	--	9.4	9.9	--	--	--	--	--	--	--	--	--
Clay	--	--	38.6	35	--	--	--	--	--	--	--	--	--
Total Gravel	--	--	0.4	2.3	--	--	--	60.3	--	--	25	--	--
Total Sand	--	--	19.05	7.7	--	--	--	36	--	--	69.9	--	--
Total Silt	--	--	42	54.8	--	--	--	3.8	--	--	5.1	--	--
Total Clay	--	--	38.6	35	--	--	--	--	--	--	--	--	--
Total Fines (Silt + Clay)	--	--	80.6	89.8	--	--	--	3.8	--	--	5.1	--	--
Total Grain Size	--	--	100.05	99.8	--	--	--	100.1	--	--	100	--	--
Percent passing < 1.3 micron sieve	--	--	27.6	25.9	--	--	--	--	--	--	--	--	--
Percent retained 1.3 micron sieve	--	--	11	9.1	--	--	--	--	--	--	--	--	--
Percent retained 3.2 micron sieve	--	--	9.4	9.9	--	--	--	--	--	--	--	--	--
Percent retained 7 micron sieve	--	--	7.1	6.1	--	--	--	--	--	--	--	--	--
Percent retained 9 micron sieve	--	--	4.7	6.8	--	--	--	--	--	--	--	--	--
Percent retained 13 micron sieve	--	--	8.7	9.1	--	--	--	--	--	--	--	--	--
Percent retained 22 micron sieve	--	--	4.7	6.8	--	--	--	--	--	--	--	--	--
Percent retained 32 micron sieve	--	--	7.4	16.1	--	--	--	3.8	--	--	5.1	--	--
Percent retained 75 micron sieve	--	--	5.2	2.8	--	--	--	1.9	--	--	3.7	--	--
Percent retained 150 micron sieve	--	--	6.1	1.3	--	--	--	2.2	--	--	5.9	--	--
Percent retained 250 micron sieve	--	--	5.4	1.2	--	--	--	5.9	--	--	15.2	--	--
Percent retained 425 micron sieve	--	--	1.6	1	--	--	--	9.4	--	--	17.5	--	--
Percent retained 850 micron sieve	--	--	0.45	0.8	--	--	--	7.8	--	--	13.5	--	--
Percent retained 2000 micron sieve	--	--	0.3	0.6	--	--	--	8.8	--	--	14.1	--	--
Percent retained 4750 micron sieve	--	--	0.4	2.3	--	--	--	9.6	--	--	13.5	--	--
Percent retained 9500 micron sieve	--	--	0.1 U	0.1 U	--	--	--	3.3	--	--	6.7	--	--
Percent retained 12500 micron sieve	--	--	0.1 U	0.1 U	--	--	--	14.1	--	--	4.8	--	--
Percent retained 19000 micron sieve	--	--	0.1 U	0.1 U	--	--	--	10	--	--	0.1 U	--	--
Percent retained 25K micron sieve	--	--	0.1 U	0.1 U	--	--	--	23.3	--	--	0.1 U	--	--
Percent retained 37.5K micron sieve	--	--	0.1 U	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 50K micron sieve	--	--	0.1 U	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 75K micron sieve	--	--	0.1 U	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--	--

Table 22
Subsurface Sediment Geotechnical Testing Results - Inner Waterway

Location ID:	3B-102A-HSA	3B-102A-HSA	3B-102A-HSA	3B-102A-HSA	3B-102A-HSA	3B-102A-HSA	3B-102A-HSA	3B-102A-HSA	3B-102A-HSA	3B-102C-HSA	3B-102C-HSA	3B-102C-HSA	3B-102C-HSA
Sample ID:	3B-102A-HSA-S9	3B-102A-HSA-S10	3B-102A-HSA-S11	3B-102A-HSA-S12	3B-102A-HSA-S13	3B-102A-HSA-S14	3B-102A-HSA-S15	3B-102A-HSA-S16	3B-102A-HSA-S18	3B-102C-HSA-S2	3B-102C-HSA-S3	3B-102C-HSA-S4	3B-102C-HSA-S5
Sample Date:	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/6/08	8/12/08	8/12/08	8/12/08	8/12/08
In-Situ Depth[1] (ft):	29 - 30.5 ft	34 - 35.5 ft	39 - 40.5 ft	44 - 45.5 ft	49 - 50.5 ft	54 - 55.5 ft	59 - 60.5 ft	64 - 65.5 ft	74 - 75.5 ft	10 - 11.5 ft	12.5 - 14 ft	15 - 16.5 ft	17.5 - 19 ft
Physical Parameters													
Atterberg Classification	--	--	CL	--	--	CL	--	--	CL	--	--	CL	--
Specific gravity (su)	--	--	--	--	--	2.81	--	--	--	--	--	2.76	--
Plastic Limit (pct)	--	--	14.1	--	--	12.5	--	--	13.3	--	--	14.8	--
Plasticity Index (pct)	--	--	9.3	--	--	7.9	--	--	18.8	--	--	13.2	--
Liquid Limit (pct)	--	--	23.5	--	--	20.4	--	--	32.1	--	--	28	--
Moisture (water) Content (pct)	21.48	17.72	18.36	18.89	21.23	20.62	18.28	19.95	15.58	--	--	--	--
Moisture, percent (pct)	--	--	--	--	--	--	--	--	--	79.11	20.98	22.55	20.34
Grain Size (pct)													
Gravel	--	--	--	0.6	--	--	0.5	--	--	1.6	--	--	3.6
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	0.1	--	--	0.5	--	--	2	--	--	1.1	--	--	2
Sand, Medium	0.8	--	--	2.4	--	--	4.7	--	--	4	--	--	6.2
Sand, Fine	22.1	--	--	26.2	--	--	17.8	--	--	22.3	--	--	18.7
Silt, Very Coarse	15.9	--	--	22.1	--	--	9.9	--	--	7	--	--	8.7
Silt, Coarse	5.4	--	--	9.9	--	--	5.3	--	--	4.6	--	--	5.8
Silt, Medium	8.5	--	--	8.4	--	--	8.3	--	--	7.7	--	--	6.5
Silt, Fine	10	--	--	8.4	--	--	9.8	--	--	12.3	--	--	9.4
Silt, Very Fine	8.5	--	--	6.1	--	--	8.3	--	--	8.5	--	--	6.5
Clay	28.7	--	--	15.3	--	--	33.3	--	--	30.8	--	--	32.6
Total Gravel	--	--	--	0.6	--	--	0.5	--	--	1.6	--	--	3.6
Total Sand	23	--	--	29.1	--	--	24.5	--	--	27.4	--	--	26.9
Total Silt	48.3	--	--	54.9	--	--	41.6	--	--	40.1	--	--	36.9
Total Clay	28.7	--	--	15.3	--	--	33.3	--	--	30.8	--	--	32.6
Total Fines (Silt + Clay)	77	--	--	70.2	--	--	74.9	--	--	70.9	--	--	69.5
Total Grain Size	100	--	--	99.9	--	--	99.9	--	--	99.9	--	--	100
Percent passing < 1.3 micron sieve	21.7	--	--	10.7	--	--	25	--	--	20.8	--	--	23.2
Percent retained 1.3 micron sieve	7	--	--	4.6	--	--	8.3	--	--	10	--	--	9.4
Percent retained 3.2 micron sieve	8.5	--	--	6.1	--	--	8.3	--	--	8.5	--	--	6.5
Percent retained 7 micron sieve	4.6	--	--	3.8	--	--	5.3	--	--	5.4	--	--	4.3
Percent retained 9 micron sieve	5.4	--	--	4.6	--	--	4.5	--	--	6.9	--	--	5.1
Percent retained 13 micron sieve	8.5	--	--	8.4	--	--	8.3	--	--	7.7	--	--	6.5
Percent retained 22 micron sieve	5.4	--	--	9.9	--	--	5.3	--	--	4.6	--	--	5.8
Percent retained 32 micron sieve	15.9	--	--	22.1	--	--	9.9	--	--	7	--	--	8.7
Percent retained 75 micron sieve	15.5	--	--	16.7	--	--	8.6	--	--	9.4	--	--	8.7
Percent retained 150 micron sieve	4.7	--	--	6.2	--	--	4.9	--	--	7.6	--	--	5.3
Percent retained 250 micron sieve	1.9	--	--	3.3	--	--	4.3	--	--	5.3	--	--	4.7
Percent retained 425 micron sieve	0.7	--	--	1.7	--	--	2.9	--	--	2.6	--	--	3.6
Percent retained 850 micron sieve	0.1	--	--	0.7	--	--	1.8	--	--	1.4	--	--	2.6
Percent retained 2000 micron sieve	0.1	--	--	0.5	--	--	2	--	--	1.1	--	--	2
Percent retained 4750 micron sieve	0.1 U	--	--	0.6	--	--	0.5	--	--	1.3	--	--	2.6
Percent retained 9500 micron sieve	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.3	--	--	0.1 U
Percent retained 12500 micron sieve	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	1
Percent retained 19000 micron sieve	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 25K micron sieve	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 37.5K micron sieve	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 50K micron sieve	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 75K micron sieve	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U

Table 22
Subsurface Sediment Geotechnical Testing Results - Inner Waterway

Location ID:	3B-102C-HSA	3B-102C-HSA	3B-103A-HSA	3B-103A-HSA	3B-103A-HSA	3B-103A-HSA	3B-103A-HSA	3B-103A-HSA	3B-103A-HSA	3B-103A-HSA	3B-103A-HSA	3B-103C-HSA	3B-103C-HSA
Sample ID:	3B-102C-HSA-S6	3B-102C-HSA-S7	3B-103A-HSA-S2	3B-103A-HSA-S3	3B-103A-HSA-S4	3B-103A-HSA-S5	3B-103A-HSA-S6	3B-103A-HSA-S7	3B-103A-HSA-S8	3B-103A-HSA-S9	3B-103A-HSA-S10	3B-103C-HSA-S2	3B-103C-HSA-S3
Sample Date:	8/12/08	8/12/08	8/7/08	8/8/08	8/8/08	8/8/08	8/8/08	8/8/08	8/8/08	8/8/08	8/8/08	8/6/08	8/6/08
In-Situ Depth[1] (ft):	22.5 - 24 ft	27.5 - 29 ft	2.5 - 3 ft	4 - 5.5 ft	7.5 - 9 ft	9 - 10.5 ft	14 - 15.5 ft	19 - 20.5 ft	24 - 25.5 ft	29 - 30.5 ft	34 - 35.5 ft	5 - 6.5 ft	7.5 - 9 ft
Physical Parameters													
Atterberg Classification	--	CL	--	--	Non-Plastic	--	--	--	Non-Plastic	--	--	OH	--
Specific gravity (su)	--	2.76	--	--	2.72	--	--	--	--	--	--	2.35	--
Plastic Limit (pct)	--	13.8	--	--	--	--	--	--	--	--	--	87.3	--
Plasticity Index (pct)	--	16.8	--	--	--	--	--	--	--	--	--	82.9	--
Liquid Limit (pct)	--	30.6	--	--	--	--	--	--	--	--	--	170	--
Moisture (water) Content (pct)	--	--	10.78	19.13	9.06	32.45	13.54	15.3	17.78	25.56	31	204.3	119.6
Moisture, percent (pct)	19.36	19.72	--	--	--	--	--	--	--	--	--	--	--
Grain Size (pct)													
Gravel	--	--	--	8.8	--	--	39.9	--	--	--	--	--	2.2
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	--	--	4.1	--	--	6.6	--	--	0.5	--	--	2.4
Sand, Medium	--	--	--	17.4	--	--	16.5	--	--	3.9	--	--	6.8
Sand, Fine	--	--	--	39.6	--	--	26.8	--	--	10.4	--	--	15.6
Silt, Very Coarse	--	--	--	30.1	--	--	10	--	--	28.1	--	--	10.8
Silt, Coarse	--	--	--	--	--	--	--	--	--	9.3	--	--	4.5
Silt, Medium	--	--	--	--	--	--	--	--	--	8.5	--	--	6.8
Silt, Fine	--	--	--	--	--	--	--	--	--	9.3	--	--	12.9
Silt, Very Fine	--	--	--	--	--	--	--	--	--	6.2	--	--	7.6
Clay	--	--	--	--	--	--	--	--	--	23.9	--	--	30.3
Total Gravel	--	--	--	8.8	--	--	39.9	--	--	--	--	--	2.2
Total Sand	--	--	--	61.1	--	--	49.9	--	--	14.8	--	--	24.8
Total Silt	--	--	--	30.1	--	--	10	--	--	61.4	--	--	42.6
Total Clay	--	--	--	--	--	--	--	--	--	23.9	--	--	30.3
Total Fines (Silt + Clay)	--	--	--	30.1	--	--	10	--	--	85.3	--	--	72.9
Total Grain Size	--	--	--	100	--	--	99.8	--	--	100.1	--	--	99.9
Percent passing < 1.3 micron sieve	--	--	--	--	--	--	--	--	--	16.2	--	--	21.2
Percent retained 1.3 micron sieve	--	--	--	--	--	--	--	--	--	7.7	--	--	9.1
Percent retained 3.2 micron sieve	--	--	--	--	--	--	--	--	--	6.2	--	--	7.6
Percent retained 7 micron sieve	--	--	--	--	--	--	--	--	--	5.4	--	--	6.8
Percent retained 9 micron sieve	--	--	--	--	--	--	--	--	--	3.9	--	--	6.1
Percent retained 13 micron sieve	--	--	--	--	--	--	--	--	--	8.5	--	--	6.8
Percent retained 22 micron sieve	--	--	--	--	--	--	--	--	--	9.3	--	--	4.5
Percent retained 32 micron sieve	--	--	--	30.1	--	--	10	--	--	28.1	--	--	10.8
Percent retained 75 micron sieve	--	--	--	11	--	--	10.8	--	--	6.7	--	--	7.5
Percent retained 150 micron sieve	--	--	--	11.9	--	--	6.1	--	--	1.7	--	--	4.4
Percent retained 250 micron sieve	--	--	--	16.7	--	--	9.9	--	--	2	--	--	3.7
Percent retained 425 micron sieve	--	--	--	11.9	--	--	10.2	--	--	2.5	--	--	3.4
Percent retained 850 micron sieve	--	--	--	5.5	--	--	6.3	--	--	1.4	--	--	3.4
Percent retained 2000 micron sieve	--	--	--	4.1	--	--	6.6	--	--	0.5	--	--	2.4
Percent retained 4750 micron sieve	--	--	--	4.2	--	--	9.7	--	--	0.1 U	--	--	2.2
Percent retained 9500 micron sieve	--	--	--	0.5	--	--	8	--	--	0.1 U	--	--	0.1 U
Percent retained 12500 micron sieve	--	--	--	4.1	--	--	12.8	--	--	0.1 U	--	--	0.1 U
Percent retained 19000 micron sieve	--	--	--	0.1 U	--	--	9.4	--	--	0.1 U	--	--	0.1 U
Percent retained 25K micron sieve	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 37.5K micron sieve	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 50K micron sieve	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U
Percent retained 75K micron sieve	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U

Table 22
Subsurface Sediment Geotechnical Testing Results - Inner Waterway

Location ID:	3B-103C-HSA	3B-103C-HSA	3B-103C-HSA	3B-103C-HSA	3B-104A-HSA	3B-104A-HSA	3B-104A-HSA	3B-104A-HSA	3B-104A-HSA	3B-104A-HSA	3B-104A-HSA	3B-104A-HSA	3B-104A-HSA
Sample ID:	3B-103C-HSA-S4	3B-103C-HSA-S5	3B-103C-HSA-S6	3B-103C-HSA-S7	3B-104A-HSA-S2	3B-104A-HSA-S3	3B-104A-HSA-S4	3B-104A-HSA-S5	3B-104A-HSA-S6	3B-104A-HSA-S7	3B-104A-HSA-S8	3B-104A-HSA-S9	3B-104A-HSA-S10
Sample Date:	8/6/08	8/6/08	8/6/08	8/6/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08
In-Situ Depth[1] (ft):	10 - 11.5 ft	12.5 - 14 ft	17.5 - 19 ft	22.5 - 24 ft	2.5 - 4 ft	6 - 7.5 ft	7.5 - 9 ft	9 - 10.5 ft	14 - 15.5 ft	19 - 20.5 ft	24 - 25.5 ft	29 - 30.5 ft	34 - 35.5 ft
Physical Parameters													
Atterberg Classification	--	--	--	CL	--	--	Non-Plastic	--	--	--	Non-Plastic	--	--
Specific gravity (su)	--	--	--	2.79	--	--	2.75	--	--	--	--	--	--
Plastic Limit (pct)	--	--	--	12.1	--	--	--	--	--	--	--	--	--
Plasticity Index (pct)	--	--	--	6.9	--	--	--	--	--	--	--	--	--
Liquid Limit (pct)	--	--	--	19.1	--	--	--	--	--	--	--	--	--
Moisture (water) Content (pct)	31.36	22.18	36.63	16.34	11.65	12.49	15.89	30.82	35.23	43.35	24.26	22.58	28.95
Moisture, percent (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--
Grain Size (pct)													
Gravel	--	1.6	--	--	--	16.6	--	--	36	--	--	--	--
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	2.4	--	--	--	12.5	--	--	9.3	--	--	--	--
Sand, Medium	--	6.8	--	--	--	30.1	--	--	22.3	--	--	1.4	--
Sand, Fine	--	19.8	--	--	--	25.4	--	--	22.1	--	--	59.3	--
Silt, Very Coarse	--	10.2	--	--	--	15.3	--	--	10.2	--	--	39.2	--
Silt, Coarse	--	3.7	--	--	--	--	--	--	--	--	--	--	--
Silt, Medium	--	7.4	--	--	--	--	--	--	--	--	--	--	--
Silt, Fine	--	9.6	--	--	--	--	--	--	--	--	--	--	--
Silt, Very Fine	--	8.1	--	--	--	--	--	--	--	--	--	--	--
Clay	--	30.4	--	--	--	--	--	--	--	--	--	--	--
Total Gravel	--	1.6	--	--	--	16.6	--	--	36	--	--	--	--
Total Sand	--	29	--	--	--	68	--	--	53.7	--	--	60.7	--
Total Silt	--	39	--	--	--	15.3	--	--	10.2	--	--	39.2	--
Total Clay	--	30.4	--	--	--	--	--	--	--	--	--	--	--
Total Fines (Silt + Clay)	--	69.4	--	--	--	15.3	--	--	10.2	--	--	39.2	--
Total Grain Size	--	100	--	--	--	99.9	--	--	99.9	--	--	99.9	--
Percent passing < 1.3 micron sieve	--	20	--	--	--	--	--	--	--	--	--	--	--
Percent retained 1.3 micron sieve	--	10.4	--	--	--	--	--	--	--	--	--	--	--
Percent retained 3.2 micron sieve	--	8.1	--	--	--	--	--	--	--	--	--	--	--
Percent retained 7 micron sieve	--	4.4	--	--	--	--	--	--	--	--	--	--	--
Percent retained 9 micron sieve	--	5.2	--	--	--	--	--	--	--	--	--	--	--
Percent retained 13 micron sieve	--	7.4	--	--	--	--	--	--	--	--	--	--	--
Percent retained 22 micron sieve	--	3.7	--	--	--	--	--	--	--	--	--	--	--
Percent retained 32 micron sieve	--	10.2	--	--	--	15.3	--	--	10.2	--	--	39.2	--
Percent retained 75 micron sieve	--	8.2	--	--	--	6.7	--	--	6.6	--	--	37.4	--
Percent retained 150 micron sieve	--	5.9	--	--	--	7	--	--	6.5	--	--	17.1	--
Percent retained 250 micron sieve	--	5.7	--	--	--	11.7	--	--	9	--	--	4.8	--
Percent retained 425 micron sieve	--	4.2	--	--	--	16.1	--	--	11	--	--	1.2	--
Percent retained 850 micron sieve	--	2.6	--	--	--	14	--	--	11.3	--	--	0.2	--
Percent retained 2000 micron sieve	--	2.4	--	--	--	12.5	--	--	9.3	--	--	0.1 U	--
Percent retained 4750 micron sieve	--	1.6	--	--	--	12	--	--	8	--	--	0.1 U	--
Percent retained 9500 micron sieve	--	0.1 U	--	--	--	4.6	--	--	7.5	--	--	0.1 U	--
Percent retained 12500 micron sieve	--	0.1 U	--	--	--	0.1 U	--	--	5	--	--	0.1 U	--
Percent retained 19000 micron sieve	--	0.1 U	--	--	--	0.1 U	--	--	15.5	--	--	0.1 U	--
Percent retained 25K micron sieve	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--
Percent retained 37.5K micron sieve	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--
Percent retained 50K micron sieve	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--
Percent retained 75K micron sieve	--	0.1 U	--	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--

Table 22
Subsurface Sediment Geotechnical Testing Results - Inner Waterway

Location ID:	3B-104A-HSA	3B-104A-HSA	3B-104A-HSA	3B-104A-HSA	3B-104A-HSA	3B-104A-HSA	3B-104A-HSA	3B-104A-HSA	3B-104C-HSA	3B-104C-HSA	3B-104C-HSA	3B-104C-HSA	3B-104C-HSA	3B-104C-HSA
Sample ID:	3B-104A-HSA-S11	3B-104A-HSA-S12	3B-104A-HSA-S13	3B-104A-HSA-S14	3B-104A-HSA-S15	3B-104A-HSA-S16	3B-104A-HSA-S17	3B-104A-HSA-S18	3B-104C-HSA-S2	3B-104C-HSA-S3	3B-104C-HSA-S4	3B-104C-HSA-S5	3B-104C-HSA-S6	3B-104C-HSA-S8
Sample Date:	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08	8/7/08
In-Situ Depth[1] (ft):	39 - 40.5 ft	44 - 45.5 ft	49 - 50.5 ft	54 - 55.5 ft	59 - 60.5 ft	64 - 65.5 ft	69 - 71 ft	74 - 75.5 ft	10.5 - 12 ft	13 - 14.5 ft	15.5 - 17 ft	18 - 19.5 ft	23 - 24.5 ft	28 - 29.5 ft
Physical Parameters														
Atterberg Classification	CL	--	--	CL	--	--	CL	--	--	--	CL	--	--	CL
Specific gravity (su)	--	--	--	2.77	--	--	--	--	--	--	2.79	--	--	2.79
Plastic Limit (pct)	16.4	--	--	14.3	--	--	19.7	--	--	--	11.7	--	--	9.8
Plasticity Index (pct)	23.5	--	--	22.4	--	--	29.8	--	--	--	21.2	--	--	16.5
Liquid Limit (pct)	39.9	--	--	36.7	--	--	49.5	--	--	--	32.9	--	--	26.3
Moisture (water) Content (pct)	28.51	19.52	17.88	15.39	19.38	28.73	--	29.02	32.09	23.11	20.6	20.29	21.52	18.09
Moisture, percent (pct)	--	--	--	--	--	--	20.47	--	--	--	--	--	--	--
Grain Size (pct)														
Gravel	--	--	--	--	3.4	--	--	2	--	--	--	0.6	--	--
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	0.4	--	--	2.1	--	--	0.1	0.4	--	--	1.7	--	--
Sand, Medium	--	1.7	--	--	5.2	--	--	0.6	0.4	--	--	5.3	--	--
Sand, Fine	--	63.6	--	--	17	--	--	5.4	5.1	--	--	17.7	--	--
Silt, Very Coarse	--	34.4	--	--	12.4	--	--	14.1	7.4	--	--	11.2	--	--
Silt, Coarse	--	--	--	--	5.2	--	--	4.6	5.5	--	--	4.5	--	--
Silt, Medium	--	--	--	--	6.7	--	--	9.2	9.4	--	--	7.6	--	--
Silt, Fine	--	--	--	--	10.3	--	--	11.6	13.3	--	--	9.8	--	--
Silt, Very Fine	--	--	--	--	8.9	--	--	11.6	11.7	--	--	9.1	--	--
Clay	--	--	--	--	28.8	--	--	40.8	46.8	--	--	32.6	--	--
Total Gravel	--	--	--	--	3.4	--	--	2	--	--	--	0.6	--	--
Total Sand	--	65.7	--	--	24.3	--	--	6.1	5.9	--	--	24.7	--	--
Total Silt	--	34.4	--	--	43.5	--	--	51.1	47.3	--	--	42.2	--	--
Total Clay	--	--	--	--	28.8	--	--	40.8	46.8	--	--	32.6	--	--
Total Fines (Silt + Clay)	--	34.4	--	--	72.3	--	--	91.9	94.1	--	--	74.8	--	--
Total Grain Size	--	100.1	--	--	100	--	--	100	100	--	--	100.1	--	--
Percent passing < 1.3 micron sieve	--	--	--	--	21.4	--	--	30	35.1	--	--	25	--	--
Percent retained 1.3 micron sieve	--	--	--	--	7.4	--	--	10.8	11.7	--	--	7.6	--	--
Percent retained 3.2 micron sieve	--	--	--	--	8.9	--	--	11.6	11.7	--	--	9.1	--	--
Percent retained 7 micron sieve	--	--	--	--	4.4	--	--	5.4	5.5	--	--	3.8	--	--
Percent retained 9 micron sieve	--	--	--	--	5.9	--	--	6.2	7.8	--	--	6	--	--
Percent retained 13 micron sieve	--	--	--	--	6.7	--	--	9.2	9.4	--	--	7.6	--	--
Percent retained 22 micron sieve	--	--	--	--	5.2	--	--	4.6	5.5	--	--	4.5	--	--
Percent retained 32 micron sieve	--	34.4	--	--	12.4	--	--	14.1	7.4	--	--	11.2	--	--
Percent retained 75 micron sieve	--	34.8	--	--	7.9	--	--	3.6	3.6	--	--	8.1	--	--
Percent retained 150 micron sieve	--	22.9	--	--	4.8	--	--	1.1	1.1	--	--	5.1	--	--
Percent retained 250 micron sieve	--	5.9	--	--	4.3	--	--	0.7	0.4	--	--	4.5	--	--
Percent retained 425 micron sieve	--	1.3	--	--	3.2	--	--	0.5	0.3	--	--	3.2	--	--
Percent retained 850 micron sieve	--	0.4	--	--	2	--	--	0.1	0.1	--	--	2.1	--	--
Percent retained 2000 micron sieve	--	0.4	--	--	2.1	--	--	0.1	0.4	--	--	1.7	--	--
Percent retained 4750 micron sieve	--	0.1 U	--	--	3.4	--	--	2	0.1 U	--	--	0.6	--	--
Percent retained 9500 micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	0.1 U	--	--	0.1 U	--	--
Percent retained 12500 micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	0.1 U	--	--	0.1 U	--	--
Percent retained 19000 micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	0.1 U	--	--	0.1 U	--	--
Percent retained 25K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	0.1 U	--	--	0.1 U	--	--
Percent retained 37.5K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	0.1 U	--	--	0.1 U	--	--
Percent retained 50K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	0.1 U	--	--	0.1 U	--	--
Percent retained 75K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	0.1 U	--	--	0.1 U	--	--

Notes:
1. Sample depth is reported as below mudline.
Bold = Detected result
U = Compound analyzed, but not detected above detection limit
pct = percent
su = standard units
-- Sample was not submitted for chemical analysis.

Table 23
Subsurface Sediment Geotechnical Testing Results - Outer Waterway

Location ID:	1C-101B-HSA	1C-101B-HSA	1C-101B-HSA	1C-101B-HSA	1C-101B-HSA	1C-101C-HSA	1C-101C-HSA	1C-102A-HSA	1C-102A-HSA	1C-102A-HSA	1C-102A-HSA	1C-102A-HSA	1C-102A-HSA	1C-102A-HSA
Sample ID:	1C-101B-HSA-S3	1C-101B-HSA-S5	1C-101B-HSA-S6	1C-101B-HSA-S7	1C-101B-HSA-S8	1C-101C-HSA-S5	1C-101C-HSA-S6	1C-102A-HSA-S2	1C-102A-HSA-S3	1C-102A-HSA-S4	1C-102A-HSA-S5	1C-102A-HSA-S6	1C-102A-HSA-S7	1C-102A-HSA-S8
Sample Date:	10/15/08	10/15/08	10/15/08	10/15/08	10/15/08	10/16/08	10/16/08	7/14/08	7/14/08	7/14/08	7/14/08	7/14/08	7/14/08	7/14/08
In-Situ Depth[1] (ft):	14.3 - 15.8 ft	21.8 - 23.3 ft	26.8 - 28.3 ft	31.8 - 33.3 ft	36.8 - 38.3 ft	17.5 - 19 ft	22.5 - 24 ft	1.5 - 3 ft	4.5 - 6 ft	6.5 - 8 ft	9 - 10.5 ft	14 - 15.5 ft	19 - 20.5 ft	24 - 25.5 ft
Physical Parameters														
Atterberg Classification	--	--	--	--	CL	--	--	--	--	--	--	--	--	Non-Plastic
Specific gravity (su)	--	2.74	--	--	2.76	--	--	--	--	2.73	--	--	--	--
Plastic Limit (pct)	--	--	--	--	17.3	--	--	--	--	--	--	--	--	--
Plasticity Index (pct)	--	--	--	--	25.8	--	--	--	--	--	--	--	--	--
Liquid Limit (pct)	--	--	--	--	43.1	--	--	--	--	--	--	--	--	--
Moisture (water) Content (pct)	--	--	--	--	--	--	--	2.3	3.92	3.93	9.38	8.82	15.38	25.28
Moisture, percent (pct)	19.61	27.6	24.74	29.18	36.88	26.53	47.21	--	--	--	--	--	--	--
Grain Size (pct)														
Gravel	0.7	--	--	--	--	--	--	--	49.7	--	--	70.1	--	--
Sand, Very Coarse	--	--	--	--	--	--	--	--	9.5	--	--	7.4	--	--
Sand, Coarse	0.9	--	0.3	--	--	1	--	--	10.4	--	--	6.8	--	--
Sand, Medium	13	--	2	--	--	2.1	--	--	11.5	--	--	7.2	--	--
Sand, Fine	65.4	--	67.9	--	--	58.3	--	--	7.9	--	--	3.9	--	--
Sand, Very Fine	--	--	--	--	--	--	--	--	3.9	--	--	1.7	--	--
Silt, Very Coarse	20	--	29.9	--	--	19.9	--	--	--	--	--	--	--	--
Silt, Coarse	--	--	--	--	--	2.2	--	--	1.7	--	--	0.4	--	--
Silt, Medium	--	--	--	--	--	3.3	--	--	1.2	--	--	0.4	--	--
Silt, Fine	--	--	--	--	--	3.3	--	--	1	--	--	0.5	--	--
Silt, Very Fine	--	--	--	--	--	1.7	--	--	0.8	--	--	0.3	--	--
Clay	--	--	--	--	--	8.3	--	--	--	--	--	--	--	--
Clay, Coarse	--	--	--	--	--	--	--	--	0.5	--	--	0.2	--	--
Clay, Medium	--	--	--	--	--	--	--	--	0.4	--	--	0.2	--	--
Clay, Fine	--	--	--	--	--	--	--	--	1.4	--	--	0.7	--	--
Total Gravel	0.7	--	--	--	--	--	--	--	49.7	--	--	70.1	--	--
Total Sand	79.3	--	70.2	--	--	61.4	--	--	43.2	--	--	27	--	--
Total Silt	20	--	29.9	--	--	30.4	--	--	4.7	--	--	1.6	--	--
Total Clay	--	--	--	--	--	8.3	--	--	2.3	--	--	1.1	--	--
Total Fines (Silt + Clay)	20	--	29.9	--	--	38.7	--	--	7	--	--	2.7	--	--
Total Grain Size	100	--	100.1	--	--	100.1	--	--	99.9	--	--	99.8	--	--
Percent passing < 1.3 micron sieve	0.1 U	--	0.1 U	--	--	7.2	--	--	--	--	--	--	--	--
Percent retained 1.3 micron sieve	0.1 U	--	0.1 U	--	--	1.1	--	--	--	--	--	--	--	--
Percent retained 3.2 micron sieve	0.1 U	--	0.1 U	--	--	1.7	--	--	--	--	--	--	--	--
Percent retained 7 micron sieve	0.1 U	--	0.1 U	--	--	2.2	--	--	--	--	--	--	--	--
Percent retained 9 micron sieve	0.1 U	--	0.1 U	--	--	1.1	--	--	--	--	--	--	--	--
Percent retained 13 micron sieve	0.1 U	--	0.1 U	--	--	3.3	--	--	--	--	--	--	--	--
Percent retained 22 micron sieve	0.1 U	--	0.1 U	--	--	2.2	--	--	--	--	--	--	--	--
Percent retained 32 micron sieve	20	--	29.9	--	--	19.9	--	--	--	--	--	--	--	--
Percent retained 75 micron sieve	18.4	--	37.1	--	--	41.2	--	--	--	--	--	--	--	--
Percent retained 150 micron sieve	26.1	--	24.2	--	--	15	--	--	--	--	--	--	--	--
Percent retained 250 micron sieve	20.9	--	6.6	--	--	2.1	--	--	--	--	--	--	--	--
Percent retained 425 micron sieve	9.3	--	1.3	--	--	0.8	--	--	--	--	--	--	--	--
Percent retained 850 micron sieve	3.7	--	0.7	--	--	1.3	--	--	--	--	--	--	--	--
Percent retained 2000 micron sieve	0.9	--	0.3	--	--	1	--	--	--	--	--	--	--	--
Percent retained 4750 micron sieve	0.7	--	0.1 U	--	--	0.1 U	--	--	--	--	--	--	--	--
Percent retained 9500 micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--	--	--	--	--	--
Percent retained 12500 micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--	--	--	--	--	--
Percent retained 19000 micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--	--	--	--	--	--
Percent retained 25K micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--	--	--	--	--	--
Percent retained 37.5K micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--	--	--	--	--	--
Percent retained 50K micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--	--	--	--	--	--
Percent retained 75K micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	--	--	--	--	--	--	--

Table 23
Subsurface Sediment Geotechnical Testing Results - Outer Waterway

Location ID:	1C-102A-HSA	1C-102A-HSA	1C-102A-HSA	1C-102A-HSA	1C-102A-HSA	1C-102A-HSA	1C-102A-HSA	1C-102A-HSA	1C-102A-HSA	1C-102A-HSA	1C-102A-HSA	1C-102C-HSA	1C-102C-HSA
Sample ID:	1C-102A-HSA-S9	1C-102A-HSA-S10	1C-102A-HSA-S11	1C-102A-HSA-S12	1C-102A-HSA-S13	1C-102A-HSA-S14	1C-102A-HSA-S15	1C-102A-HSA-S16	1C-102A-HSA-S17	1C-102A-HSA-S18	1C-102A-HSA-S19	1C-102C-HSA-S5	1C-102C-HSA-S6
Sample Date:	7/14/08	7/14/08	7/14/08	7/14/08	7/14/08	7/14/08	7/14/08	7/14/08	7/14/08	7/14/08	7/14/08	10/13/08	10/13/08
In-Situ Depth[1] (ft):	29 - 30.5 ft	34 - 35.5 ft	39 - 41.5 ft	44 - 45.5 ft	49 - 50.5 ft	54 - 55.5 ft	59 - 60.5 ft	64 - 65.5 ft	67 - 69 ft	69.5 - 70.5 ft	74 - 75.5 ft	17.6 - 19.1 ft	22.6 - 24.1 ft
Physical Parameters													
Atterberg Classification	--	--	Non-Plastic	--	--	Non-Plastic	--	CL	CL	--	--	--	--
Specific gravity (su)	--	--	--	--	--	2.71	--	--	--	--	--	--	--
Plastic Limit (pct)	--	--	--	--	--	--	--	18.2	18.5	--	--	--	--
Plasticity Index (pct)	--	--	--	--	--	--	--	27.4	31.3	--	--	--	--
Liquid Limit (pct)	--	--	--	--	--	--	--	45.7	49.8	--	--	--	--
Moisture (water) Content (pct)	37.03	24.91	22.29	20.16	18.26	18.92	24.25	33.81	30.66	33.04	26.31	--	--
Moisture, percent (pct)	--	--	--	--	--	--	--	--	--	--	--	18.44	32.24
Grain Size (pct)													
Gravel	6.8	--	--	1.3	--	--	--	--	--	0.1 U	--	--	2.4
Sand, Very Coarse	7.5	--	--	4.5	--	--	--	--	--	0.2	--	--	--
Sand, Coarse	10.5	--	--	15.9	--	--	--	--	--	0.4	--	--	1.5
Sand, Medium	19.4	--	--	35.1	--	--	--	--	--	1.1	--	--	5.7
Sand, Fine	20.5	--	--	19.5	--	--	--	--	--	3.7	--	--	52.9
Sand, Very Fine	9.3	--	--	11	--	--	--	--	--	18.4	--	--	--
Silt, Very Coarse	--	--	--	--	--	--	--	--	--	--	--	--	17
Silt, Coarse	2	--	--	5.7	--	--	--	--	--	15.5	--	--	2.1
Silt, Medium	3.4	--	--	1.7	--	--	--	--	--	13.1	--	--	2.7
Silt, Fine	4.4	--	--	1	--	--	--	--	--	9.8	--	--	3.5
Silt, Very Fine	3.9	--	--	0.7	--	--	--	--	--	7.6	--	--	1.4
Clay	--	--	--	--	--	--	--	--	--	--	--	--	11
Clay, Coarse	2.9	--	--	0.5	--	--	--	--	--	6.4	--	--	--
Clay, Medium	2.5	--	--	0.8	--	--	--	--	--	5.8	--	--	--
Clay, Fine	6.9	--	--	2.4	--	--	--	--	--	18.1	--	--	--
Total Gravel	6.8	--	--	1.3	--	--	--	--	--	--	--	--	2.4
Total Sand	67.2	--	--	86	--	--	--	--	--	23.8	--	--	60.1
Total Silt	13.7	--	--	9.1	--	--	--	--	--	46	--	--	26.7
Total Clay	12.3	--	--	3.7	--	--	--	--	--	30.3	--	--	11
Total Fines (Silt + Clay)	26	--	--	12.8	--	--	--	--	--	76.3	--	--	37.7
Total Grain Size	100	--	--	100.1	--	--	--	--	--	100.1	--	--	100.2
Percent passing < 1.3 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	9.6
Percent retained 1.3 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	1.4
Percent retained 3.2 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	1.4
Percent retained 7 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	1.4
Percent retained 9 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	2.1
Percent retained 13 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	2.7
Percent retained 22 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	2.1
Percent retained 32 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	17
Percent retained 75 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	24.9
Percent retained 150 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	15.8
Percent retained 250 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	12.2
Percent retained 425 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	4.1
Percent retained 850 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	1.6
Percent retained 2000 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	1.5
Percent retained 4750 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	2.4
Percent retained 9500 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U
Percent retained 12500 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U
Percent retained 19000 micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U
Percent retained 25K micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U
Percent retained 37.5K micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U
Percent retained 50K micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U
Percent retained 75K micron sieve	--	--	--	--	--	--	--	--	--	--	--	--	0.1 U

Table 23
Subsurface Sediment Geotechnical Testing Results - Outer Waterway

Location ID:	1C-102C-HSA	1C-102C-HSA	1C-103A-HSA	1C-103A-HSA	1C-103A-HSA	1C-103A-HSA	1C-103A-HSA	1C-103A-HSA	1C-103A-HSA	1C-103A-HSA	1C-103A-HSA	1C-103A-HSA	1C-103A-HSA	1C-103A-HSA
Sample ID:	1C-102C-HSA-S7	1C-102C-HSA-S9	1C-103A-HSA-S2	1C-103A-HSA-S3	1C-103A-HSA-S4	1C-103A-HSA-S5	1C-103A-HSA-S6	1C-103A-HSA-S7	1C-103A-HSA-S8	1C-103A-HSA-S9	1C-103A-HSA-S10	1C-103A-HSA-S11	1C-103A-HSA-S12	1C-103A-HSA-S13
Sample Date:	10/13/08	10/13/08	7/16/08	7/16/08	7/16/08	7/16/08	7/16/08	7/16/08	7/16/08	7/16/08	7/16/08	7/16/08	7/16/08	7/16/08
In-Situ Depth[1] (ft):	27.6 - 29.1 ft	34.6 - 36.1 ft	1.5 - 3 ft	4 - 5.5 ft	6.5 - 8 ft	9 - 10.5 ft	14 - 15.5 ft	19 - 20.5 ft	24 - 25.5 ft	29 - 30.5 ft	34 - 35.5 ft	39 - 40.5 ft	44 - 45.5 ft	49 - 50.5 ft
Physical Parameters														
Atterberg Classification	--	--	--	--	--	--	--	--	--	Non-Plastic	--	--	--	--
Specific gravity (su)	--	2.76	--	--	2.71	--	--	--	--	--	--	--	--	--
Plastic Limit (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Plasticity Index (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Liquid Limit (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Moisture (water) Content (pct)	--	--	2.1	3.8	5.38	17.48	22.72	32.31	25.45	28.32	22.23	23.56	22.66	22.19
Moisture, percent (pct)	25	35.18	--	--	--	--	--	--	--	--	--	--	--	--
Grain Size (pct)														
Gravel	--	--	--	8.7	--	--	1.1	--	0.7	--	--	--	1.1	--
Sand, Very Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	--	--	2.7	--	--	3.7	--	2.1	--	--	--	1.5	--
Sand, Medium	--	0.3	--	23.9	--	--	32.4	--	35.3	--	--	--	19.2	--
Sand, Fine	--	1.7	--	61.3	--	--	59.9	--	58.1	--	--	--	65.6	--
Sand, Very Fine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silt, Very Coarse	--	6.5	--	3.3	--	--	2.9	--	3.8	--	--	--	12.6	--
Silt, Coarse	--	5.5	--	--	--	--	--	--	--	--	--	--	--	--
Silt, Medium	--	10.2	--	--	--	--	--	--	--	--	--	--	--	--
Silt, Fine	--	12.6	--	--	--	--	--	--	--	--	--	--	--	--
Silt, Very Fine	--	11.7	--	--	--	--	--	--	--	--	--	--	--	--
Clay	--	51.6	--	--	--	--	--	--	--	--	--	--	--	--
Clay, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay, Medium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay, Fine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Gravel	--	--	--	8.7	--	--	1.1	--	0.7	--	--	--	1.1	--
Total Sand	--	2	--	87.9	--	--	96	--	95.5	--	--	--	86.3	--
Total Silt	--	46.5	--	3.3	--	--	2.9	--	3.8	--	--	--	12.6	--
Total Clay	--	51.6	--	--	--	--	--	--	--	--	--	--	--	--
Total Fines (Silt + Clay)	--	98.1	--	3.3	--	--	2.9	--	3.8	--	--	--	12.6	--
Total Grain Size	--	100.1	--	99.9	--	--	100	--	100	--	--	--	100	--
Percent passing < 1.3 micron sieve	--	39.1	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 1.3 micron sieve	--	12.5	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 3.2 micron sieve	--	11.7	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 7 micron sieve	--	6.3	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 9 micron sieve	--	6.3	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 13 micron sieve	--	10.2	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 22 micron sieve	--	5.5	--	--	--	--	--	--	--	--	--	--	--	--
Percent retained 32 micron sieve	--	6.5	--	3.3	--	--	2.9	--	3.8	--	--	--	12.6	--
Percent retained 75 micron sieve	--	1.3	--	6.4	--	--	4.3	--	4.5	--	--	--	10.4	--
Percent retained 150 micron sieve	--	0.3	--	18.8	--	--	18	--	16.5	--	--	--	23.6	--
Percent retained 250 micron sieve	--	0.1	--	36.1	--	--	37.6	--	37.1	--	--	--	31.6	--
Percent retained 425 micron sieve	--	0.2	--	17.6	--	--	23.6	--	24.7	--	--	--	14.4	--
Percent retained 850 micron sieve	--	0.1	--	6.3	--	--	8.8	--	10.6	--	--	--	4.8	--
Percent retained 2000 micron sieve	--	0.1 U	--	2.7	--	--	3.7	--	2.1	--	--	--	1.5	--
Percent retained 4750 micron sieve	--	0.1 U	--	4.8	--	--	0.6	--	0.7	--	--	--	0.3	--
Percent retained 9500 micron sieve	--	0.1 U	--	0.1 U	--	--	0.5	--	0.1 U	--	--	--	0.8	--
Percent retained 12500 micron sieve	--	0.1 U	--	3.9	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--
Percent retained 19000 micron sieve	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--
Percent retained 25K micron sieve	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--
Percent retained 37.5K micron sieve	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--
Percent retained 50K micron sieve	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--
Percent retained 75K micron sieve	--	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	--	--	0.1 U	--

Table 23
Subsurface Sediment Geotechnical Testing Results - Outer Waterway

Location ID:	1C-103A-HSA	1C-103A-HSA	1C-103A-HSA	1C-103A-HSA	1C-103B-HSA	1C-103B-HSA	1C-103B-HSA	1C-103B-HSA	1C-103B-HSA	1C-103B-HSA	1C-103B-HSA	1C-103B-HSA	1C-103C-HSA
Sample ID:	1C-103A-HSA-S14	1C-103A-HSA-S15	1C-103A-HSA-S16	1C-103A-HSA-S18	1C-103B-HSA-S4	1C-103B-HSA-S5	1C-103B-HSA-S6	1C-103B-HSA-S7	1C-103B-HSA-S8	1C-103B-HSA-S10	1C-103B-HSA-S11	1C-103B-HSA-S13	1C-103C-HSA-S5
Sample Date:	7/16/08	7/16/08	7/16/08	7/16/08	10/15/08	10/15/08	10/15/08	10/15/08	10/15/08	10/15/08	10/15/08	10/15/08	10/13/08
In-Situ Depth[1] (ft):	54 - 55.5 ft	59 - 60.5 ft	64 - 65.5 ft	74 - 75.5 ft	9.5 - 11 ft	14.5 - 16 ft	19.5 - 21 ft	24.5 - 26 ft	29.5 - 31 ft	39.5 - 41 ft	44.5 - 46 ft	51.5 - 53 ft	10 - 11.5 ft
Physical Parameters													
Atterberg Classification	Non-Plastic	--	CL	CL	Non-Plastic	--	--	--	Non-Plastic	--	CL	--	--
Specific gravity (su)	2.74	--	--	--	2.69	--	--	--	--	--	2.77	--	--
Plastic Limit (pct)	--	--	19.8	18.6	--	--	--	--	--	--	18.2	--	--
Plasticity Index (pct)	--	--	26.9	20.9	--	--	--	--	--	--	15.3	--	--
Liquid Limit (pct)	--	--	46.7	39.5	--	--	--	--	--	--	33.5	--	--
Moisture (water) Content (pct)	21.5	21.77	23.27	25.57	--	--	--	--	--	--	--	--	--
Moisture, percent (pct)	--	--	--	--	23.08	19.35	31.8	23.25	24.32	23.63	24.35	23.6	25.13
Grain Size (pct)													
Gravel	--	--	--	--	--	--	--	--	--	1	--	--	--
Sand, Very Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	0.4	--	--	--	1.5	--	--	--	2.2	--	--	--
Sand, Medium	--	14.3	--	--	--	19.9	--	--	--	12.7	--	--	--
Sand, Fine	--	70.7	--	--	--	62.5	--	--	--	35.4	--	--	--
Sand, Very Fine	--	--	--	--	--	--	--	--	--	--	--	--	--
Silt, Very Coarse	--	14.5	--	--	--	16.2	--	--	--	3.1	--	--	--
Silt, Coarse	--	--	--	--	--	--	--	--	--	2.6	--	--	--
Silt, Medium	--	--	--	--	--	--	--	--	--	3.9	--	--	--
Silt, Fine	--	--	--	--	--	--	--	--	--	5.2	--	--	--
Silt, Very Fine	--	--	--	--	--	--	--	--	--	5.2	--	--	--
Clay	--	--	--	--	--	--	--	--	--	28.7	--	--	--
Clay, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay, Medium	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay, Fine	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Gravel	--	--	--	--	--	--	--	--	--	1	--	--	--
Total Sand	--	85.4	--	--	--	83.9	--	--	--	50.3	--	--	--
Total Silt	--	14.5	--	--	--	16.2	--	--	--	20	--	--	--
Total Clay	--	--	--	--	--	--	--	--	--	28.7	--	--	--
Total Fines (Silt + Clay)	--	14.5	--	--	--	16.2	--	--	--	48.7	--	--	--
Total Grain Size	--	99.9	--	--	--	100.1	--	--	--	100	--	--	--
Percent passing < 1.3 micron sieve	--	--	--	--	--	0.1 U	--	--	--	22.8	--	--	--
Percent retained 1.3 micron sieve	--	--	--	--	--	0.1 U	--	--	--	5.9	--	--	--
Percent retained 3.2 micron sieve	--	--	--	--	--	0.1 U	--	--	--	5.2	--	--	--
Percent retained 7 micron sieve	--	--	--	--	--	0.1 U	--	--	--	2.6	--	--	--
Percent retained 9 micron sieve	--	--	--	--	--	0.1 U	--	--	--	2.6	--	--	--
Percent retained 13 micron sieve	--	--	--	--	--	0.1 U	--	--	--	3.9	--	--	--
Percent retained 22 micron sieve	--	--	--	--	--	0.1 U	--	--	--	2.6	--	--	--
Percent retained 32 micron sieve	--	14.5	--	--	--	16.2	--	--	--	3.1	--	--	--
Percent retained 75 micron sieve	--	26.4	--	--	--	14.5	--	--	--	8.8	--	--	--
Percent retained 150 micron sieve	--	23.2	--	--	--	21.6	--	--	--	12.2	--	--	--
Percent retained 250 micron sieve	--	21.1	--	--	--	26.4	--	--	--	14.4	--	--	--
Percent retained 425 micron sieve	--	11.1	--	--	--	14.6	--	--	--	8.6	--	--	--
Percent retained 850 micron sieve	--	3.2	--	--	--	5.3	--	--	--	4.1	--	--	--
Percent retained 2000 micron sieve	--	0.4	--	--	--	1.5	--	--	--	2.2	--	--	--
Percent retained 4750 micron sieve	--	0.1 U	--	--	--	0.1 U	--	--	--	1	--	--	--
Percent retained 9500 micron sieve	--	0.1 U	--	--	--	0.1 U	--	--	--	0.1 U	--	--	--
Percent retained 12500 micron sieve	--	0.1 U	--	--	--	0.1 U	--	--	--	0.1 U	--	--	--
Percent retained 19000 micron sieve	--	0.1 U	--	--	--	0.1 U	--	--	--	0.1 U	--	--	--
Percent retained 25K micron sieve	--	0.1 U	--	--	--	0.1 U	--	--	--	0.1 U	--	--	--
Percent retained 37.5K micron sieve	--	0.1 U	--	--	--	0.1 U	--	--	--	0.1 U	--	--	--
Percent retained 50K micron sieve	--	0.1 U	--	--	--	0.1 U	--	--	--	0.1 U	--	--	--
Percent retained 75K micron sieve	--	0.1 U	--	--	--	0.1 U	--	--	--	0.1 U	--	--	--

Table 23
Subsurface Sediment Geotechnical Testing Results - Outer Waterway

Location ID:	1C-103C-HSA	1C-103C-HSA	1C-103C-HSA	1C-103C-HSA	1C-104A-HSA	1C-104A-HSA	1C-104A-HSA	1C-104A-HSA	1C-104A-HSA	1C-104A-HSA	1C-104A-HSA	1C-104A-HSA	1C-104A-HSA	1C-104A-HSA
Sample ID:	1C-103C-HSA-S7	1C-103C-HSA-S8	1C-103C-HSA-S9	1C-103C-HSA-S10	1C-104A-HSA-S2	1C-104A-HSA-S3	1C-104A-HSA-S4	1C-104A-HSA-S5	1C-104A-HSA-S6	1C-104A-HSA-S7	1C-104A-HSA-S8	1C-104A-HSA-S9	1C-104A-HSA-S10	1C-104A-HSA-S11
Sample Date:	10/13/08	10/13/08	10/13/08	10/13/08	7/15/08	7/15/08	7/15/08	7/15/08	7/15/08	7/15/08	7/15/08	7/16/08	7/16/08	7/16/08
In-Situ Depth[1] (ft):	20 - 21.5 ft	25 - 26.5 ft	30 - 31.5 ft	37.5 - 39 ft	1.5 - 3 ft	4 - 5.5 ft	6.5 - 8 ft	11.5 - 13 ft	14 - 15.5 ft	19 - 20.5 ft	24 - 25.5 ft	29 - 30.5 ft	34 - 35.5 ft	39 - 40.5 ft
Physical Parameters														
Atterberg Classification	--	Non-Plastic	--	CL	--	--	--	--	--	--	Non-Plastic	--	--	Non-Plastic
Specific gravity (su)	2.74	--	--	--	--	--	2.75	--	--	--	--	--	--	--
Plastic Limit (pct)	--	--	--	18.4	--	--	--	--	--	--	--	--	--	--
Plasticity Index (pct)	--	--	--	26.8	--	--	--	--	--	--	--	--	--	--
Liquid Limit (pct)	--	--	--	45.2	--	--	--	--	--	--	--	--	--	--
Moisture (water) Content (pct)	--	--	--	--	5.92	5.25	5.47	33.45	26.8	38.38	22.76	21.8	25.35	18.65
Moisture, percent (pct)	22.92	31.26	28.83	33.06	--	--	--	--	--	--	--	--	--	--
Grain Size (pct)														
Gravel	--	--	--	--	--	60.5	--	--	0.4	--	--	2.1	--	--
Sand, Very Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	--	0.3	--	--	13.3	--	--	1.9	--	--	2.4	--	--
Sand, Medium	--	--	10.9	--	--	10.7	--	--	26.9	--	--	19	--	--
Sand, Fine	--	--	86.8	--	--	8.4	--	--	61.9	--	--	59.9	--	--
Sand, Very Fine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silt, Very Coarse	--	--	2	--	--	7.1	--	--	8.9	--	--	16.6	--	--
Silt, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silt, Medium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silt, Fine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silt, Very Fine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay, Medium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay, Fine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Gravel	--	--	--	--	--	60.5	--	--	0.4	--	--	2.1	--	--
Total Sand	--	--	98	--	--	32.4	--	--	90.7	--	--	81.3	--	--
Total Silt	--	--	2	--	--	7.1	--	--	8.9	--	--	16.6	--	--
Total Clay	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Fines (Silt + Clay)	--	--	2	--	--	7.1	--	--	8.9	--	--	16.6	--	--
Total Grain Size	--	--	100	--	--	100	--	--	100	--	--	100	--	--
Percent passing < 1.3 micron sieve	--	--	0.1 U	--	--	--	--	--	--	--	--	--	--	--
Percent retained 1.3 micron sieve	--	--	0.1 U	--	--	--	--	--	--	--	--	--	--	--
Percent retained 3.2 micron sieve	--	--	0.1 U	--	--	--	--	--	--	--	--	--	--	--
Percent retained 7 micron sieve	--	--	0.1 U	--	--	--	--	--	--	--	--	--	--	--
Percent retained 9 micron sieve	--	--	0.1 U	--	--	--	--	--	--	--	--	--	--	--
Percent retained 13 micron sieve	--	--	0.1 U	--	--	--	--	--	--	--	--	--	--	--
Percent retained 22 micron sieve	--	--	0.1 U	--	--	--	--	--	--	--	--	--	--	--
Percent retained 32 micron sieve	--	--	2	--	--	7.1	--	--	8.9	--	--	16.6	--	--
Percent retained 75 micron sieve	--	--	11.7	--	--	2.1	--	--	11.4	--	--	15.4	--	--
Percent retained 150 micron sieve	--	--	46.4	--	--	2.5	--	--	18.7	--	--	19.9	--	--
Percent retained 250 micron sieve	--	--	28.7	--	--	3.8	--	--	31.8	--	--	24.6	--	--
Percent retained 425 micron sieve	--	--	8.6	--	--	4.5	--	--	20.4	--	--	13.2	--	--
Percent retained 850 micron sieve	--	--	2.3	--	--	6.2	--	--	6.5	--	--	5.8	--	--
Percent retained 2000 micron sieve	--	--	0.3	--	--	13.3	--	--	1.9	--	--	2.4	--	--
Percent retained 4750 micron sieve	--	--	0.1 U	--	--	24.8	--	--	0.4	--	--	2.1	--	--
Percent retained 9500 micron sieve	--	--	0.1 U	--	--	10.8	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 12500 micron sieve	--	--	0.1 U	--	--	8	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 19000 micron sieve	--	--	0.1 U	--	--	16.9	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 25K micron sieve	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 37.5K micron sieve	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 50K micron sieve	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 75K micron sieve	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--

Table 23
Subsurface Sediment Geotechnical Testing Results - Outer Waterway

Location ID:	1C-104A-HSA	1C-104A-HSA	1C-104A-HSA	1C-104A-HSA	1C-104A-HSA	1C-104A-HSA	1C-104A-HSA	1C-104B-HSA	1C-104B-HSA	1C-104B-HSA	1C-104B-HSA	1C-104B-HSA	1C-104B-HSA
Sample ID:	1C-104A-HSA-S12	1C-104A-HSA-S13	1C-104A-HSA-S14	1C-104A-HSA-S15	1C-104A-HSA-S16	1C-104A-HSA-S17	1C-104A-HSA-S18	1C-104B-HSA-S5	1C-104B-HSA-S6	1C-104B-HSA-S7	1C-104B-HSA-S8	1C-104B-HSA-S9	1C-104B-HSA-S10
Sample Date:	7/16/08	7/16/08	7/16/08	7/16/08	7/16/08	7/16/08	7/16/08	10/14/08	10/14/08	10/14/08	10/14/08	10/14/08	10/14/08
In-Situ Depth[1] (ft):	44 - 45.5 ft	49 - 50.5 ft	54 - 55.5 ft	59 - 60.5 ft	64 - 65.5 ft	69 - 70.5 ft	79 - 81 ft	17.1 - 18.6 ft	22.1 - 23.6 ft	27.1 - 28.6 ft	32.1 - 33.6 ft	37.1 - 38.6 ft	42.1 - 43.6 ft
Physical Parameters													
Atterberg Classification	--	--	Non-Plastic	--	Non-Plastic	--	--	--	--	--	Non-Plastic	--	--
Specific gravity (su)	--	--	2.83	--	--	--	--	--	--	2.75	--	--	2.8
Plastic Limit (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--
Plasticity Index (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--
Liquid Limit (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--
Moisture (water) Content (pct)	18.58	16.4	17.93	14.46	11.99	23.66	25.77	--	--	--	--	--	--
Moisture, percent (pct)	--	--	--	--	--	--	--	24.57	17.41	17.86	21.74	27.6	37.21
Grain Size (pct)													
Gravel	--	--	--	--	--	0.5	1.1	--	0.7	--	--	--	--
Sand, Very Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	1.5	--	--	--	--	0.5	0.3	--	4.4	--	--	0.8	--
Sand, Medium	42.6	--	--	--	--	2.9	1.5	--	39.6	--	--	8.8	--
Sand, Fine	48.2	--	--	--	--	18.7	4.9	--	46.8	--	--	15.8	--
Sand, Very Fine	--	--	--	--	--	--	--	--	--	--	--	--	--
Silt, Very Coarse	7.6	--	--	--	--	27.5	5.8	--	8.5	--	--	14.2	--
Silt, Coarse	--	--	--	--	--	11.2	4.6	--	--	--	--	3.8	--
Silt, Medium	--	--	--	--	--	5.6	8.5	--	--	--	--	6.3	--
Silt, Fine	--	--	--	--	--	7.5	11.6	--	--	--	--	8.8	--
Silt, Very Fine	--	--	--	--	--	3.7	12.3	--	--	--	--	8.8	--
Clay	--	--	--	--	--	21.9	49.3	--	--	--	--	32.7	--
Clay, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay, Medium	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay, Fine	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Gravel	--	--	--	--	--	0.5	1.1	--	0.7	--	--	--	--
Total Sand	92.3	--	--	--	--	22.1	6.7	--	90.8	--	--	25.4	--
Total Silt	7.6	--	--	--	--	55.5	42.8	--	8.5	--	--	41.9	--
Total Clay	--	--	--	--	--	21.9	49.3	--	--	--	--	32.7	--
Total Fines (Silt + Clay)	7.6	--	--	--	--	77.4	92.1	--	8.5	--	--	74.6	--
Total Grain Size	99.9	--	--	--	--	100	99.9	--	100	--	--	100	--
Percent passing < 1.3 micron sieve	--	--	--	--	--	15	38.5	--	0.1 U	--	--	23.9	--
Percent retained 1.3 micron sieve	--	--	--	--	--	6.9	10.8	--	0.1 U	--	--	8.8	--
Percent retained 3.2 micron sieve	--	--	--	--	--	3.7	12.3	--	0.1 U	--	--	8.8	--
Percent retained 7 micron sieve	--	--	--	--	--	5	6.2	--	0.1 U	--	--	3.8	--
Percent retained 9 micron sieve	--	--	--	--	--	2.5	5.4	--	0.1 U	--	--	5	--
Percent retained 13 micron sieve	--	--	--	--	--	5.6	8.5	--	0.1 U	--	--	6.3	--
Percent retained 22 micron sieve	--	--	--	--	--	11.2	4.6	--	0.1 U	--	--	3.8	--
Percent retained 32 micron sieve	7.6	--	--	--	--	27.5	5.8	--	8.5	--	--	14.2	--
Percent retained 75 micron sieve	5.5	--	--	--	--	11.4	2.6	--	6	--	--	9.4	--
Percent retained 150 micron sieve	10.8	--	--	--	--	4.3	1.3	--	12.8	--	--	2.1	--
Percent retained 250 micron sieve	31.9	--	--	--	--	3	1	--	28	--	--	4.3	--
Percent retained 425 micron sieve	30.8	--	--	--	--	1.9	0.7	--	25.5	--	--	5.4	--
Percent retained 850 micron sieve	11.8	--	--	--	--	1	0.8	--	14.1	--	--	3.4	--
Percent retained 2000 micron sieve	1.5	--	--	--	--	0.5	0.3	--	4.4	--	--	0.8	--
Percent retained 4750 micron sieve	0.1 U	--	--	--	--	0.5	0.1 U	--	0.7	--	--	0.1 U	--
Percent retained 9500 micron sieve	0.1 U	--	--	--	--	0.1 U	1.1	--	0.1 U	--	--	0.1 U	--
Percent retained 12500 micron sieve	0.1 U	--	--	--	--	0.1 U	0.1 U	--	0.1 U	--	--	0.1 U	--
Percent retained 19000 micron sieve	0.1 U	--	--	--	--	0.1 U	0.1 U	--	0.1 U	--	--	0.1 U	--
Percent retained 25K micron sieve	0.1 U	--	--	--	--	0.1 U	0.1 U	--	0.1 U	--	--	0.1 U	--
Percent retained 37.5K micron sieve	0.1 U	--	--	--	--	0.1 U	0.1 U	--	0.1 U	--	--	0.1 U	--
Percent retained 50K micron sieve	0.1 U	--	--	--	--	0.1 U	0.1 U	--	0.1 U	--	--	0.1 U	--
Percent retained 75K micron sieve	0.1 U	--	--	--	--	0.1 U	0.1 U	--	0.1 U	--	--	0.1 U	--

Table 23
Subsurface Sediment Geotechnical Testing Results - Outer Waterway

Location ID:	1C-104C-HSA	1C-104C-HSA	1C-104C-HSA	1C-104C-HSA	1C-105A-HSA	1C-105A-HSA	1C-105A-HSA	1C-105A-HSA	1C-105A-HSA	1C-105A-HSA	1C-105A-HSA	1C-105A-HSA	1C-105A-HSA	1C-105A-HSA
Sample ID:	1C-104C-HSA-S5	1C-104C-HSA-S6	1C-104C-HSA-S7	1C-104C-HSA-S9	1C-105A-HSA-S2	1C-105A-HSA-S3	1C-105A-HSA-S4	1C-105A-HSA-S5	1C-105A-HSA-S6	1C-105A-HSA-S7	1C-105A-HSA-S8	1C-105A-HSA-S9	1C-105A-HSA-S10	1C-105A-HSA-S11
Sample Date:	10/14/08	10/14/08	10/14/08	10/14/08	7/15/08	7/15/08	7/15/08	7/15/08	7/15/08	7/15/08	7/15/08	7/15/08	7/15/08	7/15/08
In-Situ Depth[1] (ft):	13.5 - 15 ft	18.5 - 20 ft	23.5 - 25 ft	30.5 - 32 ft	1.5 - 3 ft	4 - 5.5 ft	6.5 - 8 ft	9 - 10.5 ft	14 - 15.5 ft	19 - 20.5 ft	24 - 25.5 ft	29 - 30.5 ft	34 - 35.5 ft	39 - 40.5 ft
Physical Parameters														
Atterberg Classification	--	--	CL	--	--	--	--	--	--	--	Non-Plastic	--	--	Non-Plastic
Specific gravity (su)	--	--	2.76	--	--	--	2.69	--	--	--	--	--	--	--
Plastic Limit (pct)	--	--	20.2	--	--	--	--	--	--	--	--	--	--	--
Plasticity Index (pct)	--	--	20.9	--	--	--	--	--	--	--	--	--	--	--
Liquid Limit (pct)	--	--	41.1	--	--	--	--	--	--	--	--	--	--	--
Moisture (water) Content (pct)	--	--	--	--	8.23	4.72	4.73	15.75	24.78	22.44	28.22	26.45	25.27	19.37
Moisture, percent (pct)	20.94	33.28	36.69	34.64	--	--	--	--	--	--	--	--	--	--
Grain Size (pct)														
Gravel	2	--	--	--	--	20	--	--	1.2	--	--	0.7	--	--
Sand, Very Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	1.1	--	--	--	--	10.2	--	--	3.8	--	--	2.3	--	--
Sand, Medium	1.8	--	--	0.1	--	24.8	--	--	19.3	--	--	17.6	--	--
Sand, Fine	61	--	--	4.3	--	32.5	--	--	70.6	--	--	59	--	--
Sand, Very Fine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Silt, Very Coarse	34.1	--	--	21.5	--	0.6	--	--	5.1	--	--	2.3	--	--
Silt, Coarse	--	--	--	6.2	--	1.7	--	--	--	--	--	2.9	--	--
Silt, Medium	--	--	--	8.5	--	2.1	--	--	--	--	--	2.3	--	--
Silt, Fine	--	--	--	11.6	--	2.2	--	--	--	--	--	4.6	--	--
Silt, Very Fine	--	--	--	9.3	--	1.3	--	--	--	--	--	0.6	--	--
Clay	--	--	--	38.6	--	4.7	--	--	--	--	--	7.6	--	--
Clay, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay, Medium	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Clay, Fine	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total Gravel	2	--	--	--	--	20	--	--	1.2	--	--	0.7	--	--
Total Sand	63.9	--	--	4.4	--	67.5	--	--	93.7	--	--	78.9	--	--
Total Silt	34.1	--	--	57.1	--	7.9	--	--	5.1	--	--	12.7	--	--
Total Clay	--	--	--	38.6	--	4.7	--	--	--	--	--	7.6	--	--
Total Fines (Silt + Clay)	34.1	--	--	95.7	--	12.6	--	--	5.1	--	--	20.3	--	--
Total Grain Size	100	--	--	100.1	--	100.1	--	--	100	--	--	99.9	--	--
Percent passing < 1.3 micron sieve	0.1 U	--	--	29.2	--	3	--	--	--	--	--	4.1	--	--
Percent retained 1.3 micron sieve	0.1 U	--	--	9.4	--	1.7	--	--	--	--	--	3.5	--	--
Percent retained 3.2 micron sieve	0.1 U	--	--	9.3	--	1.3	--	--	--	--	--	0.6	--	--
Percent retained 7 micron sieve	0.1 U	--	--	6.2	--	1.3	--	--	--	--	--	2.3	--	--
Percent retained 9 micron sieve	0.1 U	--	--	5.4	--	0.9	--	--	--	--	--	2.3	--	--
Percent retained 13 micron sieve	0.1 U	--	--	8.5	--	2.1	--	--	--	--	--	2.3	--	--
Percent retained 22 micron sieve	0.1 U	--	--	6.2	--	1.7	--	--	--	--	--	2.9	--	--
Percent retained 32 micron sieve	34.1	--	--	21.5	--	0.6	--	--	5.1	--	--	2.3	--	--
Percent retained 75 micron sieve	31.9	--	--	4.1	--	4.7	--	--	11.1	--	--	12.3	--	--
Percent retained 150 micron sieve	22.6	--	--	0.1	--	9.7	--	--	24.5	--	--	20.4	--	--
Percent retained 250 micron sieve	6.5	--	--	0.1	--	18.1	--	--	35	--	--	26.3	--	--
Percent retained 425 micron sieve	1.2	--	--	0.1	--	15	--	--	13.3	--	--	12.1	--	--
Percent retained 850 micron sieve	0.6	--	--	0.1 U	--	9.8	--	--	6	--	--	5.5	--	--
Percent retained 2000 micron sieve	1.1	--	--	0.1 U	--	10.2	--	--	3.8	--	--	2.3	--	--
Percent retained 4750 micron sieve	2	--	--	0.1 U	--	9.5	--	--	1.2	--	--	0.7	--	--
Percent retained 9500 micron sieve	0.1 U	--	--	0.1 U	--	5.5	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 12500 micron sieve	0.1 U	--	--	0.1 U	--	5	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 19000 micron sieve	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 25K micron sieve	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 37.5K micron sieve	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 50K micron sieve	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--
Percent retained 75K micron sieve	0.1 U	--	--	0.1 U	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--

Table 23
Subsurface Sediment Geotechnical Testing Results - Outer Waterway

Location ID:	1C-105A-HSA	1C-105A-HSA	1C-105A-HSA	1C-105A-HSA	1C-105A-HSA	1C-105A-HSA	1C-106C-HSA	1C-106C-HSA	1C-106C-HSA	1C-106C-HSA	1C-106C-HSA	1C-106C-HSA
Sample ID:	1C-105A-HSA-S12	1C-105A-HSA-S13	1C-105A-HSA-S14	1C-105A-HSA-S15	1C-105A-HSA-S17	1C-105A-HSA-S18	1C-106C-HSA-S2	1C-106C-HSA-S3	1C-106C-HSA-S4	1C-106C-HSA-S5	1C-106C-HSA-S6	1C-106C-HSA-S7
Sample Date:	7/15/08	7/15/08	7/15/08	7/15/08	7/15/08	7/15/08	8/11/08	8/11/08	8/11/08	8/11/08	8/11/08	8/11/08
In-Situ Depth[1] (ft):	44 - 45.5 ft	49 - 50.5 ft	54 - 55.5 ft	59 - 60.5 ft	69 - 70.5 ft	74 - 75.5 ft	10.5 - 12 ft	13 - 14.5 ft	15.5 - 17 ft	18 - 19.5 ft	23.5 - 25 ft	28.5 - 30 ft
Physical Parameters												
Atterberg Classification	--	--	Non-Plastic	--	CL	--	--	--	CH	--	--	CL
Specific gravity (su)	--	--	--	--	--	--	--	--	2.79	--	--	2.77
Plastic Limit (pct)	--	--	--	--	18.7	--	--	--	20.4	--	--	20.1
Plasticity Index (pct)	--	--	--	--	24.8	--	--	--	30	--	--	25.2
Liquid Limit (pct)	--	--	--	--	43.6	--	--	--	50.4	--	--	45.3
Moisture (water) Content (pct)	20.79	16.59	18.77	26.17	34.41	35.5	137.6	34.9	39.76	26.3	31.33	37.97
Moisture, percent (pct)	--	--	--	--	--	--	--	--	--	--	--	--
Grain Size (pct)												
Gravel	0.2	--	--	--	--	--	--	1.7	--	0.2	--	--
Sand, Very Coarse	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	3.4	--	0.4	--	--	--	--	2.3	--	0.1	--	--
Sand, Medium	45.1	--	13	--	--	0.1	--	4.2	--	5.3	--	--
Sand, Fine	37.5	--	51.3	--	--	1.2	--	13.3	--	23.5	--	--
Sand, Very Fine	--	--	--	--	--	--	--	--	--	--	--	--
Silt, Very Coarse	13.9	--	19.5	--	--	33	--	4.2	--	7.3	--	--
Silt, Coarse	--	--	2.4	--	--	1.2	--	4.5	--	4.6	--	--
Silt, Medium	--	--	2.4	--	--	3.7	--	8.3	--	8.4	--	--
Silt, Fine	--	--	1.8	--	--	8.7	--	10.6	--	8.4	--	--
Silt, Very Fine	--	--	0.6	--	--	8.7	--	8.3	--	6.1	--	--
Clay	--	--	8.5	--	--	43.4	--	42.8	--	36.1	--	--
Clay, Coarse	--	--	--	--	--	--	--	--	--	--	--	--
Clay, Medium	--	--	--	--	--	--	--	--	--	--	--	--
Clay, Fine	--	--	--	--	--	--	--	--	--	--	--	--
Total Gravel	0.2	--	--	--	--	--	--	1.7	--	0.2	--	--
Total Sand	86	--	64.7	--	--	1.3	--	19.8	--	28.9	--	--
Total Silt	13.9	--	26.7	--	--	55.3	--	35.9	--	34.8	--	--
Total Clay	--	--	8.5	--	--	43.4	--	42.8	--	36.1	--	--
Total Fines (Silt + Clay)	13.9	--	35.2	--	--	98.7	--	78.7	--	70.9	--	--
Total Grain Size	100.1	--	99.9	--	--	100	--	100.2	--	100	--	--
Percent passing < 1.3 micron sieve	--	--	6.7	--	--	30.4	--	34.5	--	28.4	--	--
Percent retained 1.3 micron sieve	--	--	1.8	--	--	13	--	8.3	--	7.7	--	--
Percent retained 3.2 micron sieve	--	--	0.6	--	--	8.7	--	8.3	--	6.1	--	--
Percent retained 7 micron sieve	--	--	0.6	--	--	5	--	5.3	--	4.6	--	--
Percent retained 9 micron sieve	--	--	1.2	--	--	3.7	--	5.3	--	3.8	--	--
Percent retained 13 micron sieve	--	--	2.4	--	--	3.7	--	8.3	--	8.4	--	--
Percent retained 22 micron sieve	--	--	2.4	--	--	1.2	--	4.5	--	4.6	--	--
Percent retained 32 micron sieve	13.9	--	19.5	--	--	33	--	4.2	--	7.3	--	--
Percent retained 75 micron sieve	6.9	--	24.3	--	--	1	--	5.8	--	8.9	--	--
Percent retained 150 micron sieve	8.6	--	13.7	--	--	0.1	--	4.7	--	5.6	--	--
Percent retained 250 micron sieve	22	--	13.3	--	--	0.1	--	2.8	--	9	--	--
Percent retained 425 micron sieve	29.4	--	10	--	--	0.1	--	1.7	--	4.9	--	--
Percent retained 850 micron sieve	15.7	--	3	--	--	0.1 U	--	2.5	--	0.4	--	--
Percent retained 2000 micron sieve	3.4	--	0.4	--	--	0.1 U	--	2.3	--	0.1	--	--
Percent retained 4750 micron sieve	0.2	--	0.1 U	--	--	0.1 U	--	1.7	--	0.2	--	--
Percent retained 9500 micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--
Percent retained 12500 micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--
Percent retained 19000 micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--
Percent retained 25K micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--
Percent retained 37.5K micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--
Percent retained 50K micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--
Percent retained 75K micron sieve	0.1 U	--	0.1 U	--	--	0.1 U	--	0.1 U	--	0.1 U	--	--

Notes:
1. Sample depth is reported as below mudline.
Bold = Detected result
U = Compound analyzed, but not detected above detection limit
pct = percent
su = standard units
-- Sample was not submitted for chemical analysis.

Table 24
Subsurface Sediment Geotechnical Testing Results - Log Pond

Location ID:	4-101B-HSA	4-101B-HSA	4-101B-HSA	4-101B-HSA	4-101B-HSA	4-101B-HSA	4-101B-HSA	4-101B-HSA	4-101B-HSA	4-101B-HSA	4-101B-HSA
Sample ID:	4-101B-HSA-S2	4-101B-HSA-S3	4-101B-HSA-S4	4-101B-HSA-S5	4-101B-HSA-S6	4-101B-HSA-S7	4-101B-HSA-S8	4-101B-HSA-S9	4-101B-HSA-S10	4-101B-HSA-S11	4-101B-HSA-S13
Sample Date:	8/13/08	8/13/08	8/13/08	8/13/08	8/13/08	8/13/08	8/13/08	8/13/08	8/13/08	8/13/08	8/13/08
In-Situ Depth[1] (ft):	3.5 - 5 ft	6 - 7.5 ft	8.5 - 10 ft	11 - 12.5 ft	16 - 17.5 ft	21 - 22.5 ft	26 - 27.5 ft	31 - 32.5 ft	36 - 37.5 ft	41 - 42.5 ft	51 - 52.5 ft
Physical Parameters											
Atterberg Classification	--	--	--	--	--	--	**Non-Plastic**	--	--	**CL**	--
Specific gravity (su)	--	--	**2.68**	--	--	--	--	--	--	**2.8**	--
Plastic Limit (pct)	--	--	--	--	--	--	--	--	--	**22.2**	--
Plasticity Index (pct)	--	--	--	--	--	--	--	--	--	**25.6**	--
Liquid Limit (pct)	--	--	--	--	--	--	--	--	--	**47.8**	--
Moisture, percent (pct)	**43.14**	**25.85**	**23.13**	**19.4**	**18.94**	**21.26**	**16.94**	**19.51**	**37.58**	**38.45**	**34.51**
Grain Size (pct)											
Gravel	--	**0.6**	--	--	**0.5**	--	--	**1.4**	--	--	--
Sand, Coarse	--	**2.2**	--	--	**2.2**	--	--	**4.6**	--	--	--
Sand, Medium	--	**31.6**	--	--	**27.6**	--	--	**24.3**	--	--	--
Sand, Fine	--	**57**	--	--	**58.7**	--	--	**49.3**	--	--	--
Silt, Very Coarse	--	**8.6**	--	--	**11**	--	--	**20.6**	--	--	--
Total Gravel	--	**0.6**	--	--	**0.5**	--	--	**1.4**	--	--	--
Total Sand	--	**90.8**	--	--	**88.5**	--	--	**78.2**	--	--	--
Total Silt	--	**8.6**	--	--	**11**	--	--	**20.6**	--	--	--
Total Fines (Silt + Clay)	--	**8.6**	--	--	**11**	--	--	**20.6**	--	--	--
Total Grain Size	--	**100**	--	--	**100**	--	--	**100.2**	--	--	--
Percent retained 32 micron sieve	--	**8.6**	--	--	**11**	--	--	**20.6**	--	--	--
Percent retained 75 micron sieve	--	**9.3**	--	--	**11.4**	--	--	**12.3**	--	--	--
Percent retained 150 micron sieve	--	**16.9**	--	--	**18.8**	--	--	**15.5**	--	--	--
Percent retained 250 micron sieve	--	**30.8**	--	--	**28.5**	--	--	**21.5**	--	--	--
Percent retained 425 micron sieve	--	**26.4**	--	--	**18.4**	--	--	**15.3**	--	--	--
Percent retained 850 micron sieve	--	**5.2**	--	--	**9.2**	--	--	**9**	--	--	--
Percent retained 2000 micron sieve	--	**2.2**	--	--	**2.2**	--	--	**4.6**	--	--	--
Percent retained 4750 micron sieve	--	**0.6**	--	--	**0.5**	--	--	**1.4**	--	--	--
Percent retained 9500 micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	--
Percent retained 12500 micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	--
Percent retained 19000 micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	--
Percent retained 25K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	--
Percent retained 37.5K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	--
Percent retained 50K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	--
Percent retained 75K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	--

Notes:
1. Sample depth is reported as below mudline.
Bold = Detected result
U = Compound analyzed, but not detected above detection limit
pct = percent
su = standard units
-- Sample was not submitted for chemical analysis.

Table 25
Sediment Vane Shear and Co-Located Surface Sediment Physical Testing Results

Location ID:	4-01-VS	4-01-VS	4-02-VS	4-03-VS	4-03-VS	4-03-VS	4-04-VS	4-04-VS	4-04-VS	4-05-VS	4-05-VS	4-05-VS	4-06-VS	4-06-VS
Sample ID:	4-01-VS	4-01-VS	4-02-VS	4-03-VS	4-03-VS	4-03-VS	4-04-VS	4-04-VS	4-04-VS	4-05-VS	4-05-VS	4-05-VS	4-06-VS	4-06-VS
Sample Date:	8/20/08	8/20/08	8/20/08	8/18/08	8/18/08	8/18/08	8/18/08	8/18/08	8/18/08	8/19/08	8/19/08	8/19/08	8/19/08	8/19/08
In-Situ Depth[1] (ft):	0 - 1 ft	1 - 2 ft	0 - 1 ft	0 - 1 ft	1 - 2 ft	2 - 3 ft	0 - 1 ft	1 - 2 ft	2 - 3 ft	0 - 1 ft	1 - 2 ft	2 - 3 ft	0 - 1 ft	1 - 2 ft
In Field Measurements (lbs/ft^2)														
Peak	236	1039	671	302	444	378	661	520	1153	208	321	+1228	170	227
Residual	170	236	246	113	189	208	208	208	378	94	227	378	57	123
Physical Parameters														
Atterberg Classification	Non-Plastic	--	Non-Plastic	Non-Plastic	--	--	Non-Plastic	--	--	ML	--	--	ML	--
Liquid Limit (pct)	--	--	--	--	--	--	--	--	--	41.8	--	--	25.2	--
Plastic Limit (pct)	--	--	--	--	--	--	--	--	--	33.6	--	--	24.7	--
Plasticity Index (pct)	--	--	--	--	--	--	--	--	--	8.2	--	--	0.5	--
Moisture, percent (pct)	28.83	--	40.65	--	--	--	--	--	--	110.4	--	--	79.01	--
Moisture (water) Content (pct)	--	--	--	37.49	--	--	35.74	--	--	--	--	--	--	--
Grain Size (pct)														
Gravel	8.4	--	2.7	1.5	--	--	4.3	--	--	--	--	--	0.2	--
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	15.5	--	6.7	1.6	--	--	10	--	--	0.2	--	--	0.7	--
Sand, Fine	29.1	--	61.4	49.1	--	--	24.8	--	--	4.4	--	--	36.7	--
Sand, Medium	44.1	--	25.9	39.5	--	--	55.7	--	--	3.7	--	--	4.4	--
Silt, Coarse	--	--	--	--	--	--	--	--	--	17.2	--	--	11.6	--
Silt, Fine	--	--	--	--	--	--	--	--	--	14	--	--	7	--
Silt, Medium	--	--	--	--	--	--	--	--	--	17.2	--	--	8.5	--
Silt, Very Coarse	2.9	--	3.4	8.3	--	--	5.2	--	--	18.9	--	--	15.7	--
Silt, Very Fine	--	--	--	--	--	--	--	--	--	7	--	--	2.3	--
Clay	--	--	--	--	--	--	--	--	--	17.2	--	--	13.1	--
Total Gravel	8.4	--	2.7	1.5	--	--	4.3	--	--	--	--	--	0.2	--
Total Sand	88.7	--	94	90.2	--	--	90.5	--	--	8.3	--	--	41.8	--
Total Silt	2.9	--	3.4	8.3	--	--	5.2	--	--	74.3	--	--	45.1	--
Total Clay	--	--	--	--	--	--	--	--	--	17.2	--	--	13.1	--
Total Fines (Silt + Clay)	2.9	--	3.4	8.3	--	--	5.2	--	--	91.5	--	--	58.2	--
Total Grain Size	100	--	100.1	100	--	--	100	--	--	99.8	--	--	100.2	--
Percent passing < 1.3 micron sieve	--	--	--	--	--	--	--	--	--	13.3	--	--	10	--
Percent retained 1.3 micron sieve	--	--	--	--	--	--	--	--	--	3.9	--	--	3.1	--
Percent retained 3.2 micron sieve	--	--	--	--	--	--	--	--	--	7	--	--	2.3	--
Percent retained 7 micron sieve	--	--	--	--	--	--	--	--	--	7	--	--	3.1	--
Percent retained 9 micron sieve	--	--	--	--	--	--	--	--	--	7	--	--	3.9	--
Percent retained 13 micron sieve	--	--	--	--	--	--	--	--	--	17.2	--	--	8.5	--
Percent retained 22 micron sieve	--	--	--	--	--	--	--	--	--	17.2	--	--	11.6	--
Percent retained 32 micron sieve	2.9	--	3.4	8.3	--	--	5.2	--	--	18.9	--	--	15.7	--
Percent retained 75 micron sieve	2	--	3.1	4.2	--	--	1.1	--	--	0.8	--	--	13.5	--
Percent retained 150 micron sieve	9	--	8.3	11.8	--	--	6.9	--	--	1	--	--	13.7	--
Percent retained 250 micron sieve	18.1	--	50	33.1	--	--	16.8	--	--	2.6	--	--	9.5	--
Percent retained 425 micron sieve	21.8	--	20.3	33.3	--	--	32.6	--	--	2.3	--	--	2.8	--
Percent retained 850 micron sieve	22.3	--	5.6	6.2	--	--	23.1	--	--	1.4	--	--	1.6	--
Percent retained 2000 micron sieve	15.5	--	6.7	1.6	--	--	10	--	--	0.2	--	--	0.7	--
Percent retained 4750 micron sieve	6.5	--	2	1.3	--	--	2.6	--	--	0.1 U	--	--	0.2	--
Percent retained 9500 micron sieve	1.6	--	0.7	0.2	--	--	1.7	--	--	0.1 U	--	--	0.1 U	--
Percent retained 12500 micron sieve	0.3	--	0.1 U	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--
Percent retained 19000 micron sieve	0.1 U	--	0.1 U	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--
Percent retained 25K micron sieve	0.1 U	--	0.1 U	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--
Percent retained 37.5K micron sieve	0.1 U	--	0.1 U	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--
Percent retained 50K micron sieve	0.1 U	--	0.1 U	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--
Percent retained 75K micron sieve	0.1 U	--	0.1 U	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--

Table 25
Sediment Vane Shear and Co-Located Surface Sediment Physical Testing Results

Location ID:	4-06-VS	4-07-VS	4-07-VS	4-07-VS	4-08-VS	4-08-VS	4-08-VS	4-09-VS	4-09-VS	4-09-VS	5B-01-VS	5B-01-VS	5B-02-VS	5B-02-VS
Sample ID:	4-06-VS	4-07-VS	4-07-VS	4-07-VS	4-08-VS	4-08-VS	4-08-VS	4-09-VS	4-09-VS	4-09-VS	5B-01-VS	5B-01-VS	5B-02-VS	5B-02-VS
Sample Date:	8/19/08	8/19/08	8/19/08	8/19/08	8/19/08	8/19/08	8/19/08	8/19/08	8/19/08	8/19/08	8/25/08	8/25/08	8/25/08	8/25/08
In-Situ Depth[1] (ft):	2 - 3 ft	0 - 1 ft	1 - 2 ft	2 - 3 ft	0 - 1 ft	1 - 2 ft	1 - 2.75 ft	0 - 1 ft	1 - 2 ft	2 - 3 ft	0 - 1 ft	1 - 2 ft	0 - 1 ft	1 - 1.75 ft
In Field Measurements (lbs/ft^2)														
Peak	1087	265	548	869	444	274	794	491	340	1135	406	236	542	813
Residual	350	189	265	217	189	189	548	151	208	425	283	113	387	426
Physical Parameters														
Atterberg Classification	--	--	--	--	Non-Plastic	--	--	Non-Plastic	--	--	ML	--	ML	--
Liquid Limit (pct)	--	--	--	--	--	--	--	--	--	--	48.7	--	28.5	--
Plastic Limit (pct)	--	--	--	--	--	--	--	--	--	--	34.5	--	25.6	--
Plasticity Index (pct)	--	--	--	--	--	--	--	--	--	--	14.2	--	2.9	--
Moisture, percent (pct)	--	1.82	--	--	13.26	--	--	37.21	--	--	132.7	--	80.55	--
Moisture (water) Content (pct)	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Grain Size (pct)														
Gravel	--	12.7	--	--	19.5	--	--	0.1	--	--	2.7	--	2.2	--
Gravel, Coarse	--	83.2	--	--	67.2	--	--	--	--	--	--	--	--	--
Sand, Coarse	--	1.1	--	--	1.7	--	--	0.4	--	--	2.6	--	2.2	--
Sand, Fine	--	0.8	--	--	6.1	--	--	60.1	--	--	32.4	--	50.1	--
Sand, Medium	--	1.9	--	--	5	--	--	37.1	--	--	6.2	--	10.6	--
Silt, Coarse	--	--	--	--	--	--	--	--	--	--	4.5	--	2.1	--
Silt, Fine	--	--	--	--	--	--	--	--	--	--	11.3	--	7.7	--
Silt, Medium	--	--	--	--	--	--	--	--	--	--	4.5	--	2.1	--
Silt, Very Coarse	--	0.4	--	--	0.4	--	--	2.4	--	--	3.3	--	6.5	--
Silt, Very Fine	--	--	--	--	--	--	--	--	--	--	8.3	--	2.1	--
Clay	--	--	--	--	--	--	--	--	--	--	24.1	--	14.6	--
Total Gravel	--	95.9	--	--	86.7	--	--	0.1	--	--	2.7	--	2.2	--
Total Sand	--	3.8	--	--	12.8	--	--	97.6	--	--	41.2	--	62.9	--
Total Silt	--	0.4	--	--	0.4	--	--	2.4	--	--	31.9	--	20.5	--
Total Clay	--	--	--	--	--	--	--	--	--	--	24.1	--	14.6	--
Total Fines (Silt + Clay)	--	0.4	--	--	0.4	--	--	2.4	--	--	56	--	35.1	--
Total Grain Size	--	100.1	--	--	99.9	--	--	100.1	--	--	99.9	--	100.2	--
Percent passing < 1.3 micron sieve	--	--	--	--	--	--	--	--	--	--	16.6	--	9.7	--
Percent retained 1.3 micron sieve	--	--	--	--	--	--	--	--	--	--	7.5	--	4.9	--
Percent retained 3.2 micron sieve	--	--	--	--	--	--	--	--	--	--	8.3	--	2.1	--
Percent retained 7 micron sieve	--	--	--	--	--	--	--	--	--	--	3.8	--	5.6	--
Percent retained 9 micron sieve	--	--	--	--	--	--	--	--	--	--	7.5	--	2.1	--
Percent retained 13 micron sieve	--	--	--	--	--	--	--	--	--	--	4.5	--	2.1	--
Percent retained 22 micron sieve	--	--	--	--	--	--	--	--	--	--	4.5	--	2.1	--
Percent retained 32 micron sieve	--	0.4	--	--	0.4	--	--	2.4	--	--	3.3	--	6.5	--
Percent retained 75 micron sieve	--	0.1 U	--	--	0.6	--	--	2.9	--	--	9.6	--	23.2	--
Percent retained 150 micron sieve	--	0.1	--	--	1.8	--	--	15.4	--	--	13.2	--	14.2	--
Percent retained 250 micron sieve	--	0.7	--	--	3.7	--	--	41.8	--	--	9.6	--	12.7	--
Percent retained 425 micron sieve	--	1	--	--	3.3	--	--	32.6	--	--	3.8	--	7.3	--
Percent retained 850 micron sieve	--	0.9	--	--	1.7	--	--	4.5	--	--	2.4	--	3.3	--
Percent retained 2000 micron sieve	--	1.1	--	--	1.7	--	--	0.4	--	--	2.6	--	2.2	--
Percent retained 4750 micron sieve	--	3.2	--	--	1.7	--	--	0.1	--	--	2.3	--	2.2	--
Percent retained 9500 micron sieve	--	0.1 U	--	--	2.6	--	--	0.1 U	--	--	0.4	--	0.1 U	--
Percent retained 12500 micron sieve	--	9.5	--	--	5.6	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--
Percent retained 19000 micron sieve	--	0.1 U	--	--	9.6	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--
Percent retained 25K micron sieve	--	0.1 U	--	--	36	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--
Percent retained 37.5K micron sieve	--	83.2	--	--	31.2	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--
Percent retained 50K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--
Percent retained 75K micron sieve	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	--	0.1 U	--	0.1 U	--

Table 25
Sediment Vane Shear and Co-Located Surface Sediment Physical Testing Results

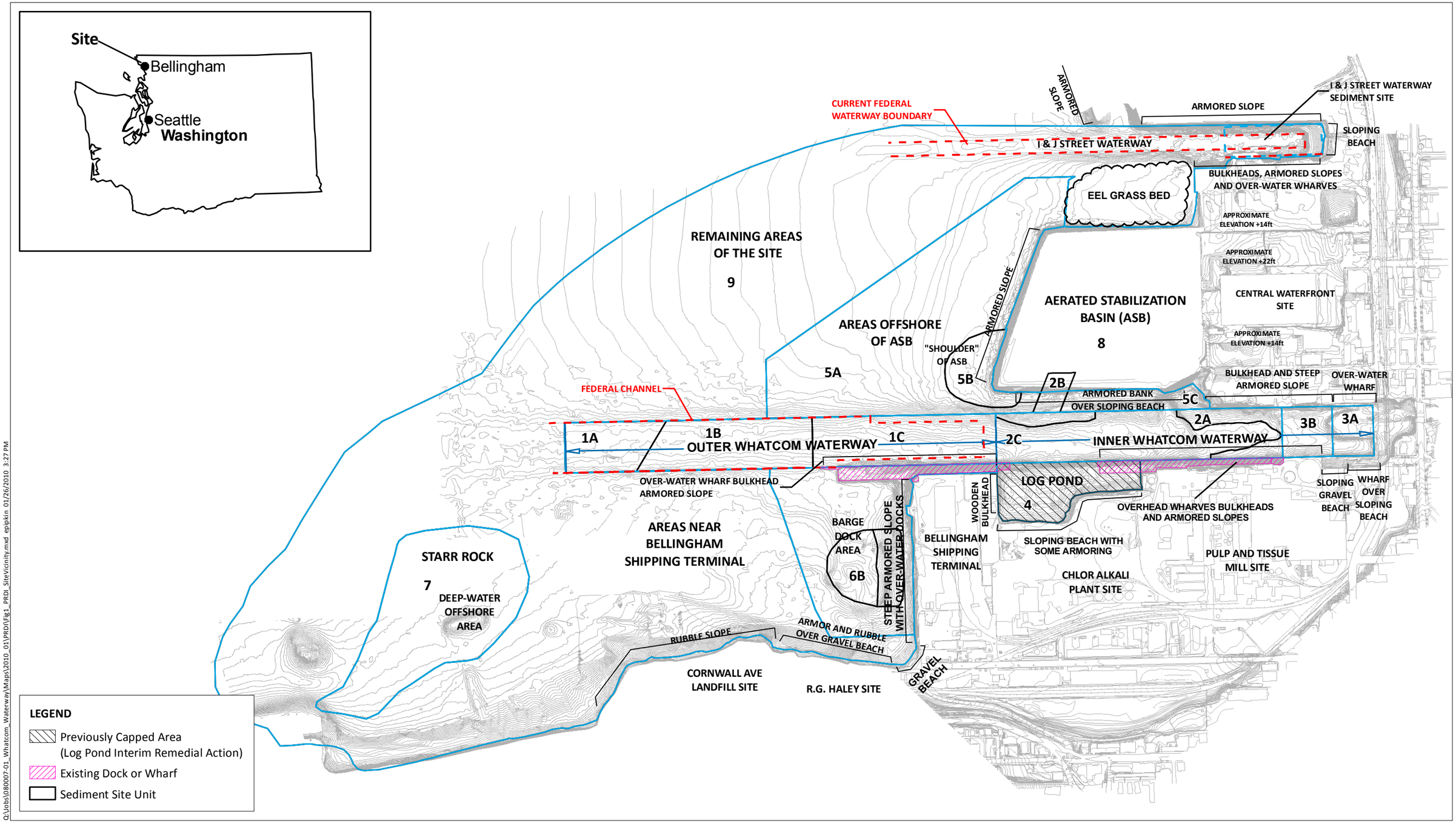
Location ID:	5B-03-VS	5B-03-VS	5B-04-VS	5B-04-VS	6C-01-VS	6C-01-VS	6C-02-VS	6C-02-VS	6C-03-VS	6C-03-VS	6C-03-VS	6C-04-VS
Sample ID:	5B-03-VS	5B-03-VS	5B-04-VS	5B-04-VS	6C-01-VS	6C-01-VS	6C-02-VS	6C-02-VS	6C-03-VS	6C-03-VS	6C-03-VS	6C-04-VS
Sample Date:	8/25/08	8/25/08	8/25/08	8/25/08	8/25/08	8/25/08	8/25/08	8/25/08	8/25/08	8/25/08	8/25/08	8/25/08
In-Situ Depth[1] (ft):	0 - 1 ft	1 - 1.5 ft	0 - 1 ft	1 - 1.5 ft	0 - 1 ft	1 - 1.5 ft	0 - 1 ft	1 - 1.5 ft	0 - 1 ft	1 - 2ft	2 - 3 ft	0 - 1 ft
In Field Measurements (lbs/ft^2)												
Peak	**945**	**1550**	**697**	**968**	**378**	**945**	**1142**	**1258**	**348**	**348**	**1239**	**1007**
Residual	**293**	**756**	**232**	**445**	**378**	**378**	**426**	**465**	**232**	**232**	**542**	**387**
Physical Parameters												
Atterberg Classification	**ML**	--	**Non-Plastic**	--	**ML**	--	**Non-Plastic**	--	**Non-Plastic**	--	--	**Non-Plastic**
Liquid Limit (pct)	**35.2**	--	--	--	**24.5**	--	--	--	--	--	--	--
Plastic Limit (pct)	**29.7**	--	--	--	**22**	--	--	--	--	--	--	--
Plasticity Index (pct)	**5.5**	--	--	--	**2.5**	--	--	--	--	--	--	--
Moisture, percent (pct)	**106**	--	**47.29**	--	**62.88**	--	**46.72**	--	**56.24**	--	--	**33.33**
Moisture (water) Content (pct)	--	--	--	--	--	--	--	--	--	--	--	--
Grain Size (pct)												
Gravel	**9.9**	--	**10.7**	--	**0.2**	--	**0.2**	--	**0.2**	--	--	**4**
Gravel, Coarse	--	--	--	--	--	--	--	--	--	--	--	--
Sand, Coarse	**5.7**	--	**4.3**	--	**0.1**	--	**0.6**	--	**0.2**	--	--	**5.4**
Sand, Fine	**41.5**	--	**41.2**	--	**50.2**	--	**82.4**	--	**56.7**	--	--	**57.2**
Sand, Medium	**15**	--	**27.6**	--	**2.9**	--	**1.7**	--	**2.4**	--	--	**24.4**
Silt, Coarse	**0.7**	--	**1**	--	**3.1**	--	**1.1**	--	**1.4**	--	--	--
Silt, Fine	**7.2**	--	**3.5**	--	**5.4**	--	**3.4**	--	**3.5**	--	--	**1.6**
Silt, Medium	**2**	--	**0.5**	--	**3.8**	--	**1.1**	--	**2.8**	--	--	**0.5**
Silt, Very Coarse	**1.2**	--	**0.9**	--	**19.6**	--	**2.4**	--	**19.2**	--	--	**0.6**
Silt, Very Fine	**2.6**	--	**2**	--	**2.3**	--	--	--	**2.8**	--	--	**1.1**
Clay	**14.4**	--	**8.1**	--	**12.2**	--	**7.2**	--	**11.1**	--	--	**5.3**
Total Gravel	**9.9**	--	**10.7**	--	**0.2**	--	**0.2**	--	**0.2**	--	--	**4**
Total Sand	**62.2**	--	**73.1**	--	**53.2**	--	**84.7**	--	**59.3**	--	--	**87**
Total Silt	**13.7**	--	**7.9**	--	**34.2**	--	**8**	--	**29.7**	--	--	**3.8**
Total Clay	**14.4**	--	**8.1**	--	**12.2**	--	**7.2**	--	**11.1**	--	--	**5.3**
Total Fines (Silt + Clay)	**28.1**	--	**16**	--	**46.4**	--	**15.2**	--	**40.8**	--	--	**9.1**
Total Grain Size	**100.2**	--	**99.8**	--	**99.8**	--	**100.1**	--	**100.3**	--	--	**100.1**
Percent passing < 1.3 micron sieve	**8.5**	--	**5.6**	--	**8.4**	--	**5.5**	--	**8.3**	--	--	**4.8**
Percent retained 1.3 micron sieve	**5.9**	--	**2.5**	--	**3.8**	--	**1.7**	--	**2.8**	--	--	**0.5**
Percent retained 3.2 micron sieve	**2.6**	--	**2**	--	**2.3**	--	0.1 U	--	**2.8**	--	--	**1.1**
Percent retained 7 micron sieve	**3.3**	--	**0.5**	--	**3.1**	--	**1.7**	--	**1.4**	--	--	0.1 U
Percent retained 9 micron sieve	**3.9**	--	**3**	--	**2.3**	--	**1.7**	--	**2.1**	--	--	**1.6**
Percent retained 13 micron sieve	**2**	--	**0.5**	--	**3.8**	--	**1.1**	--	**2.8**	--	--	**0.5**
Percent retained 22 micron sieve	**0.7**	--	**1**	--	**3.1**	--	**1.1**	--	**1.4**	--	--	0.1 U
Percent retained 32 micron sieve	**1.2**	--	**0.9**	--	**19.6**	--	**2.4**	--	**19.2**	--	--	**0.6**
Percent retained 75 micron sieve	**8.2**	--	**4.5**	--	**27.4**	--	**28.1**	--	**27.3**	--	--	**7.6**
Percent retained 150 micron sieve	**15.8**	--	**11.4**	--	**14.1**	--	**42.5**	--	**18.5**	--	--	**13.9**
Percent retained 250 micron sieve	**17.5**	--	**25.3**	--	**8.7**	--	**11.8**	--	**10.9**	--	--	**35.7**
Percent retained 425 micron sieve	**10**	--	**18.9**	--	**2.3**	--	**1**	--	**2**	--	--	**17.9**
Percent retained 850 micron sieve	**5**	--	**8.7**	--	**0.6**	--	**0.7**	--	**0.4**	--	--	**6.5**
Percent retained 2000 micron sieve	**5.7**	--	**4.3**	--	**0.1**	--	**0.6**	--	**0.2**	--	--	**5.4**
Percent retained 4750 micron sieve	**4.1**	--	**3.7**	--	**0.2**	--	**0.2**	--	**0.2**	--	--	**4**
Percent retained 9500 micron sieve	**1.2**	--	**3.1**	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U
Percent retained 12500 micron sieve	**1.9**	--	**3.9**	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U
Percent retained 19000 micron sieve	**2.7**	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U
Percent retained 25K micron sieve	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U
Percent retained 37.5K micron sieve	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U
Percent retained 50K micron sieve	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U
Percent retained 75K micron sieve	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	0.1 U	--	--	0.1 U

Notes:
1. Sample depth is reported as below mudline and presented for VST measurements. Physical testing depths are presented in Table 4.
Bold = Detected result
U = Compound analyzed, but not detected above detection limit
pct = percent
su = standard units
-- Sample was not submitted for chemical analysis.

Table 26
Sediment Consolidated-Undrained Triaxial and Consolidation Testing Results

Station ID		Boring Location	Sample ID	In-Situ Depth (ft):	Atterberg Limits[1]		Consolidation[2]			Consolidated-Undrained Trixial[3]		
					PI (%)	USCS	$C_c/(1+e_0)$	$C_r/(1+e_0)$	σ_p (psi)[4]	σ_{3f} (psi)	$\sigma_{Df} = (\sigma_1-\sigma_3)_f$ (psi)	Δu_f (psi)
Outer Waterway												
1C	1C-102A-HSA	Upland	1C-102A-HSA- S17	67 - 69	31.3	CL	0.122	0.021	7	20	18.1	12.1
										40	24.9	25.7
										80	39.5	55.5
	1C-102C-HSA	In-Water	1C-102C-HSA-S8	32.6 - 34.6	29.3	CH	0.194	0.026	28	7	13.9	3.1
										14	16.3	7.6
										28	20.6	17.6
	1C-103B-HSA	In-Water	1C-103B-HSA-S12	49.5 - 51.5	23.3	CL	0.122	0.016	28	15	18.9	9.2
										30	35.5	17.1
										60	47.5	37.8
	1C-104A-HSA	Upland	1C-104A-HSA-S18	79 - 81	27.0	CL	0.224	0.030	15	25	23.3	15.0
										50	43.6	33.2
										80	40.5	54.7
Inner Waterway												
3B	3B-101A-HSA	Upland (Yard Area)	3B-101A-HSA-S16	64 - 66	43.7	CH	0.143	0.026	28	20	17.7	13.4
										40	69.0	18.3
										75	48.3	42.3
	3B-102C-HSA	In-Water	3B-102C-HSA-S8	32.5 - 34.5	29.9	CL	0.091	0.011	10	7	14.6	3.2
										14	21.1	7.4
										28	32.3	15.5
	3B-104A-HSA	Upland (Yard Area)	3B-104A-HSA-S17	69 - 71	29.8	CL	0.131	0.027	14	20	23.1	10.2
										40	38.1	23.5
										75	53.1	46.0
	3B-104C-HSA	In-Water	3B-104C-HSA-S8	33 - 35	31.8	CH	0.156	0.028	28	7	18.2	1.7
										14	26.3	5.0
										28	32.5	16.1
Log Pond												
4	4-101B-HSA	In-Water	4-101B-HSA-S12	46 - 48	31.9	CH	0.125	0.017	29	12	20.4	4.7
										25	27.0	13.4
										50	92.3	17.9
ASB												
8	8-105A-HSA	Berm	8-105A-HSA-S18	75 -77	38.4	CH	0.036	0.005	1	25	24.6	17.9
										50	28.1	30.0
										80	47.3	56.0
	8-105C-HSA	ASB In-Water	8-105C-HSA-S14	49 - 51	25.8	CL	0.074	0.018	18	12	16.4	5.4
										25	27.2	15.1
										50	33.0	31.5
	8-110A-HSA	Berm	8-110A-HSA-S15	60 - 62	19.3	CL	0.202	0.020	26	20	26.5	9.4
										40	33.0	25.9
										80	52.9	55.3
	8-110B-HSA	ASB In-Water	8-110B-HSA-S13	46.5 - 48	25.0	CL	0.099	0.012	21	12	16.5	4.5
										25	30.3	9.4
										50	34.7	33.7

Notes:
1. Atterberg Limits testing conducted according to ASTM D-4318
2. Consolidation testing conducting according to ASTM D-2435, Method B.
3. Consolidated-Undrained Triaxial testing conducted according to ASTM D-4767
4. Preconsolidation stress estimated using the Cassagrande procedure.



Q:\Jobs\080007-01_Whatcom_Waterway\Maps\2010_01\PRDI\Fig1_PRDI_SiteVicinity.mxd epipkin 01/26/2010 3:27 PM

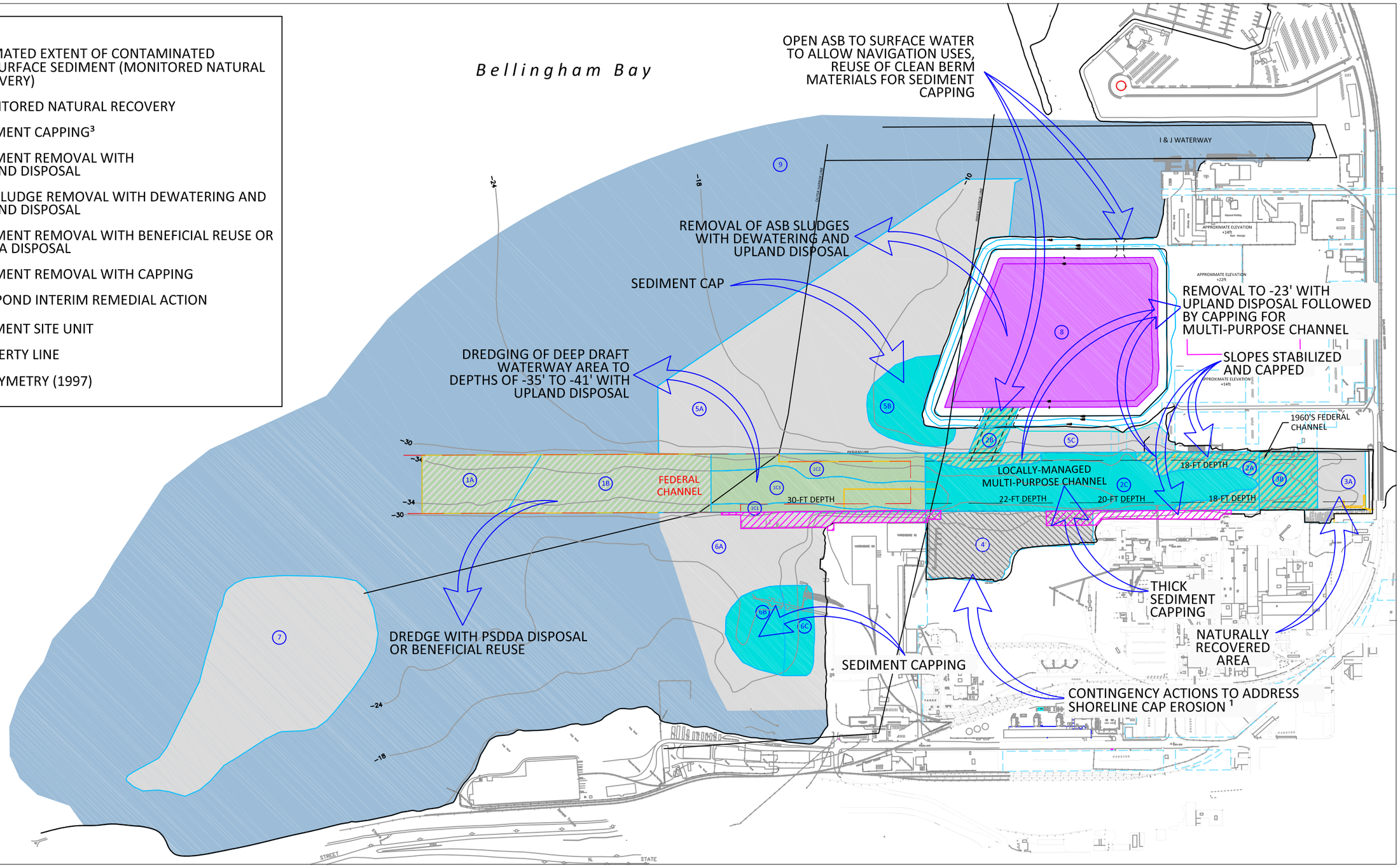
NOTES:
1. Source: Figure 2-3 Cleanup Action Plan, Whatcom Waterway Site, September 2007.
2. Horizontal datum: Washington State Plane North, NAD 83 Feet.
3. Vertical datum: Mean Lower Low Water (MLLW).

Feet
0 300 600 900 1,200

Figure 1
Site Vicinity and Location Features
Whatcom Waterway PRDI Data Report

LEGEND

- ESTIMATED EXTENT OF CONTAMINATED SUBSURFACE SEDIMENT (MONITORED NATURAL RECOVERY)
- MONITORED NATURAL RECOVERY
- SEDIMENT CAPPING[3]
- SEDIMENT REMOVAL WITH UPLAND DISPOSAL
- ASB SLUDGE REMOVAL WITH DEWATERING AND UPLAND DISPOSAL
- SEDIMENT REMOVAL WITH BENEFICIAL REUSE OR PSDDA DISPOSAL
- SEDIMENT REMOVAL WITH CAPPING
- LOG POND INTERIM REMEDIAL ACTION
- 5A SEDIMENT SITE UNIT
- PROPERTY LINE
- –18 BATHYMETRY (1997)



NOTES:

1. Contingency actions to address shoreline cap erosion include additional material placed along the shoreline and construction of energy dissipating groins. See Appendix A, Figure A-2 for a complete description of planned contingency actions for log pond.
2. For details regarding monitored natural recovery areas see CAP Section 2.3.
3. Some dredging in shallow-water areas of unit 5-B will be performed prior to cap placement to achieve a cap surface elevation that minimizes wave energies affecting the cap.

ANCHOR QEA

0 600
Scale in Feet

Figure 2
Cleanup Action Plan
Site Cleanup Action
Whatcom Waterway PRDI Data Report

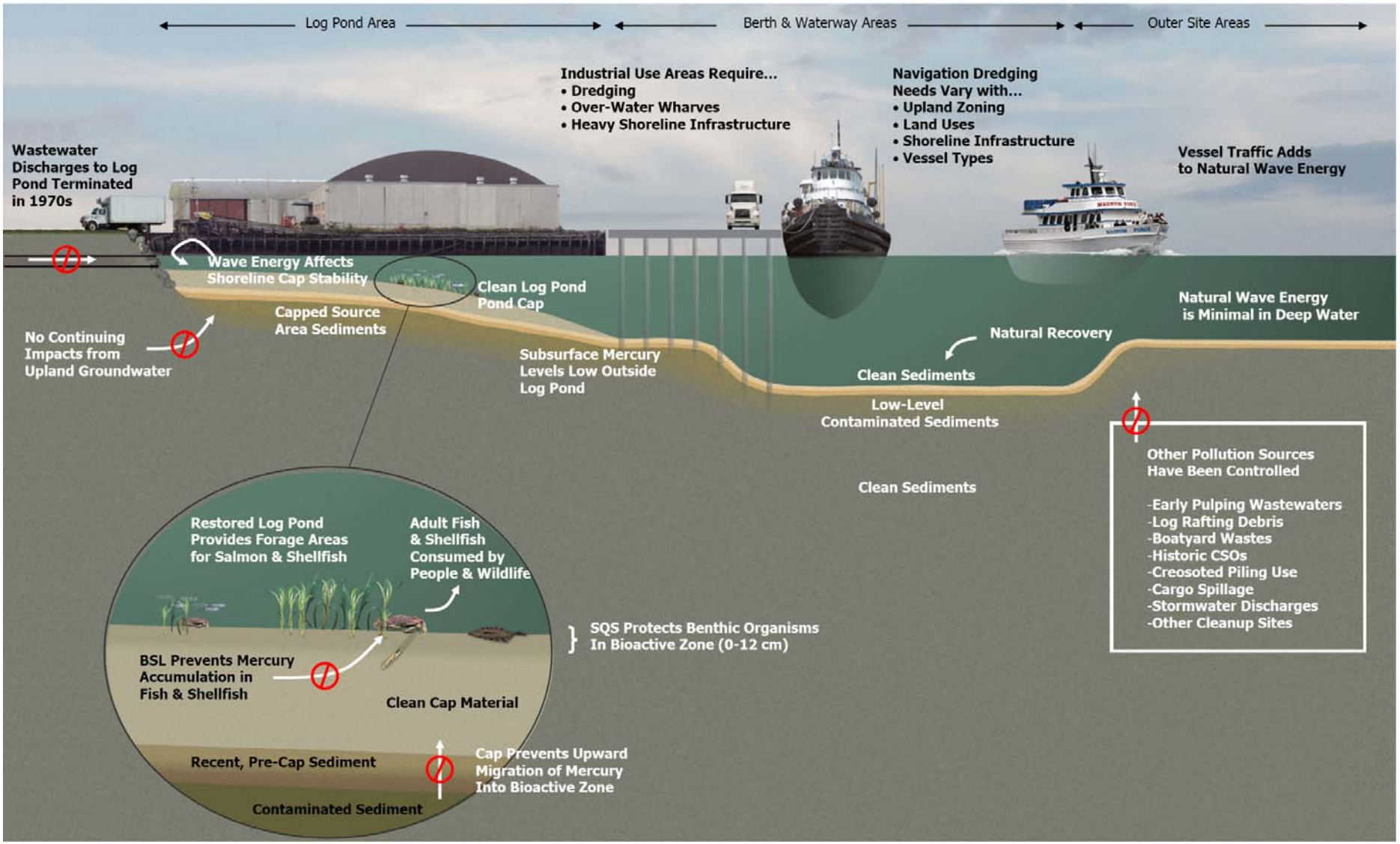


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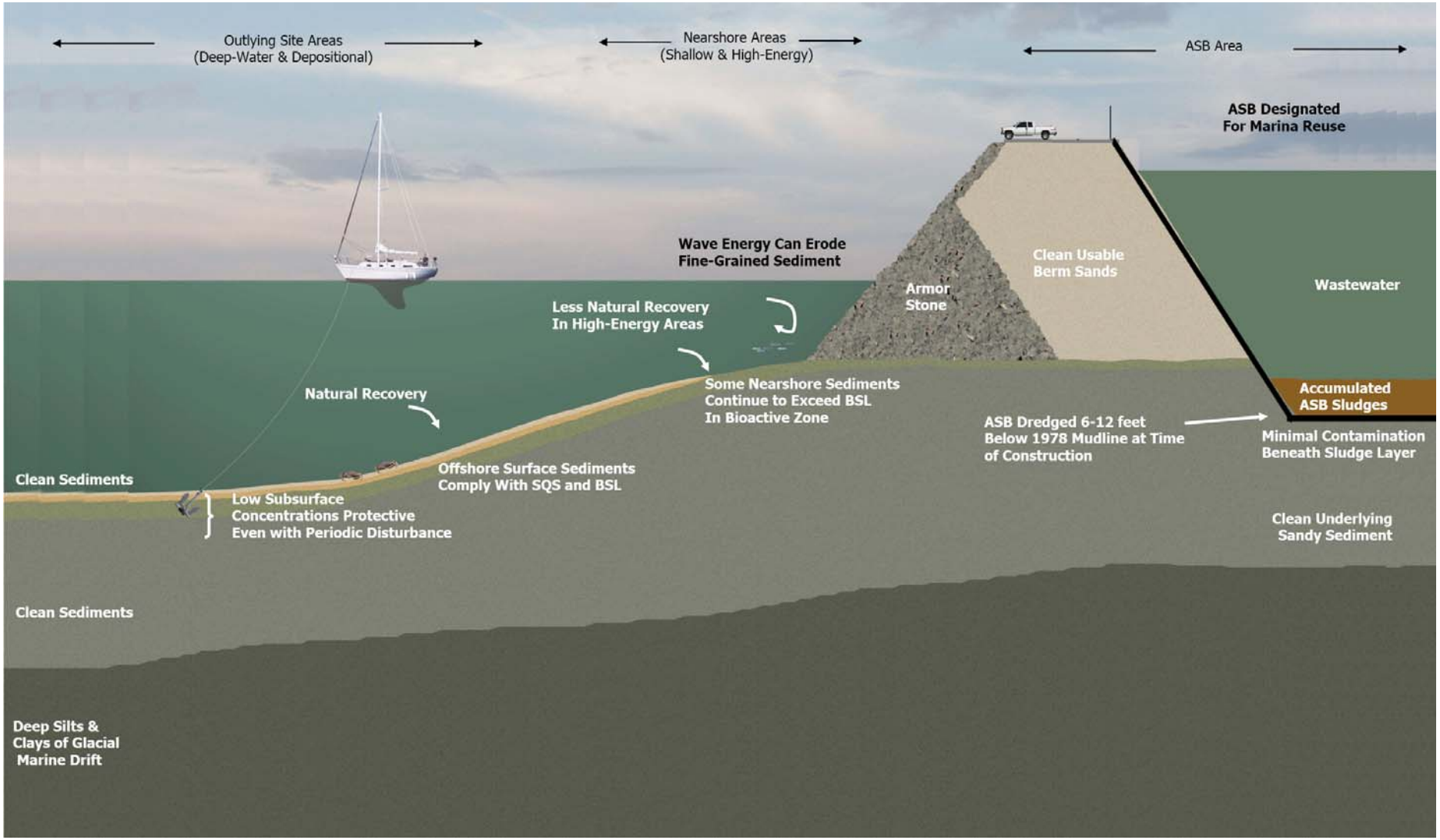
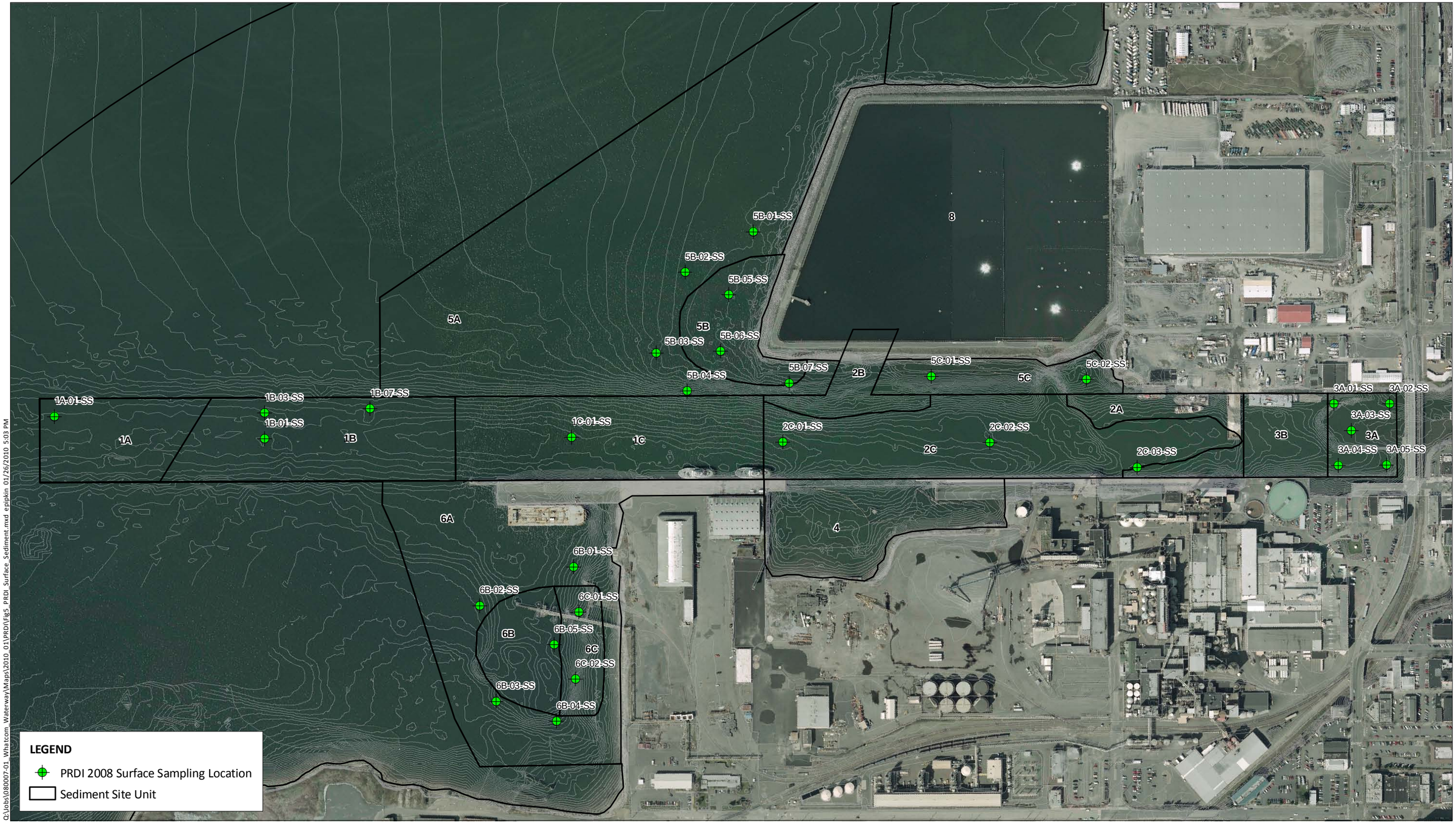
Figure 3
Conceptual Site Model (1 of 2)
Whatcom Waterway PRDI Data Report



ANCHOR QEA

Figure 4
Conceptual Site Model (2 of 2)
Whatcom Waterway PRDI Data Report

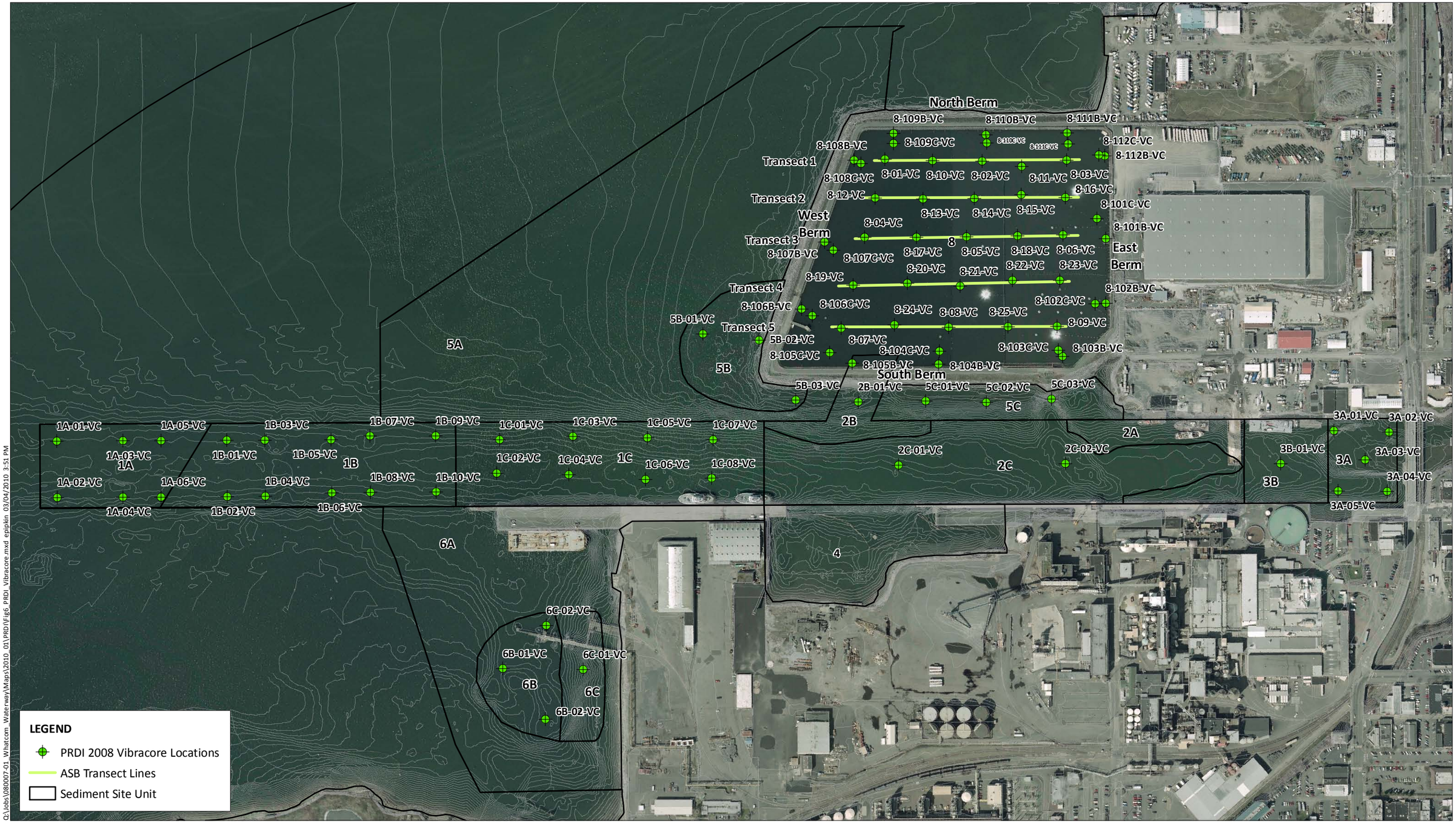


Q:\Jobs\080007-01_Whatcom_Waterway\Maps\2010_01\PRDI\Fig5_PRDI_Surface_Sediment.mxd epipkin 01/26/2010 5:03 PM

NOTES:
1. See table 1 for testing details.
2. Sediment Site Units and boundaries source: Figure 4-6, Cleanup Action Plan, Whatcom Waterway Site, September 2007.
3. Mercury speciation testing conducted at locations: 1B-01-SS, 1C-01-SS, 2C-01-SS, 2C-02-SS, 5C-01-SS, 6B-05-SS
4. Reference locations in Samish Bay: REF-01-SS, REF-02-SS.
5. Horizontal datum: Washington State Plane North, NAD 83 Feet.
6. Vertical Datum: Mean Lower Low Water (MLLW).
7. Aerial photo taken in 2004.

Feet
0 200 400 600 800

Figure 5
PRDI Surface Sediment Sampling Locations
Whatcom Waterway PRDI Data Report



NOTES:
1. See tables 2a & 2b for testing details.
2. Sediment Site Units and boundaries source: Figure 4-6, Cleanup Action Plan, Whatcom Waterway Site, September 2007.
3. Horizontal datum: Washington State Plane North, NAD 83 Feet.
4. Vertical Datum: Mean Lower Low Water (MLLW).
5. Aerial photo taken in 2004.

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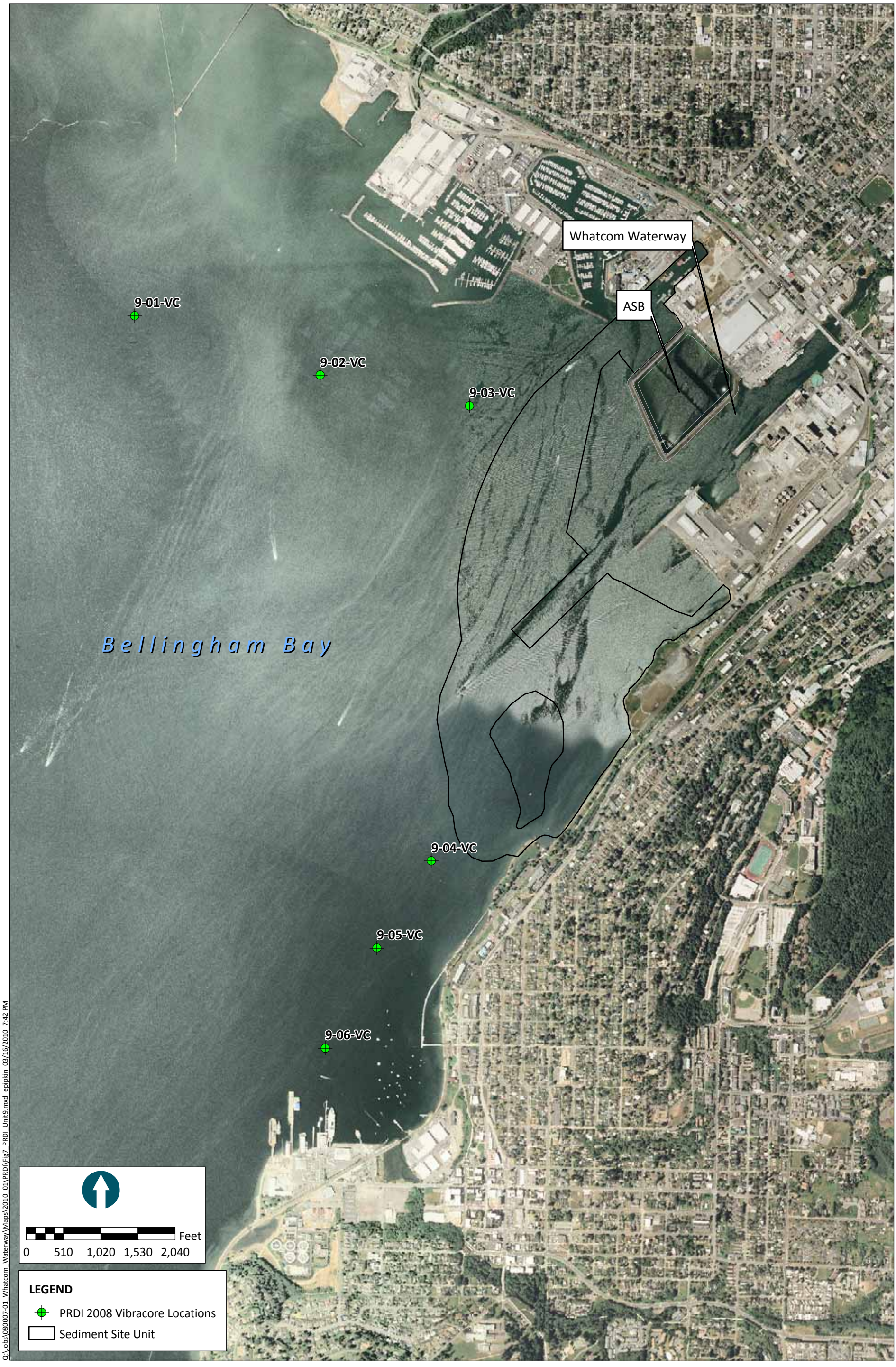
Feet
0 200 400 600 800

Figure 6
PRDI Subsurface Sediment Vibracore Sampling Locations
Whatcom Waterway PRDI Data Report



NOTES:
1. See Table 2b for testing details.
2. Sediment Site Units and boundaries source: Figure 4-6, Cleanup Action Plan, Whatcom Waterway Site, September 2007.
3. Horizontal datum: Washington State Plane North, NAD 27 Feet.
4. Vertical Datum: Mean Lower Low Water (MLLW).
5. Aerial photo from NAIP 2006.

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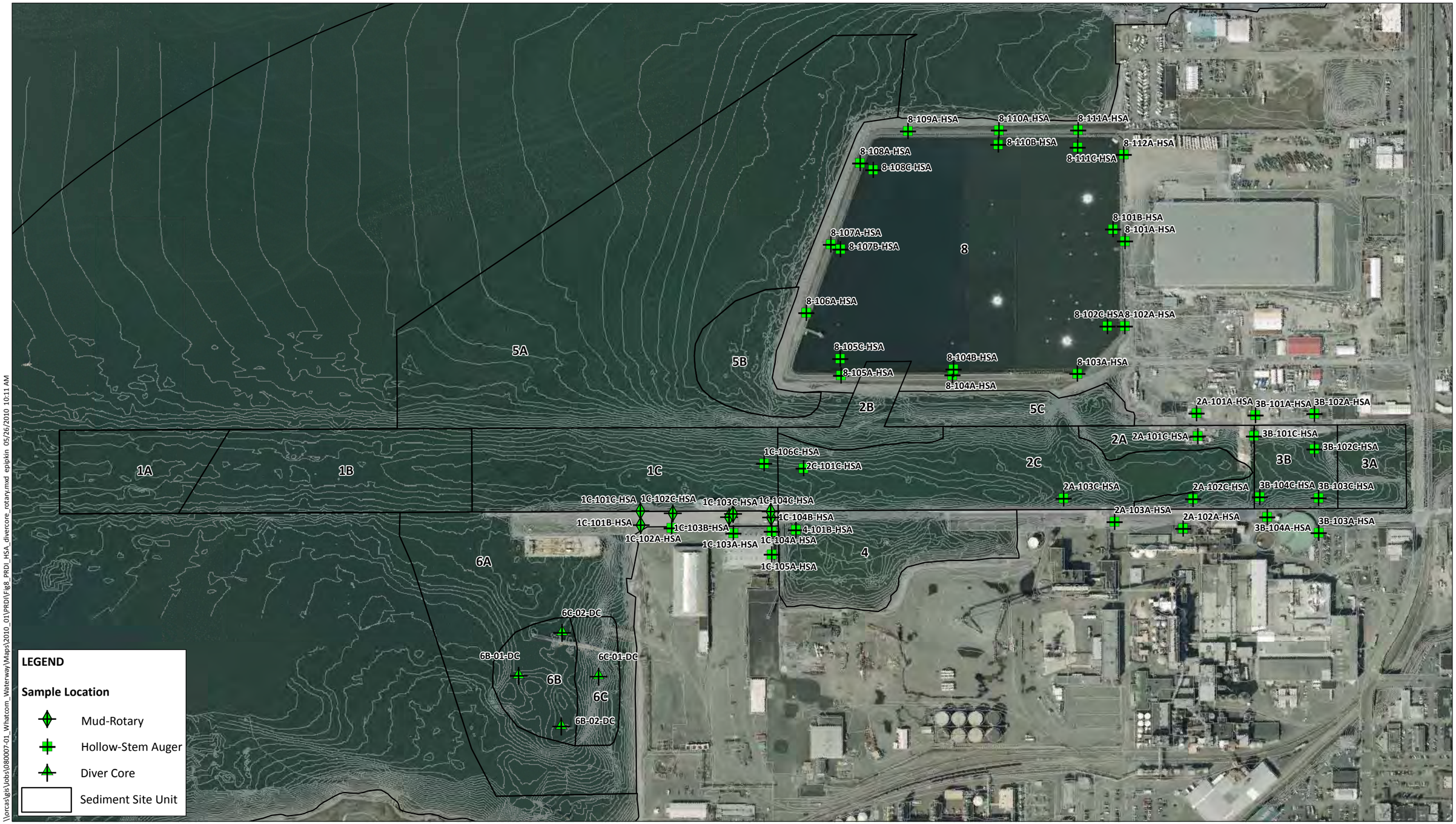
Figure 7
PRDI Unit 9 Subsurface Sediment Vibracore Sampling Locations
Whatcom Waterway PRDI Data Report



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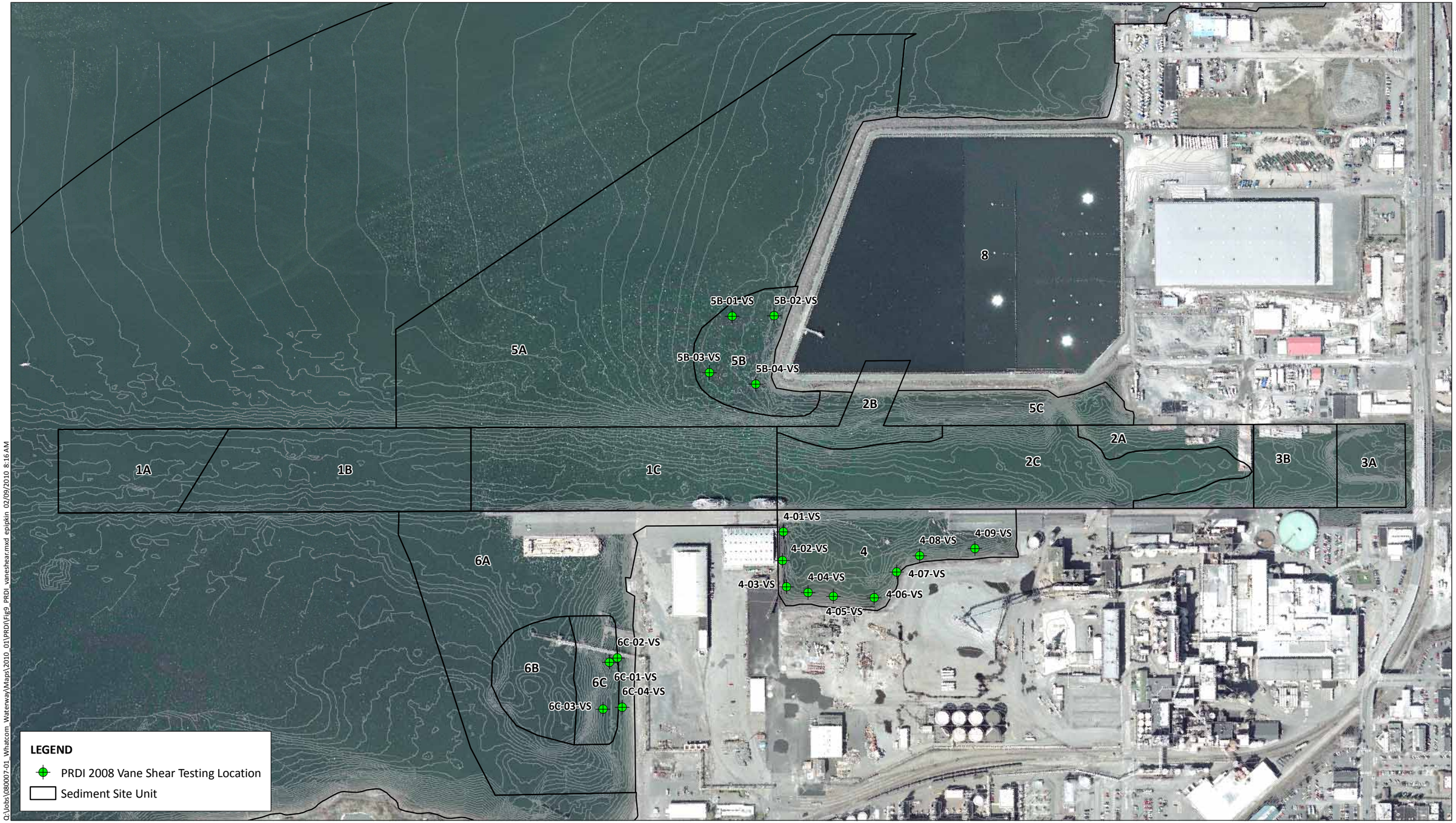
NOTES:
1. See tables 3a & 3b for testing details.
2. Mud rotarty methodology was used at the BST dock locations.
3. Sediment Site Units and boundaries source: Figure 4-6, Cleanup Action Plan, Whatcom Waterway Site, September 2007.3
4. Horizontal datum: Washington State Plane North, NAD 27/98.
5. Vertical Datum: Mean Lower Low Water (MLLW).
6. 1C-102B-HSA was not collected due to refusal.
7. Aerial photo taken in 2004.
8. BST stations 1C-101B-HSA and 1C-101C-HSA included co-located diver cores.

Feet
0 200 400 600 800

ANCHOR QEA

Figure 8
PRDI Hollow-Stem Auger, Mud-Rotary, and Diver Core Locations
Whatcom Waterway PRDI Data Report



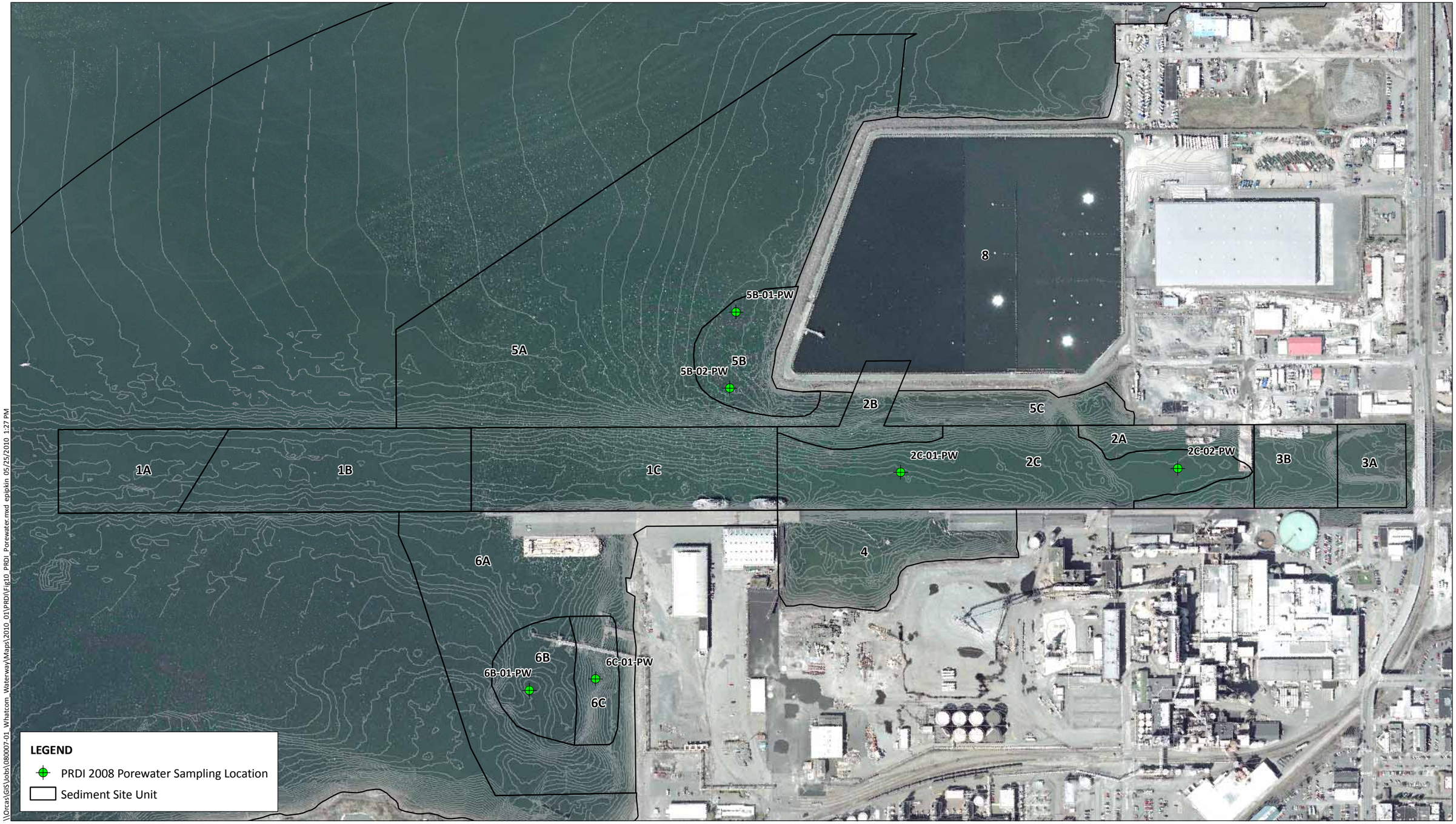
Q:\Jobs\080007-01_Whatcom_Waterway\Maps\2010_01\PRDI\Fig9_PRDI_vaneshear.mxd epipkin 02/09/2010 8:16 AM

NOTES:
1. Surface sediment grabs were co-located with vane shear locations (grain size testing) to facilitate standardization of the field VST measurements.
2. See table 4 for testing details.
3. Sediment Site Units and boundaries source: Figure 4-6, Cleanup Action Plan, Whatcom Waterway Site, September 2007.
4. Horizontal datum: Washington State Plane North, NAD 27/98.
5. Vertical Datum: Mean Lower Low Water (MLLW).
6. Aerial photo taken in 2004.

Feet
0 200 400 600 800

ANCHOR QEA

Figure 9
PRDI Vane Shear Testing Locations
Whatcom Waterway PRDI Data Report



\\Orcas\GIS\Jobs\080007-01_Whatcom_Waterway\Maps\2010_01\PRDI\Fig10_PRDI_Porewater.mxd epipkin 05/25/2010 1:27 PM

NOTES:
1. See table 5 for testing details.
2. Sediment Site Units and boundaries source: Figure 4-6, Cleanup Action Plan, Whatcom Waterway Site, September 2007
3. Horizontal datum: Washington State Plane North, NAD 27/98.
4. Vertical Datum: Mean Lower Low Water (MLLW).
5. Aerial photo taken in 2004.

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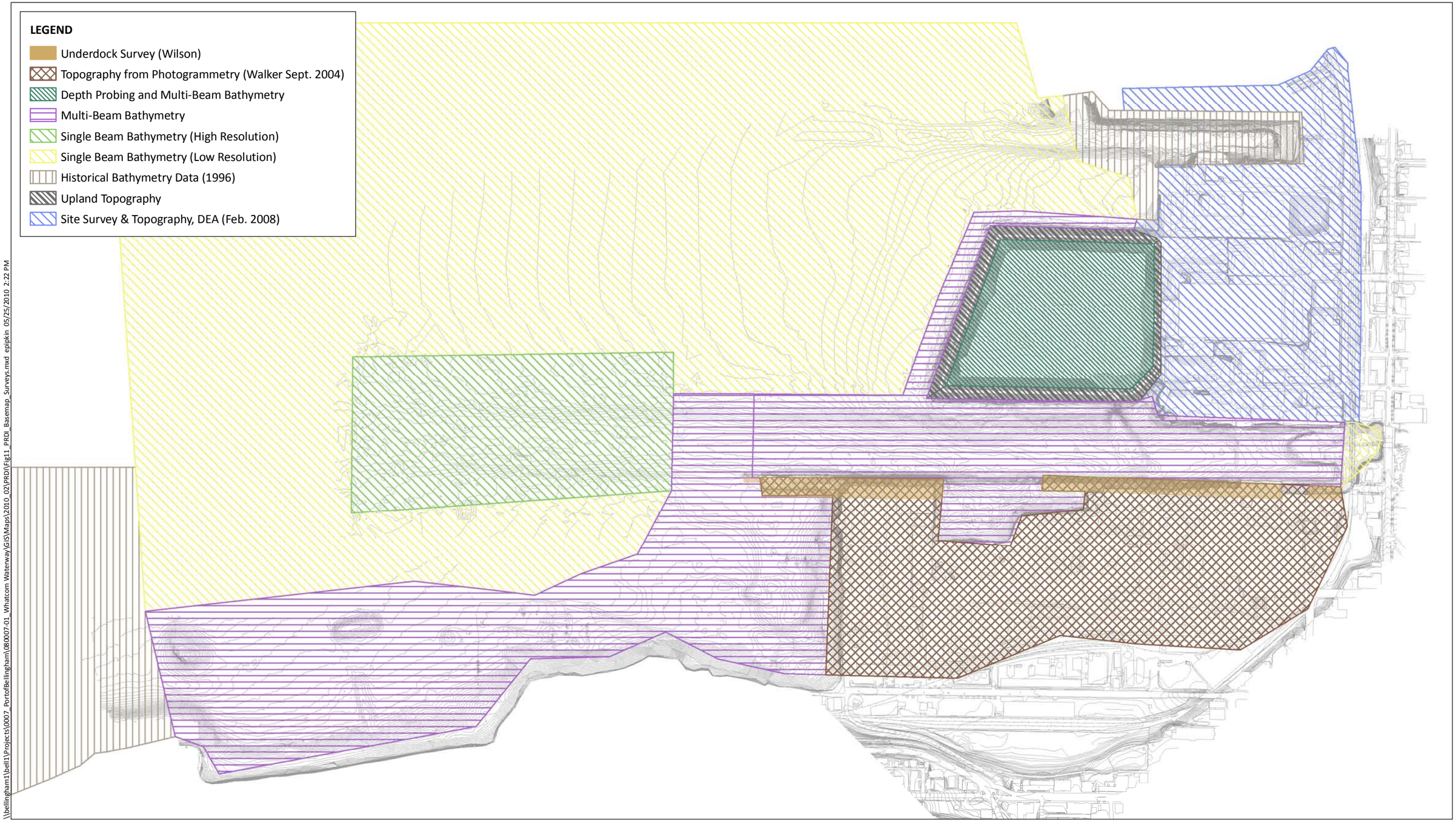
Feet
0 200 400 600 800

Figure 10
PRDI Porewater Sampling Locations
Whatcom Waterway PRDI Data Report



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NOTE:

1. These surveys were completed in Washington State Plane North, NAD 83 (feet) and North American Vertical Datum (NAVD) 88 (feet) and were converted to MLLW (feet) for incorporation into the project basemap. The conversion from NAVD 88 (ft) to MLLW (ft) used for the project is +0.48 ft and was taken from NOAA Benchmark No. 9449211 (Bellingham, WA).
2. Bathymetry for the remainder of Bellingham Bay taken from NOAA navigation charts.
3. ASB contours are based on multi-beam survey data.

ANCHOR QEA

Feet
0 250 500 750 1,000

Figure 11
Summary of PRDI Site Surveys
Whatcom Waterway PRDI Data Report

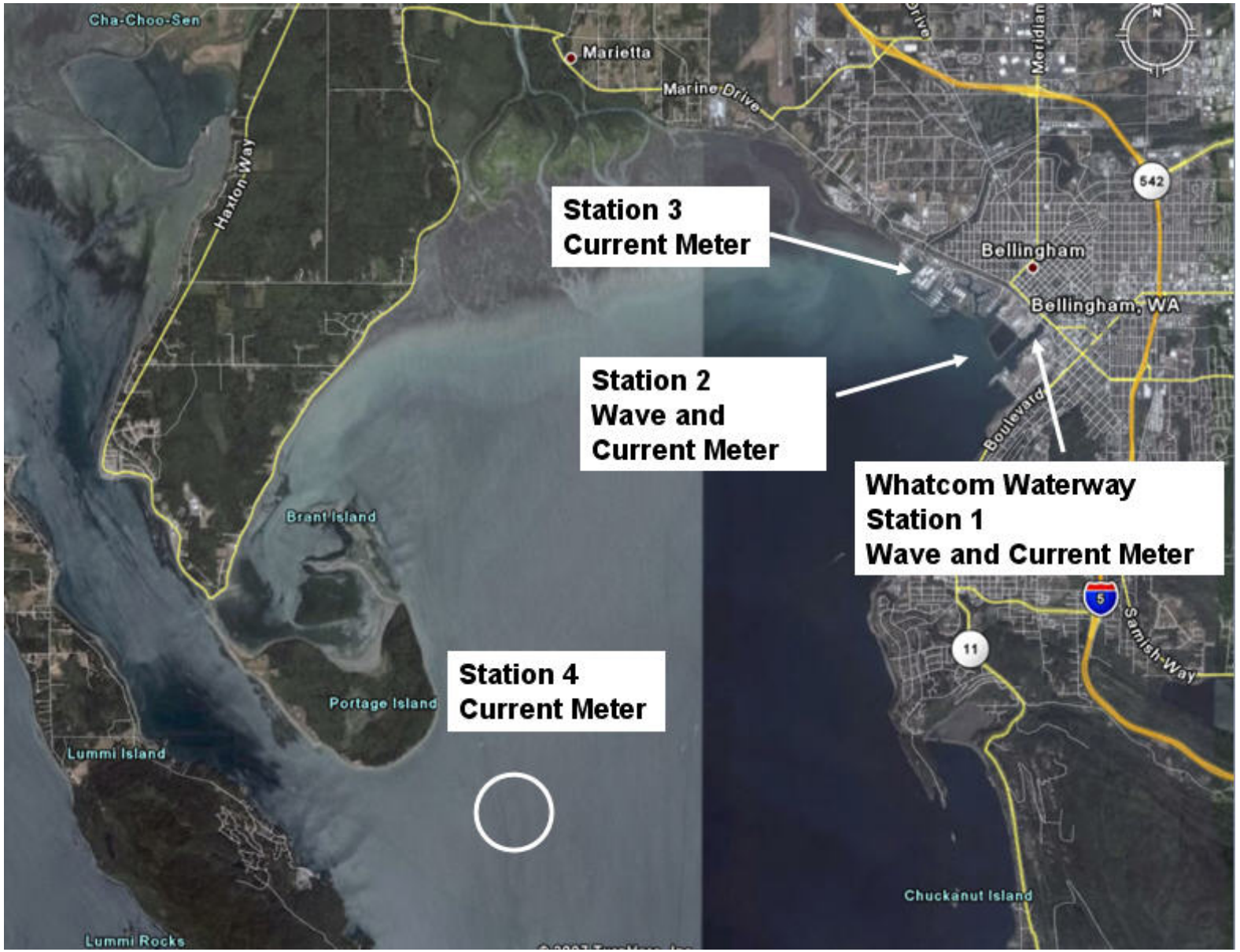

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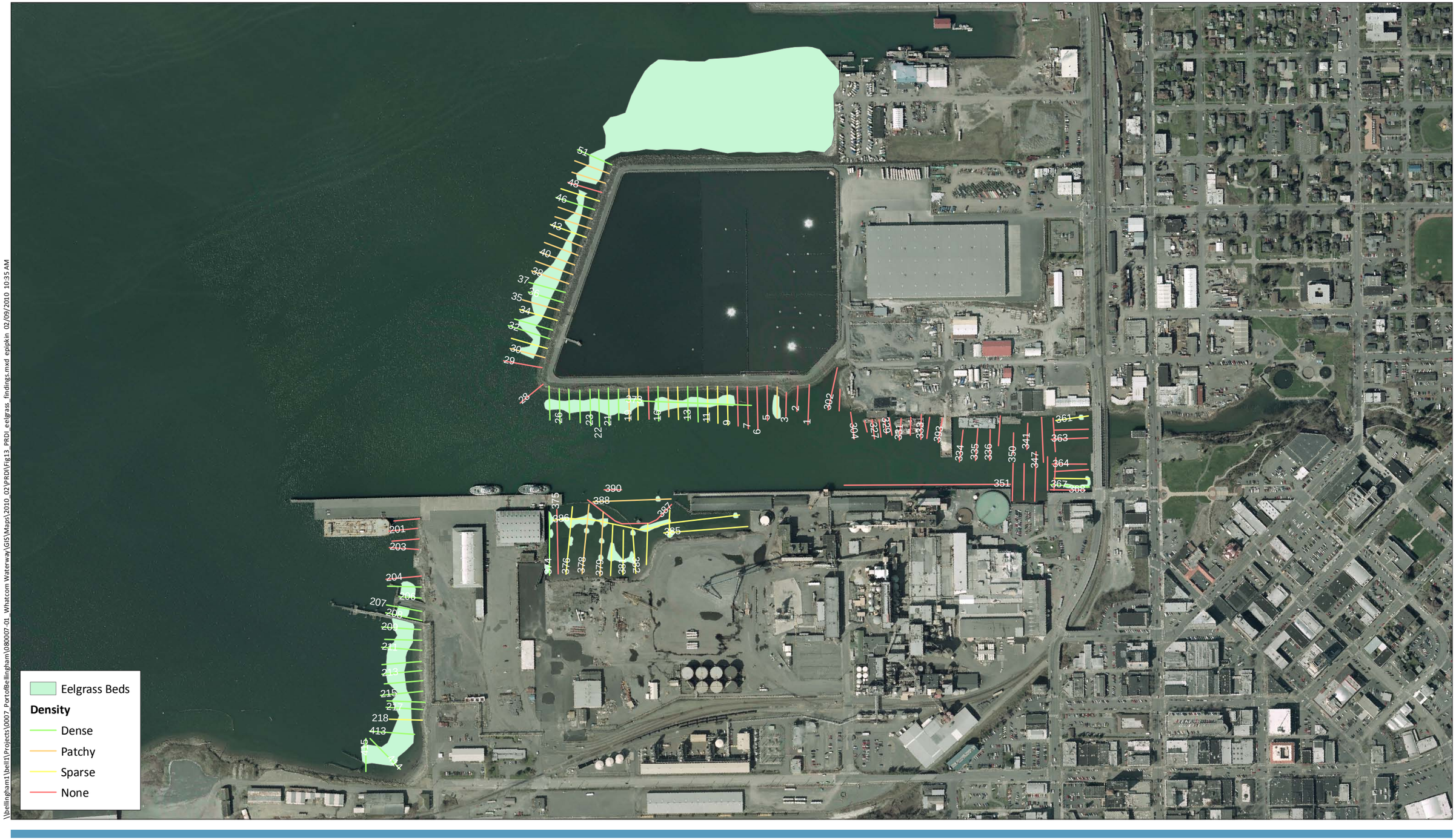
Figure 12
Oceanographic Data Collection Stations
Whatcom Waterway PRDI Data Report



\\bellingham1\bell1\Projects\0007_PortofBellingham\080007-01_Whatcom Waterway\GIS\Maps\2010_02\PRDI\Fig13_PRDI_eelgrass_findings.mxd epipkin 02/09/2010 10:35 AM

NOTES:

1. Source: Anchor QEA. *Draft Underwater Video and Dive Survey of Eelgrass and Macroalgae Report*. March 2009.
2. Horizontal datum: Washington State Plane North, NAD 27/98.
3. Vertical datum: Mean Lower Low Water (MLLW).
4. Transect 351 is a combination of transects 352 and 353 per this figure.
5. Sector A includes transects 029-051.
6. Sector B includes transects 001-028, 302-304, 325, 327-338, 341-343, 361-363, 373, and 392-393.
7. Sector C includes transects 200-218, 344-345, 347, 349, 350, 364-368, 374-376, 378-388, 390, and 413-415.

Feet
0 220 440 660 880

Figure 13
Eelgrass Survey Findings
Whatcom Waterway PRDI Data Report

HAR-96-SS24
ANC-03-SS24
5B-01-SS
0.76
5B-02-SS
1.1
5B-05-SS
0.71
HAR-96-SS23
ANC-03-SS23
HAR-96-SS13
ANC-03-SS13
5B
5B-03-SS
0.5
5B-06-SS
2.64
HAR-96-SS32
ANC-96-SS32
5B-07-SS
0.22
5B-04-SS
0.61
8
5A
2B
5C-01-SS
0.12
5C-02-SS
0.31
5C
2A
3A-01-SS
0.2
3A-02-SS
0.13
1B-01-SS
0.2
1C-01-SS
0.3
2C-01-SS
0.3
2C-02-SS
0.4
3A-03-SS
0.09
3A
3B
1A
1B
1C
2C
2C-03-SS
0.6
3A-05-SS
0.4
3A-04-SS
0.4
6A
4
6B-01-SS
0.29
HAR-96-SS31
ANC-03-SS31
HAR-96-SS19
HAR-96-SS21
6C-01-SS
0.3
6B-02-SS
0.3
6B
6B-05-SS
0.3
6C-02-SS
0.4
6B-03-SS
0.3
6C
6B-04-SS
0.31
HAR-96-SS29
ANC-03-SS29

Current Bioassay Pass Locations (Anchor, 2008)
Not Bioassay tested (Anchor, 2008)
Current Area of BSL Exceedance
Historic Bioassay Locations (Hart Crowser, 1996 and Anchor, 2003)
Sediment Site Unit

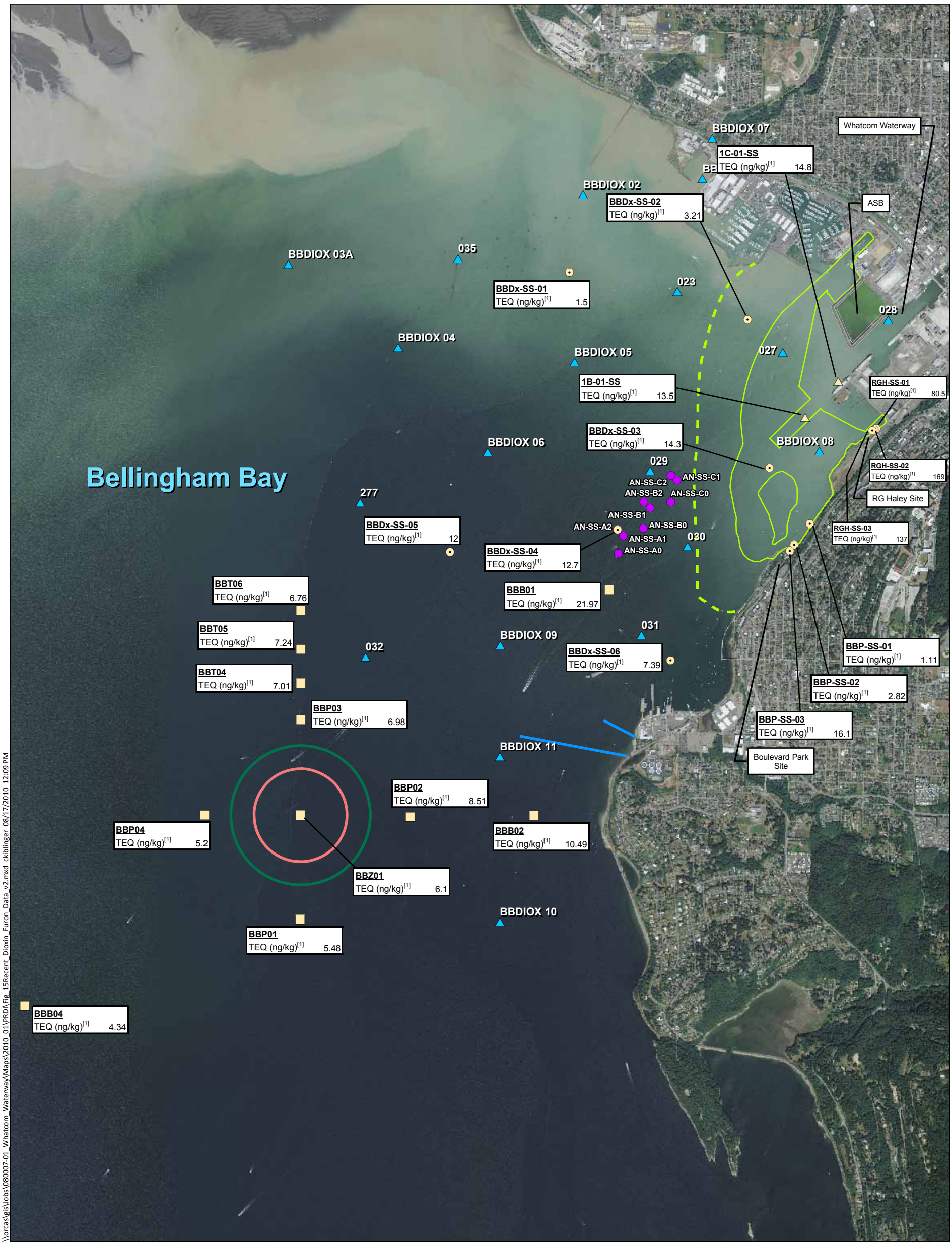
Q:\Jobs\080007-01_Whatcom_Waterway\Maps\2010_01\PRDI\Fig14_PRDI_SurfaceSedimentTestResults.mxd epipkin 02/09/2010 11:18 AM

NOTES:
1. 2008 Mercury results presented as mg/kg, see tables 7 &14 for chemical and biological testing results.
2. Sediment Site Units and boundaries source: Figure 4-6,
Cleanup Action Plan, Whatcom Waterway Site, September 2007.
3. Horizontal datum: Washington State Plane North, NAD 27/98.
4. Vertical Datum: Mean Lower Low Water (MLLW).

ANCHOR QEA

Feet
0 200 400 600 800

Figure 14
Surface Sediment Mercury Testing Results
Whatcom Waterway PRDI Data Report



\\orcas\gis\Jobs\080007-01_Whatcom_Waterway\Maps\2010_01\PRDI\Fig_15Recent_Dioxin_Furon_Data_v2.mxd ckiblinger 08/17/2010 12:09 PM

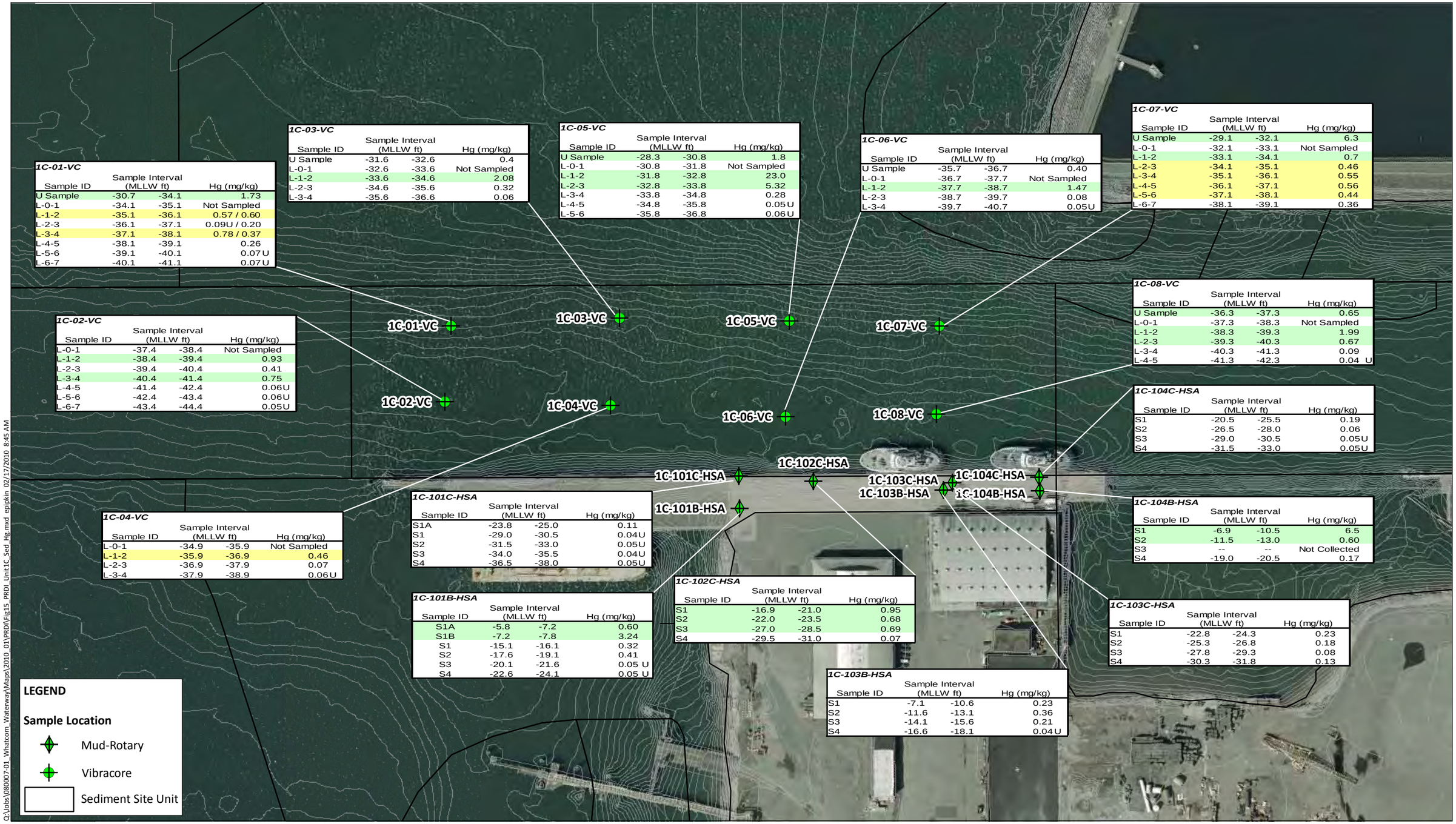
- Anchor Sample Location (2008)
- SAIC Sample Location (2008)
- Ecology/Hart Crowser Sample Location (2009)
- GP Outfall Testing Location
- Ecology 2010 Dioxin/Furan Sampling Locations
- Bellingham Disposal Site Disposal Zone
- Bellingham Disposal Site Target Area
- Updated Area 9 Boundary[6]
- Previously Defined Whatcom Waterway Site Unit Boundaries
- City of Bellingham NPDES Outfall (Approximate Locations)

Notes:
1. TEQ concentrations plotted were calculated using WHO 2005 mammalian TEF values, and assume non-detected compounds at 1/2 the method reporting limit.
2. Sediment Site Units and boundaries source: Figure 4-6, Cleanup Action Plan, Whatcom Waterway Site, September 2007.
3. Horizontal datum: Washington State Plane North, NAD 27/98.
4. Vertical Datum: Mean Lower Low Water (MLLW).
5. Aerial photo from NAIP 2006.
6. The boundary for Unit 9 has been updated based on the extent of site-associated subsurface mercury contamination as described in Section 2-2 and Figure 19.
7. Over 10 years have elapsed since collection of the GP outfall testing samples in 1999. Older date are available in EIM, but resampling in 2008 at location BBDx-SS-04 showed substantial declines in surface sediment TEQ concentrations.

Feet
0 1,250 2,500 3,750 5,000

ANCHOR QEA

Figure 15
Summary of Recent Dioxin/Furan Data for Bellingham Bay Surface Sediments
Whatcom Waterway PRDI Data Report



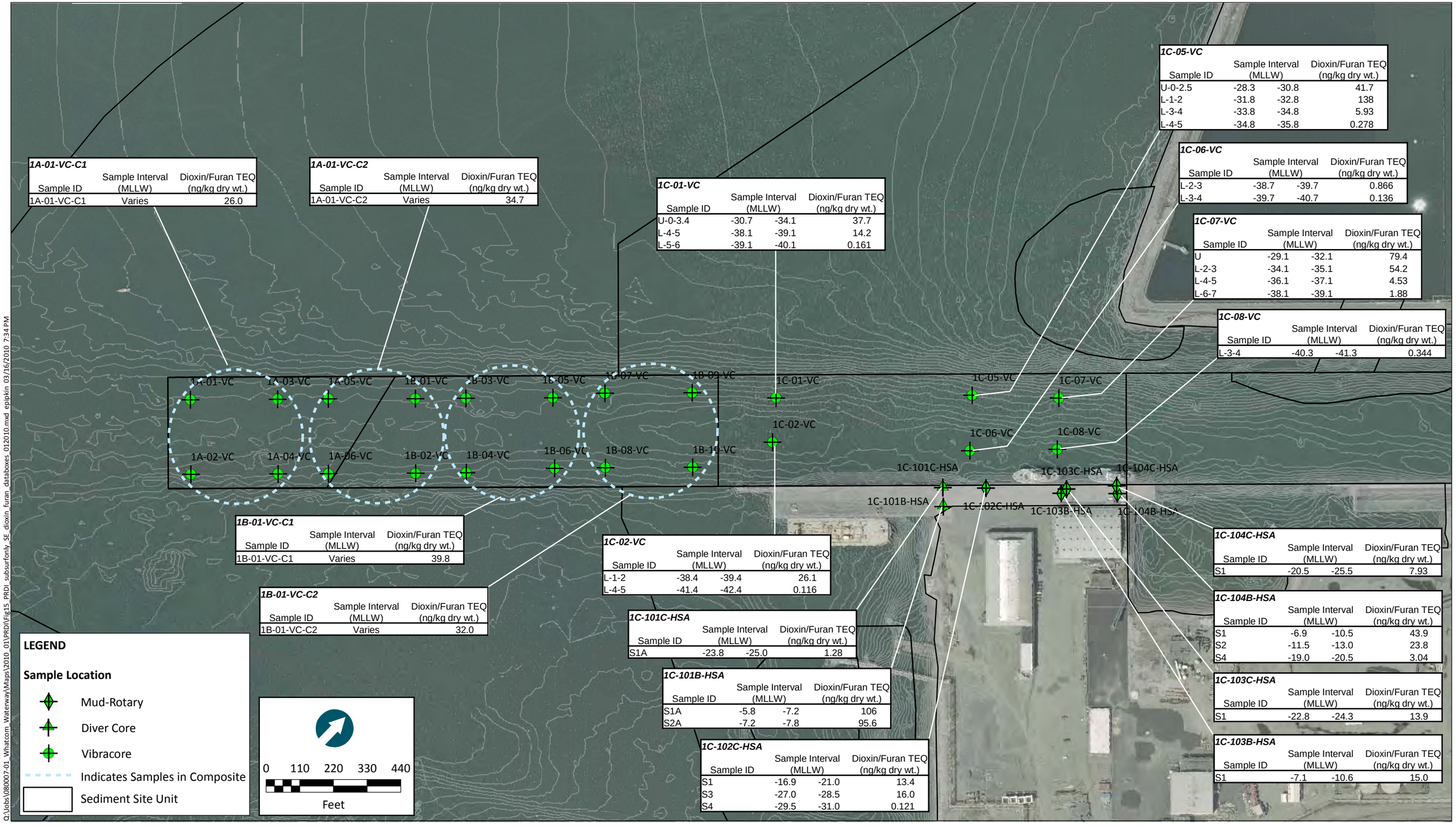
NOTES:

1. 2008 Mercury results presented as mg/kg, see tables 17a & 17b for testing results.
2. Station 1C-102B-HSA was not sampled due to refusal.
3. Results of duplicate analyses are averaged to assess compliance with numeric screening levels.
4. Sample intervals presented as Mean Lower Low Water (MLLW) elevation.
5. Sediment Site Units and boundaries source: Figure 4-6, Cleanup Action Plan, Whatcom Waterway Site, September 2007.
6. BST stations 1C-101B-HSA and 1C-101C-HSA included co-located mud-rotary and diver core sampling.
7. Horizontal datum: Washington State Plane North, NAD 27/98.
8. Aerial photo taken in 2004.

Feet
0 80 160 240 320

ANCHOR QEA

Figure 16
Subsurface Sediment Mercury Testing Results - Unit 1C
Whatcom Waterway PRDI Data Report



NOTES:

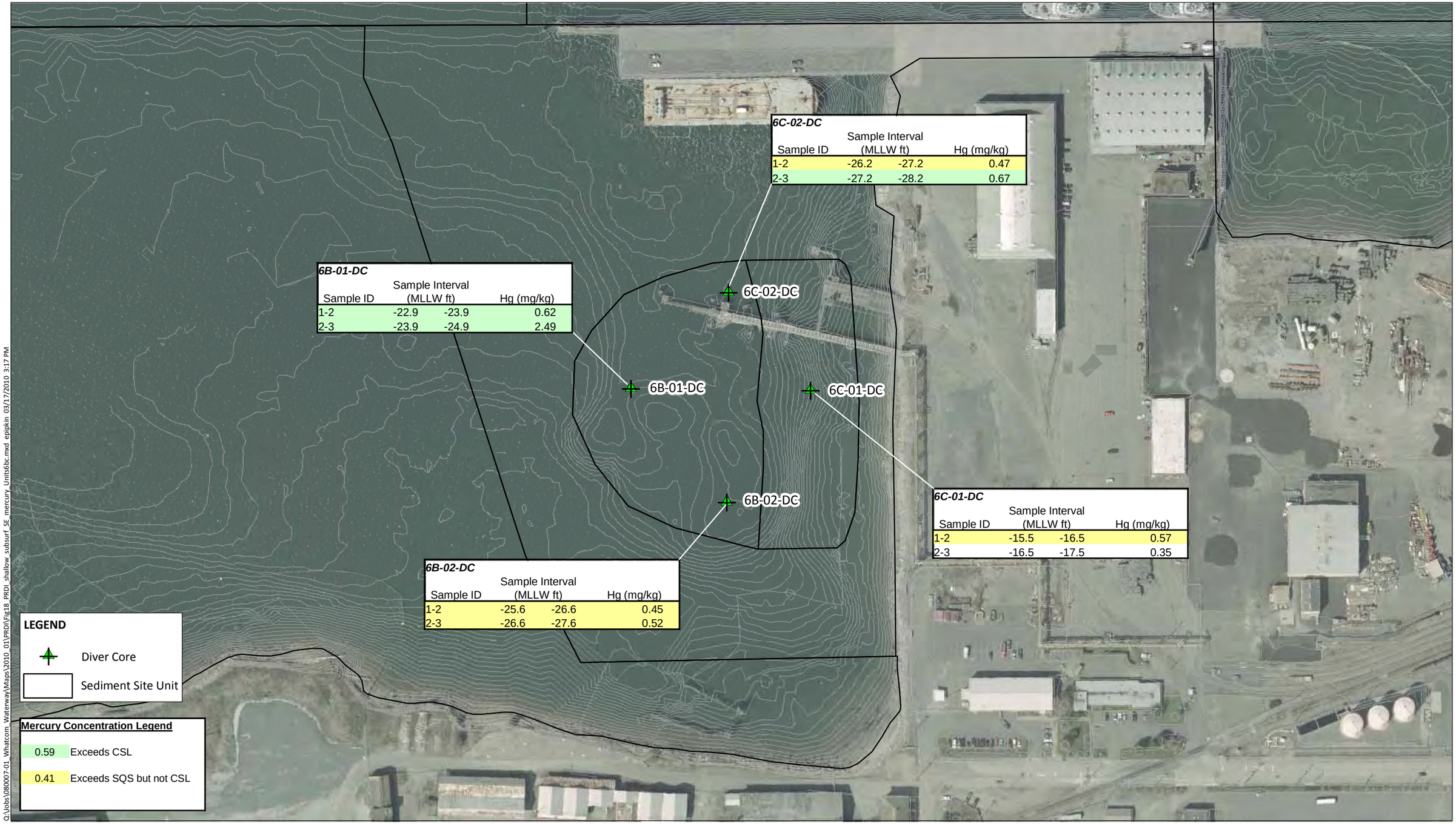
1. Horizontal Datum: WA State Plane North NAD 83 (Feet)
2. Sample intervals presented as Mean Lower Low Water (MLLW) elevation.
3. Toxic equivalency (TEQ) values were calculated for the validated dioxin/furan congeners using the 2005 World Health Organization's toxic equivalency factors for mammals. Undetected congeners were assigned a concentration equal to 1/2 the detection limit (ND=1/2).
4. Unit 1A/1B Vibracore samples are composite core samples collected 0-4 feet below the existing mudline. Table 2b and core logs (Appendix B) present the individual sampling elevations.
5. Aerial photo is 2004.
6. BST stations 1C-101B-HSA and 1C-101C-HSA included co-located mud-rotary and diver core sampling.

ANCHOR QEA

Figure 17

Outer Waterway Subsurface Sediment Dioxin/Furan Testing Results

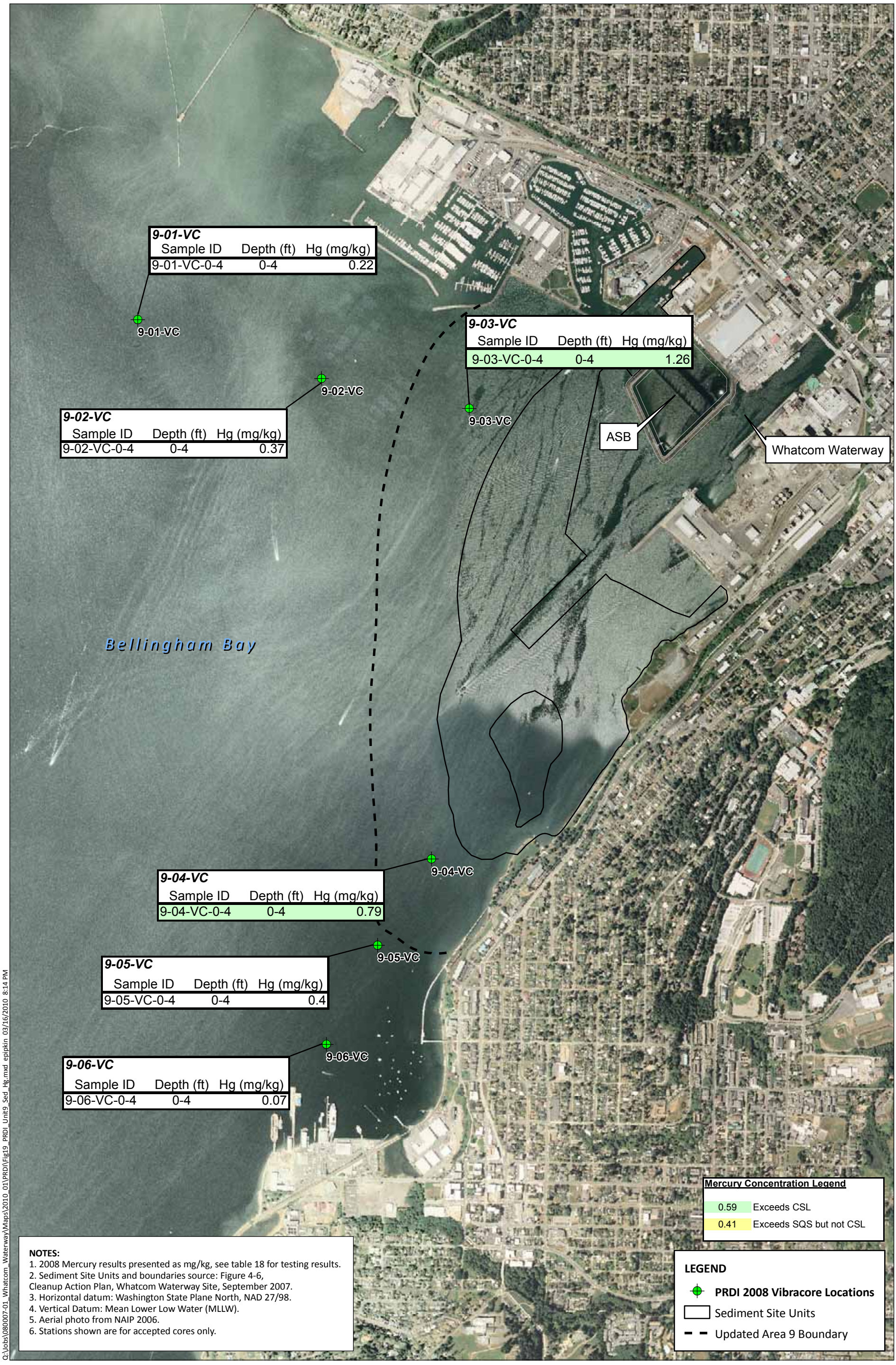
Whatcom Waterway PRDI Data Report



NOTES:
1. 2008 mercury results presented as mg/kg, see Table 18 for testing results.
2. Horizontal Datum: WA State Plane North NAD 83 (Feet)
3. Sample intervals presented as Mean Lower Low Water (MLLW) elevation.
4. Aerial photo is 2004.

0 75 150 225 300
Feet

Figure 18
Shallow Subsurface Sediment Mercury Testing Results - Units 6B & 6C
Whatcom Waterway PRDI Data Report



ANCHOR QEA

Figure 19
Subsurface Sediment Mercury Testing Results - Unit 9
Whatcom Waterway PRDI Data Report

PRE-REMEDIAL DESIGN INVESTIGATION DATA REPORT APPENDIX A – PRDI METHODS

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1 PRDI METHODS

A.1 Sample Station Location and Identification

Tables 1 through 5 in the Pre-Remedial Design Investigation (PRDI) Data Report present a detailed summary of the sampling design including sample nomenclature and testing for each station and sampling interval. The sample nomenclature is described below.

Each surface and subsurface sediment sample was assigned a unique alphanumeric identifier according to the following method:

- Each location was identified by Site Sediment Unit (e.g., 5B) and a number (e.g., 01), resulting in a station identifier: 5B-01
- This nomenclature was followed by letters that identify the method: SS for surface sediment, VC for vibracore, VS for vane shear, HSA for hollow stem auger, associated diver cores, or mud-rotary methodology. The resulting station identifier was:
  - 5B-01-SS for a surface sediment sample collected from Station 5B-01
  - 5B-01-VC for a subsurface vibracore sample collected from Station 5B-01
  - 5B-01-VS for a vane shear reading taken from Station 5B-01
  - 5B-01-HSA for a hollow stem auger, supplemental diver core, or mud rotary sample collected from station 5B-01
- Additional descriptors were added to vibracore samples taken from Unit 1C: U for upper signifies samples taken above the estimated deepest dredge (U) and L for lower signifies samples taken below the estimated deepest dredge (L). The resulting nomenclature was: 1C-01-VC-U or 1C-01-VC-L
- Hollow-stem auger samples were identified by a number 101 and transect letter (e.g., A) to identify the station, followed by the method identifier of HSA. The resulting nomenclature is: 8-101A-HSA. This represents a subsurface hollow-stem auger sample collected from transect 8-101, position A, which indicates the top of slope.
- A homogenization duplicate collected from a surface or subsurface sediment sample was followed with -XX, where XX is the station number plus 50.
- For equipment rinsate blank samples, ERB was appended to the sample identification number. The resulting nomenclature was: 5B-01-SS-ERB. This represents the equipment rinsate blank of the decontaminated sample processing equipment after sediments from Station 5B-01.

Composite samples were identified using a CX nomenclature as indicated in the sampling tables and were collected from several locations.

Horizontal positioning was determined in the field by a differential global positioning system (DGPS) based on target coordinates. The actual sample coordinates are provided in the PRDI Data Report Tables 1 through 5. The horizontal datum was North American Datum (NAD) 83/98, Washington State Plane. Measured geographical coordinates for station positions were recorded and reported to the nearest 0.01 second. In addition, state plane coordinates were reported to the nearest foot. The DGPS accuracy is less than 1 meter and generally less than 30 centimeters (cm), depending on the satellite coverage and the number of data points collected. Various locations were photographed to aid in understanding the station location.

The vertical elevation of each sediment station was measured using a fathometer or lead line and converted to mean lower low water (MLLW) elevation. Tidal elevations were determined using the program WTides, a subset of XTides, which uses merged harmonics to predict tides for Bellingham Bay from Rosario Strait, Washington. Upland geotechnical stations were surveyed in feet-MLLW by Wilson Engineering, a licensed surveyor.

A.2 Surface Sediment Collection and Sampling

Surface sediment collection was performed using a hydraulically pressurized Van Veen sampler. The objectives of surface sediment sampling are provided in Section 2 of the PRDI Data Report. Co-located surface samples were taken at areas of Vane Shear testing to confirm geotechnical properties of sediment.

A.2.1 Van Veen Grab Collection Methods

Surface sediment samples were collected from the 0- to 12-cm biologically active zone at locations presented on Figure 5 in the PRDI Data Report. Table 1 presents a summary of the surface sediment locations and sampling scheme details including chemical and physical testing analyses as well as coordinates and sample depths.

A pneumatically controlled power Van Veen grab was used to collect surface sediment samples. Sampling locations were approached at slow boat speeds with minimal wake to minimize disturbance of bottom sediments prior to sampling. Sediment samples were handled carefully to minimize disturbance during collection and transportation to the laboratory.

The grab sampler was lowered over the side of the boat from a cable at an approximate speed of 0.3 feet per second. When the sampler reached the mudline, the cable was drawn taut and DGPS measurements were recorded. Each surface grab sample was retrieved aboard the vessel and evaluated for the following acceptance criteria:

- Overlying water was present and has low turbidity
- Adequate penetration depth was achieved
- Sampler was not overfilled
- Sediment surface was undisturbed
- No signs of winnowing or leaking from sampling device were present

Grab samples not meeting these criteria were rejected near the location of sample collection, and the steps were repeated until the criteria were met. Deployments were repeated within a 20-foot radius of the proposed sample location. Once accepted, overlying water was siphoned off and a decontaminated stainless steel trowel, spoon, or equivalent were used to collect only the upper 12 cm of sediment from inside the sampler without touching the sidewalls. The sampler was decontaminated between stations and rinsed with site water between grabs.

After sample collection, the following information was recorded on the Sediment Sampling Form:

- Date, time, and name of person logging sample
- Weather conditions
- Sample location number, coordinates, and attempts
- Project designation
- Depth of water at the location and time to tide-correct mudline elevations
- Sediment penetration and depth
- Sediment sample interval

- Sample recovery
- Physical observations such as apparent grain size, color, odor, density, layering, anoxic contact, and presence of sheen, shells, and/or debris

A summary of physical observations for each grab sample is provided in Table A-1 located in Appendix A of the Whatcom Waterway PRDI Work Plan.

A.2.2 Van Veen Grab Sample Processing

Sulfide samples were collected from discrete grabs prior to compositing to minimize potential loss of volatiles. Each sulfide sample jar was completely filled with sediments followed by 2 milliliters (mL) of zinc acetate added on top. In addition, the sample jar was sealed with a Teflon-lined cap to ensure proper preservation of the sample.

Surface sediment samples were homogenized in decontaminated stainless steel bowls using stainless steel spoons. Homogenized sediment was spooned immediately into appropriate pre-cleaned, pre-labeled sample containers, placed in coolers filled with ice, and maintained at 4 degrees centigrade. Debris and materials more than 0.5-inch in diameter were omitted from the sample containers. Surface sediment samples were submitted for chemical and testing analysis. Sufficient surface sediment quantity was collected and archived for bioassay testing and future chemical testing.

In addition to the location information collected in the field, sample logging involved physical characterization in general accordance with the visual-manual description procedure (Method American Society for Testing and Materials [ASTM] D-2488 modified). The information was recorded on the standard field collection forms and is summarized in Table A-1 of the Whatcom Waterway PRDI Work Plan, Appendix A. Refer to the Whatcom Waterway PRDI Work Plan, Appendix A, Attachment A to view the log templates (Anchor 2008). Physical characterization included the following:

- Grain size distribution
- Density/consistency
- Color
- Biological structures (e.g., shells, tubes, macrophytes, bioturbation)

- Presence of debris (e.g., woodchips or fibers, paint chips, concrete, sand blast grit, metal debris)
- Presence of oily sheen
- Odor (e.g., hydrogen sulfide)

Surface sediment samples collected for chemical and physical analysis were packed and shipped to Analytical Resources, Inc. (ARI) in Tukwila, Washington. The surface sediment samples collected for methyl mercury analysis were packed with dry ice and taken by courier to Brooks Rand Labs in Seattle, Washington. Surface sediment collected for bioassay analyses were packed on ice and driven by courier to NewFields, LLC (NewFields) in Port Gamble, Washington.

A.2.3 Van Veen Grab Bioassay Testing

Surface sediment (0 to 12cm) was collected and archived for contingent bioassay testing. Marine bioassay testing species selections were coordinated with Ecology and depended on grain size, salinity, and season in which testing was performed. Based on the project schedule, the following bioassay testing was performed:

- *Eohaustorius estuarius*
- *Dendraster excentricus*
- *Neanthes arenaceodentata*

Bioassay testing was performed by NewFields, a laboratory accredited by Ecology to perform each of the above testing procedures according to PSEP guidelines (PSEP 1995). NewFields provided a detailed Biological Testing of Sediment for Whatcom Waterway report that is contained in Appendix H. The discussion below provides a summary of the testing performed.

A.2.3.1 Amphipod Test

The amphipod test involved exposing the amphipod to test sediment for 10 days and counting the surviving animals at the end of the exposure period. Daily emergence data and the number of amphipods failing to rebury at the end of the test were recorded as well.

Eohaustorius estuaries exhibit sensitivity to high clay content (greater than 30 percent) despite being relatively insensitive to salinity changes and other effects of grain size.

A.2.3.2 Larval Test

The larval test monitored larval development of a suitable echinoderm or bivalve species in the presence of test sediment. The test was run until the appropriate stage of development was achieved in a sacrificial seawater control. At the end of the test, larvae from each test sediment exposure were examined to quantify abnormality and mortality.

Initial counts were made for a minimum of five 10-mL aliquots. Final counts for seawater control, reference sediment, and test sediment were made on 10-mL aliquots. The sediment larval bioassay has a variable endpoint (not necessarily 48 hours) that is determined by the developmental stage of organisms in a sacrificial seawater control.

Ammonia and sulfide toxicity may interfere with test results for this bioassay. Aeration was conducted to provide sufficient oxygenation to maintain control and reference sample replicates at ASTM oxygenation levels throughout the test to minimize these effects.

Adults were collected in spawning condition or were induced to spawn in the laboratory. Therefore, seasonality played a role in selecting a test organism.

Larvae of *Dendraster excentricus* do not show an adverse response to increasing silt and clay fractions, and under conditions of expected high silts and clay, the sand dollar test is preferable (EPA 1993).

Prior to initiating bioassay testing, sediment grain size and interstitial salinity were determined to confirm selection of the appropriate test species. If there was headspace in the jars, nitrogen was added prior to storage (PSEP 1995).

A.2.3.3 Neanthes Growth Test

The neanthes growth test utilized the polychaete *Neanthes arenaceodentata* in a 20-day growth test. The growth rate of organisms exposed to test sediments was compared to the

growth rate of organisms exposed to the reference sediment. Note that in one sample, the growth rate was compared to the control. This sample is discussed in depth in the Biological Testing of Sediment for Whatcom Waterway report (Appendix H) and is summarized in Section 6.2 of the PRDI Data Report.

A.2.3.4 Reference Sediment

Two reference samples were collected from Samish Bay. Reference sediments were collected using a pneumatically controlled power Van Veen grab as described in Section A.2.1.

A.3 Subsurface Vibracore Collection and Sampling

Subsurface sediment sampling was carried out by vibratory core sampler (vibracore) to collect chemical and geotechnical data. Multiple sets of core samples were collected and analyzed throughout the study area. Figures 6 and 7 in the PRDI Data Report show the subsurface vibracore sampling locations. Tables 2a and 2b present the subsurface sediment sampling details for the ASB (Aerated Stabilization Basin) and Waterway areas, respectively.

The subsequent sections provide details regarding vibracore collection methods and vibracore processing and sample methods.

A.3.1 Vibracore Collection Methods

Subsurface sediment was collected by vibracore. A vibracore collects a continuous profile of subsurface sediments by utilizing a high frequency vibrating coring device that penetrates into the underlying sediments with minimal distortion. A vibracore is ideal for collecting long, relatively undisturbed cores from a variety of sediment types.

Prior to deployment, the following procedure was used to decontaminate sample tubes:

- Rinse and pre-clean with potable water
- Wash and scrub the tubes in a solution of laboratory grade, non-phosphate-based soap and potable water
- Rinse with potable water
- Rinse three times with distilled water
- Seal both ends of each core tube with aluminum foil or decontaminated cap

The aluminum foil or cap was removed immediately prior to placement into the coring device. Care was taken during sampling to avoid contact of the sample tube with potentially contaminated surfaces.

Sediment samples were collected in the following manner:

- Vessel maneuvered to the proposed sample location.
- A decontaminated core tube the length of the desired penetration depth was secured to the vibratory assembly and deployed from the vessel.
- The cable umbilical to the vibrator assembly was drawn taut and perpendicular, as the core rested on the bottom sediment.
- A 4-inch-diameter, thin-walled, aluminum tube was driven into the sediment using two counter-rotating vibrating heads.
- The coordinates of the actual sampling location were recorded.
- A continuous core sample was collected to the designated coring depth or until refusal.
- The depth of core penetration was measured and recorded as indicated by sonar.
- When the sonar was not functional, the depth to sediment was measured from the waterline to the head assembly with a survey tape.
- The vibracore assembly was extracted from the sediment using a winch.
- While suspended from the A-frame, the assembly and core barrel were sprayed off and then placed on the vessel deck.
- The core barrel was removed from the vibracore assembly for evaluation.
- The amount of headspace and overlying water were recorded and the sediment was evaluated at the core shoe.
- The length of recovered sediment was recorded, and, if accepted, the core tube was sectioned as necessary for transport.

Acceptance criteria for sediment core samples were as follows:

- Overlying water was present and the surface is intact
- The core tube appeared intact without obstruction or blocking
- The accepted core recovery was greater than 75 percent of drive length. Exceptions to this criterion included: a) when multiple attempts were made, the core with the deepest penetration depth was kept regardless of the core recovery, and b) when the

recovery of cores collected from the ASB were lower than 75 percent, these cores were kept as long as the native sand layer was present. Within the ASB, the recovery measurements were based on recovered length and drive length within the native sand layer. Low recovery of the overlying ASB sludges was presumed based on previous sampling at the ASB. Refer to Appendix B for additional information on core recovery and in-situ depths.

If sample acceptance criteria were not achieved, the sample was rejected unless modified acceptance criteria were approved by the field coordinator, and collection was attempted again. Three attempts were made at stations were driving conditions were difficult; the best of these attempts was kept per the acceptance criteria listed above.

Anchor QEA personnel recorded field conditions and drive notes on a standard core log. Refer to the Whatcom Waterway PRDI Work Plan Appendix A, Attachment A to view the log templates (Anchor 2008). Logs included the following information:

- Depth to mudline as measured by leadline deployed beside the vibracore assembly
- Depth to mudline as measured by the calibrated boat depth sounder
- Location of each station as determined by DGPS
- Date and time of collection of each sediment core sample
- Names of field personnel collecting and handling the samples
- Observations made during sample collection, including weather conditions, complications, ship traffic, and other details associated with the sampling effort
- Sample station identification
- Length and depth intervals of each core section and estimated recovery for each sediment sample as measured from MLLW
- Qualitative notation of apparent resistance of sediment column to coring (how the core drove), with depths determined by the sonar
- Any deviation from the approved Sampling and Analysis Plan (SAP)

Once the core samples were deemed acceptable, the cutterhead was removed and a cap was placed over the end of the tube and secured firmly in place with duct tape. The core tube was then removed from the sampler and the other end of the core was capped and taped. The core tube was labeled with permanent black pen and scribed with the location ID and an

arrow pointing to the top of core. The cores were then cut into appropriate lengths for transport to the laboratory for processing. Cores were cut to a maximum length of 5.5 feet. The cores were sealed tightly enough to prevent leakage or disturbance during transport to the processing station. Cores were stored overnight in a secure refrigerated truck and transported in the truck every morning to the processing laboratory at ARI in Tukwila, Washington. A Chain of Custody form was logged by Anchor QEA field staff and maintained by the courier to the processing lab.

Mudline elevations were determined after core collection using the depth to mudline measurements, the time of sample collection, and tidal elevations. Tidal elevations were determined using the WTides software version 3.1.7, which predicts tides through merged harmonic analysis (Thorton 2005). Mudline elevations for samples collected by vibracore are presented in Tables 2a and 2b. The vibracore sampling mudline elevations in the ASB were calculated using subsequent probing methodology described in Section A.8 below.

A.3.2 Vibracore Processing and Sample Methods

The vibracore processing station was located at the ARI laboratory in Tukwila, Washington. Transported cores were handled consistent with ASTM procedures (ASTM D 4220) and stored upright in the ARI refrigerators until processed. When processed, the core caps were removed and the core was cut longitudinally using a circular saw. The core was split with decontaminated stainless steel wire core splitters or spatulas into two halves for sampling.

Prior to sampling, color photographs were taken and a sediment description of each core was recorded on a standard core processing log. The following parameters were noted:

- Sample recovery measurements
- Physical soil description in accordance with ASTM procedures (ASTM D 2488 and ASTM D 2487 - Unified Soil Classification System) including soil type, density/consistency of soil, and color
- Odor (e.g., hydrogen sulfide, petroleum)
- Visual stratification, structure, and texture
- Vegetation and debris (e.g., woodchips or fibers, paint chips, concrete, sand blast grit, metal debris)

- Biological activity (e.g., detritus, shells, tubes, bioturbation, live or dead organisms)
- Presence of oil sheen

Cores were compaction-corrected and sampled as actual (in-situ) depths based on the core lithology and observations during core collection. Final core logs are provided in Appendix B and additional details on compaction-corrections and in-situ depths can be found in Section B.1 of Appendix B.

Samples were then taken per the PRDI Work Plan (Anchor 2008a). Where applicable, the first samples to be taken were volatile organic compounds (VOCs). Separate containers were completely filled with sample sediment for volatiles; no headspace was allowed to remain.

Discrete and composite samples were taken directly from the selected depth interval, homogenized in a decontaminated stainless steel bowl and then spooned into laboratory supplied jars using decontaminated stainless steel mixing tools. The homogenized sediment was mixed until homogenous in color and texture and then spooned into laboratory supplied jars for analyses. A Chain of Custody form was logged by the processing staff and relinquished to the ARI lab staff.

A.4 Subsurface Hollow-stem Auger, Mud-Rotary, and Piston Coring

Subsurface sediment was collected for geotechnical testing and chemical sampling, as needed, by hollow-stem auger, mud-rotary, and diver-assisted piston cores at selected locations to obtain data, and at other locations where vibracore methods were not practical due to logistical considerations. Locations of these borings are shown on Figure 8 in the PRDI Data Report. The sampling intervals and testing parameters for borings along the ASB berm are listed in Table 3a and parameters for borings taken in the Waterway areas are identified in Table 3b, both tables are located in the PRDI Data Report. The subsequent sections provide details regarding hollow-stem auger, mud-rotary, and diver-assisted piston cores collection methods and processing methods.

A.4.1 Hollow-stem Auger and Mud-Rotary Collection Methods

Soil samples were collected by hollow-stem auger and mud-rotary consistent with ASTM procedures (ASTM D 1452). The over-water auger locations in the ASB were placed using a truck-mounted drill rig positioned in the center of the flexi-float barge. In the Waterway, a truck-mounted drill rig was placed on a much larger vessel, named the Sea Vulture, to conduct the borings. The 3.375-inch inside diameter hollow-stem auger was advanced into the sediment to the top of the depth interval of interest. After the target depth was reached, sediment was collected by advancing a 2-inch outside diameter, decontaminated split spoon or Shelby tube. The split spoon was advanced using a 140-pound hammer dropped 30 inches. The Shelby tube is pushed 2 feet in a slow constant motion using the drill rig's hydraulics. Decontamination procedures for the split spoon and Shelby tube were the same as for the vibracore (see Section A.3.1).

Sampling for upland locations were collected in the same manner as described above. However, at these locations, the barge was not required. Upland locations at the ASB berm, Georgia Pacific (GP) shoreline areas, Central Waterfront south shoreline, and Bellingham Shipping Terminal (BST) locations were accessed using a standard truck-mounted drilling rig. Three of the BST locations were located within a warehouse structure and encountered no problems with the same drilling equipment. Wharf locations at BST were sampled through existing access ports located in the wharf structure using a mud-rotary drilling method.

Mud-rotary drilling was employed at the BST rather than hollow stem auger sampling methodology because of potential to encounter rip rap and because the augers were not small enough to fit through the existing drainage holes in the dock. Mud-rotary drilling involved lowering a casing and pushing through the access ports. Sampling, recovery and drilling all took place through this casing. Liquid mud was used to remove soil cuttings up through the boring and the casing, while a drill bit drilled down to predetermined depths. There, Shelby tube and split spoon sampling followed the same sampling procedures as that of the hollow-stem auger.

During split spoon penetration, the number of blows required to advance the spoon in 6-inch increments were recorded as a measure of soil density using the Standard Penetration Test.

This test was used as an approximate measure of soil density and consistency. As described in ASTM D 1586, this test employed a standard 2-inch outside diameter split-spoon sampler. Using a 140 pound hammer, free falling 30 inches, the sampler was driven into the soil for 18 inches. The number of blows required to drive the sampler the last 12 inches is the Standard Penetration Resistance. This resistance, or blow count, measured the relative density of granular soils and the consistency of cohesive solids. The blow counts were plotted on boring logs at their respective sample depths. Boring logs are provided in Appendix B.

When dense materials precluded driving the total 18-inch sample, the penetration resistance was entered in one of two ways: if less than 6-inches, the total number of blows over the number of inches of penetration was entered on the boring log; if greater than 6 inches, the total number of blows completed after the first 6 inches of penetration was summed and recorded. The sum was expressed over the number of inches driven that exceeded the first 6 inches (the number of blows needed to drive the first 6 inches were not reported). If extremely soft materials allowed the sampler to advance 18 inches without any blows, a "push" was recorded on the raw boring logs along with a blow count of 0. In the attached boring logs this is reflected as WOR, or weight of the rods.

Anchor QEA personnel recorded field conditions and drive notes on a standard boring log. Refer to the Whatcom Waterway PRDI Work Plan Appendix A, Attachment A to view the log templates (Anchor 2008). The logs included the following information:

- Date and time of collection of each sediment core sample
- Names of field personnel collecting and handling the samples
- Observations made during sample collection, including weather conditions, complications, and other details associated with the sampling effort
- The sample station identification
- Length and depth intervals of each core section and estimated recovery
- Qualitative notation of apparent resistance during driving
- Any deviation from the approved SAP

A.4.2 Diver Assisted Piston Core Collection Methods

Diver assisted piston cores were collected at two locations beneath the BST in order to collect the upper 2 feet of sediment that was not captured during mud-rotary drilling. Diver assisted piston cores were collected by Anchor QEA and Wilson Engineering staff by boat and with diver. Locations were marked by attaching a rope with a weight through the existing drain holes on the BST dock to the mudline in order to retain position control and to sample in the same location as the mud-rotary drilling effort. A diver set the piston core in place in the soft sediment while a two-person crew worked from a boat to manually advance the piston core to the appropriate depth, which was verified by diver. The piston core was retrieved by diver and passed to the sampling crew in the boat. A cap was placed over the end of the tube and secured firmly in place with duct tape. The top of the core tube was then slit just above the mudline to allow overlying water to seep out. Once the water was removed, the top end of the core was capped and taped. The core tube was labeled with permanent black pen with the location ID and an arrow pointing to the top of core. Cores were secured vertically for transport back to the dock.

A.4.3 Hollow-stem Auger and Mud-Rotary Processing Methods

Hollow-stem auger and mud-rotary samples were logged on-site by Anchor QEA field staff. Prior to sampling, color photographs were taken and a sediment description of each core was recorded on a standard boring log. Refer to the Whatcom Waterway PRDI Work Plan Appendix A, Attachment A to view the log templates (Anchor 2008). The following parameters were noted:

- Sample recovery
- Physical soil description in accordance with the Unified Soil Classification System (includes soil type, density/consistency of soil, color)
- Odor (e.g., hydrogen sulfide, petroleum)
- Visual stratification, structure, and texture
- Vegetation and debris (e.g. woodchips or fibers, paint chips, concrete, sand blast grit, metal debris
- Biological activity (e.g., detritus, shells, tubes, bioturbation, live or dead organisms)
- Presence of oil sheen

Discrete samples were taken directly from the selected depth interval and spooned into laboratory supplied jars. Composited samples were then placed in a decontaminated stainless steel bowl and mixed using decontaminated stainless steel mixing. The composited soil was mixed until homogenous in color and texture and then spooned into laboratory supplied jars for analyses. All jars were kept on ice for transport to ARI. A Chain of Custody form was logged by the processing staff and relinquished to the courier and then to ARI lab staff. The final boring logs are presented in Appendix B.

A.4.4 Diver Assisted Piston Core Processing Methods

The piston core processing station was located on-site. Cores were transported consistent with ASTM procedures (ASTM D 4220) and stored upright until processed. When processed, the core caps were removed and the core was cut longitudinally using a set of electric shears. The core was split with decontaminated spatulas into two halves for sampling. Refer to Section A.3.2 for details on documenting, logging, and sampling the piston cores.

A.5 Subsurface Diver Coring

Subsurface diver coring was carried out in Site Units 6B and 6C in order to collect supplemental chemistry data in the shallow subsurface (to 3 feet below mudline). Diver coring occurred at four locations in order assess potential impacts from scouring, propeller wash, and anchoring. Locations are depicted on Figure 6 and the sampling scheme is listed in Table 2b, both located in the PRDI Data Report.

A.5.1 Diver Core Collection Methods

Diver cores were collected by deploying the core and the diver to the subsurface. The diver used a manually-driven slide hammer to penetrate into the shallow subsurface. After achieving the appropriate penetration depth, the diver retrieved the core and passed it to the sampling crew in the boat. The core catcher was removed and a cap was placed over the end of the tube and secured firmly in place with duct tape. The top of the core tube was then slit just above the mudline to allow overlying water to seep out. Once the water was removed, the top end of the core was capped and taped. The core tube was labeled with permanent black pen with the location ID and an arrow pointing to the top of core. Cores were secured vertically for transport back to the dock.

A.5.2 Diver Core Processing Methods

The diver core processing station was located at the ARI laboratory in Tukwila, Washington. Transported cores were handled consistent with ASTM procedures (ASTM D 4220) and stored upright in the ARI refrigerators until processed. When processed, the core caps were removed and the core was cut longitudinally using a pair of electric shears. The core was split with decontaminated stainless steel spatulas into two halves for sampling. Refer to Section A.3.2 for details on documenting, logging, and sampling the diver cores.

A.6 Vane Shear Tests

In situ strength of the sediments was measured using field vane shear equipment. Collected strength data was compared to geotechnical index parameters. The subsequent section provide details regarding vane shear collection methodology. Figure 9 in the PRDI Data Report illustrates the vane shear testing locations.

A.6.1 Vane Shear Testing Methods

Vane shear data was collected from a shallow draft boat using vane shear testing (VST) equipment. VST was performed consistent with ASTM D 2573; however, some depths had to be abandoned due to refusal. The VST equipment was operated by pushing the vane into the sediment to the required depth and making sure that the scale-ring was set to the zero-position. The handle was turned clockwise until the lower part followed the upper part around or fell back. Failure and maximum shear strengths were obtained in the sediment at the vane and were recorded on field forms. Refer to the Whatcom Waterway PRDI Work Plan Appendix A, Attachment A to view the log templates (Anchor 2008). The data recorded included the values on the graduated scale, the position of the hole, and the depth. After recording the data, the handle was held firmly and allowed to return to the zero-position. The vanes were then rotated approximately ten times and the test rerun to obtain remolded shear strength.

Surface grabs were co-located with vane shear locations in order to characterize the material and to standardize the field VST results using laboratory tests. Surface sediment was collected via pneumonic Van Veen (Section A.2.1) and trowel sampling in the Log Pond. A summary of VST measurements is presented in Table 4 of the PRDI Data Report.

A.7 Porewater Collection and Sampling

Sediment porewater mercury concentration data was collected at selected locations to supplement information available from previous studies. Sampling locations included Unit 2C, Unit 5B, and Unit 6C. Sampling locations and analysis are listed in Table 5 and locations are presented on Figure 10, both located in the PRDI Data Report. The following subsections provide details of the porewater collection field procedures.

A.7.1 Porewater Collection and Processing

The porewater sampling design included collecting porewater from six locations within the project area. Two stations were located in each of the following Site Units: Unit 2C, Unit 5B, and Unit 6B. A third station was added within Unit 2C, 2C-03-PW, however, sample was unable to be collected here due to a high degree of silty material that clogged the piezometer screen.

Porewater was collected using diver-assisted push-point mini-piezometers. A mini-piezometer is a mini well point constructed of a stainless-steel rod with a screened end at the tip. The design included a probe with a heavier-weight stainless-steel construction, approximately 2-inch screened (0.5-millimeter [mm] slot) interval with a smaller aperture size near the tip of the probe, and a base plate attachment that sat at the mudline elevation to minimize drawdown from the overlying surface water. A schematic of the porewater sampling device is shown on Figure A-1. Larger screen (4- and 6-inch) intervals were available when field conditions encountered clogging of the screen due to fine grained sediment. Clean polyethylene tubing was connected to the end (opposite end of screened portion) of the mini-piezometer and extended through the water column to the deck of the sampling vessel and into a peristaltic pump or similar type pumping device. The samples were field filtered and pumped directly into the sampling jars from the tubing.

Seven steps for collection of the porewater samples are discussed below:

1. **Purging Volume Determination and Field Blank Collection** – Prior to the diver entering the water, the polyethylene tubing was inserted through the water-tight stopper in the end of the decontaminated mini-piezometer; tubing was pushed through the probe to the non-screened end of the mini-piezometer. The approximate

volume contained within the mini-piezometer was calculated, as well as the volume for a full length of polyethylene tubing with sufficient length to reach the mudline from the peristaltic pump. One tube volume of distilled water was pumped through the full length of tubing and into the mini-piezometer. The flow was then reversed in order to collect a field blank. After field blank collection, the tubing and mini-piezometer were again filled with distilled water in order to limit intake of surface water into the apparatus during transport and placement by the diver.

2. **Sampling Depth Determination** – For each station, the mini-piezometer was placed so that the center of the screen was located 1-foot below mudline. In order to verify placement and to minimize the potential collection of overlying water, a circular, stainless-steel baseplate was clamped to the piezometer so that the center of the screened interval of the probe laid 1-foot below it. This allowed the diver to easily and accurately drive the minipiezometer to the correct depth below the mudline and eliminated the potential for capturing overlying water during sampling (Figure A-1).
3. **Porewater Volume Determination** – Prior to the diver entering the water, the required porewater volume was calculated. Initial purging of porewater (described in detail in Step 5 below) involved purging approximately three to five pore volumes prior to sampling in order to ensure porewater capture and minimize the potential for collection of overlying water. The available porewater can be conservatively estimated by the following equation:

   PV = Surface area of baseplate (ft^2) * length of tubing (ft) * porosity

4. **Sampling Location** – Once on station, the diver was handed the mini-piezometer for placement. The diver descended to the sample location and drove the minipiezometer until the stainless-steel baseplate was secured in the sediment.
5. **Initial Purging** – While the diver was descending, the sampling crew connected the tubing to a peristaltic pump. Once the diver surfaced, the crew began purging the mini-piezometer using a low-flow pump rate. The low-flow pump rate was maintained between approximately 80 to 100 mL per minute and was quality checking during sampling. Purging occurred until between three to five purge volumes were reached, as indicated in Step 1. The waste volume was discarded (i.e., distilled water).

6. **Porewater Sample Collection** – The low-flow pump rate was maintained per Step 5, and sample volume was collected for total suspended solids (TSS) and dissolved mercury directly into laboratory-supplied certified, pre-cleaned, and pre-labeled sampling containers until the calculated porewater volume was reached (per Step 3) or the laboratory volume requirements were satisfied, whichever occurred first. If additional porewater volume was necessary to fulfill the laboratory volume requirements, a clip was placed across the tubing to completely close the tubing and the mini-piezometer apparatus was relocated, per Step 7.
7. **If Necessary, Piezometer Reinstallation** – When it was necessary, the mini-piezometer apperatus was relocated in order to obtain sufficient sample volume. Communications were maintained with the diver to reinstall the mini-piezometer at an adjacent location. A low-flow pump rate (i.e., approximately 80 to 100 mL per minute) was re-established, and the tubing was purged until the calculated purge volume was reached (per Step 1). The waste volume was discarded and the required remaining porewater volume was collected into the laboratory certified, pre-cleaned, and pre-labeled containers. This procedure was repeated until sufficeint porewater volumes were collected.

Detailed notes were maintained on field logs during both the diver installation and porewater collection activities. Refer to the Whatcom Waterway PRDI Work Plan Appendix A, Attachment A to view the log templates (Anchor 2008).

A.7.2 Porewater Analysis

Porewater was analyzed for total suspended solids and low-level dissolved mercury by ARI in Tukwila, Washington. Field measurements of pH, temperature, conductivity, dissolved oxygen, and oxidation reduction potential (redox) were measured at the time of porewater collection. A summary of field measurements along with qualitative observations recorded during sample collection is provided in Table A-2.

A.8 Surface Sediment Mercury Speciation

Mercury speciation was evaluated in surface sediments at select locations as listed on Figure 5 in the PRDI Data Report. A sample was also collected from a Samish Bay clean reference

station. Table 1 in the PRDI Data Report lists the surface sediment methyl mercury sampling locations, coordinates, sample depth, and testing.

A.8.1 Methyl Mercury Collection Methods

Surface sediment sampling for methyl mercury analysis was performed at seven locations including the reference station. Samples were collected from the 0- to 12-cm biologically active zone using a pneumatically controlled power Van Veen grab. Section A.2.1 describes the methods for deploying the grab, the acceptance criteria, and decontamination procedures used.

A.8.2 Methyl Mercury Processing and Sample Methods

Surface sediment from the Van Veen grab was immediately spooned into a polyethylene sterile bag and homogenized in the sealed bag with no headspace for methyl mercury sampling. Homogenized sediment was then placed directly from the polyethylene sterile bag into laboratory-supplied certified, pre-cleaned, plastic sampling containers with headspace for methyl mercury analysis. The bottom corner of the polyethylene sterile bag was cut with decontaminated equipment for direct placement into the sampling container. Samples were immediately put on dry ice for separate storage and transport to the laboratory. Immediate freezing was required to avoid potential microbe-induced speciation changes after disturbance of the sediment during sampling. Headspace within the plastic container was necessary to avoid container breakage from freezing.

Remaining sediment from the Van Veen grab was then homogenized and sampled for additional parameters and placed into pre-cleaned sample containers. Containers were stored and transported in coolers filled with ice maintained at 4 degrees Centigrade. Surface sediment samples were submitted for chemical analyses at ARI.

Field probe measurements were performed directly in an undisturbed portion of the surface sediment contained within the Van Veen grab sampling device. Field probe measurements included oxidation-reduction potential (redox), dissolved oxygen, pH, conductivity, and temperature. These measurements are presented in Table A-3.

A.9 ASB Sludge and Hard Bottom Surveys

Multiple survey methods, in addition to vibracore sampling, were used in order to assess the potential thickness of unconsolidated and consolidated ASB sludges above/below the measured mudline and to verify the "hard bottom" contact located between the ASB sludges and the underlying native sand. These different survey methods resulted in defining a general sludge consolidation profile and estimating the native sand contact. These methods included:

- ASB Site survey
  - multi-beam survey (measured mudline)
- ASB vibracore sampling measurements
  - plate-pole measurements (lighter sludge)
  - leadline measurements (more dense sludge)
- ASB probing survey
  - plate-pole measurements (lighter sludge)
  - closed-end pole measurements (hard bottom)
  - hollow-tipped pole measurements (hard bottom verification)
  - vertical water column turbidity measurements

A.9.1 ASB Site Survey

A multi-beam survey was performed by Wilson Engineering in May 2008 to provide bathymetry data for the ASB. In reviewing this data, the bathymetry proved to be a conservative estimate of the mudline because the flocculant nature of the ASB solids caused the multi-beam signal to bounce back at a shallower depth than where the bulk of the consolidated sediment lay. Therefore, this survey data marked the top of the unconsolidated sludges. The multi-beam mudline surface was used to develop the contours as presented in the associated PRDI Data Report figures.

A.9.2 ASB Vibracore Sampling Measurements

Plate pole measurements were taken at each vibracore station. This method was used to create enough surface area so as not to sink into the soft sludge and to estimate the top of the lighter consolidated sludge. The plate pole consisted of a telescoping pole and a light-weight, round piece of aluminum ("plate") that was manually lowered to assess the depth of lighter

consolidated sludge. This depth was measured and recorded as the plate-pole depth and was shallower than the leadline depth due to increased surface area. This depth yielded the top layer of unconsolidated (lighter) sludge.

Leadline measurements were taken at each vibracore station using a standard 2-pound weight suspended by a measuring tape. This was measured as the depth at which the leadline contacted a solid surface and was intended to mark the top of the more dense consolidated sludges.

A.9.3 ASB Probing Survey

The ASB probing survey was a stand-alone, two part series of measurements taken in the ASB. The probing survey was performed at approximately 125 grid-based test locations, which were established using a rectangular grid with parallel grid lines spaced approximately 100 feet apart. The hard bottom survey included 25 primary stations and 100 secondary stations. Figure A-2 presents both the primary and secondary stations. At each primary station, three measurements and vertical water column turbidity readings were recorded to confirm the general sludge consolidation profile estimated from the previous mudline measurements. The three measurements recorded at each primary station included the plate pole, closed-end pole, and hollow-tipped pole methods. At each secondary station, two measurements were recorded and these included the plate pole and hollow-tipped pole methods, which are described below.

The plate pole method was similar to the method used during vibracore sampling as described in the previous section. The closed-end pole method consisted of lowering a pole with a sealed end until a hard contact was encountered. The depth at which the pole could not be inserted further without mechanical assistance was measured and recorded as the "hard bottom" (native sand) elevation for that station. The hollow-tipped pole method was similar to the closed-end pole method, however the pole had a hollow tip and was used to verify the presence of sand upon encountering a hard contact. Sediment recovered in the hollow-tip of the sediment probe was visually inspected to ensure that full penetration to the native sand layer was achieved. This depth marked the contact between the ASB sludges and the underlying native sand.

In addition to the probing measurements, turbidity measurements were recorded at each primary station at approximately 1- to 2-foot vertical intervals until an increase of turbidity was observed. In general, the turbidity measurements were very low (less than 10 Nephelometric Turbidity Unit [NTU] then sharply increased (greater than 500 NTU) at a similar depth as the plate pole measurement. These turbidity measurements were used as additional verification that the top layer of the unconsolidated (lighter) sludge was reached.

2 REFERENCES

Anchor. 2008. Pre-Remedial Design Investigation Work Plan, Whatcom Waterway Site Cleanup. Prepared for Port of Bellingham, Bellingham, Washington, by Anchor Environmental, L.L.C., Seattle, Washington. June 2008.

ASTM. 2007. Annual Book of ASTM Standards. Soil and Rock (I): D 420 - D 5611

PSEP. 1995. Recommended Guidelines for Conducting Laboratory Bioassays on Puget Sound Sediments. Prepared for the U.S. Environmental Protection Agency, Region 10, Seattle, Washington and Puget Sound Water Quality Authority, Olympia WA by King County Environmental Lab, Seattle, WA. 30 pp+ appendices.

RETEC. 2006. Remedial Investigation/Feasibility Study for Whatcom Waterway. Prepared for the Port of Bellingham. The RETEC Group, Inc., Seattle, WA. October.

Thorton, Philip (2005). Wtides. Retrieved from.

U.S. Army Corps of Engineers (USACE). 2007. Dredge Material Management Program User's Manual. Revised February.

U.S. Environmental Protection Agency (EPA). 1993. Test Methods for Evaluating Solid Waste, Physical/Chemical Methods – 3rd Edition, Update 4A. EPA SW846, August 1993.

Table A-1
Summary of Surface Sediment Collection

Station ID		Date Collected	Sample Recovery Details			Field Observations of Sample					
			Recovery Depth (cm)	Depth of Sample (cm)	Water Depth-Leadline (ft)	Color	Sediment Type	Biological	Odor	Sheen	Comments
Inner Waterway and Unit 5 and Unit 6											
2C	2C-01-SS	8/20/2008	21.5	0-12	35.8	Black	Silt	1/2" long snails	none	none	Wet, soft stiffens with depth, 1mm oolids
	2C-02-SS	8/20/2008	17.5	0-12	33.3	Black	Silt	Trace snails at surface	none	none	wet, soft
	2C-03-SS	8/21/2008	22	0-12	29.3	Dark Grey	Clayey Silt	Abundant polychaetes	Slight H2S	none	wet, very thin olive veneer
5B	5B-01-SS	8/21/2008	21	0-12	15.4	Olive Grey to Dark Grey	Sandy Silt	Small worm tubes	Slight H2S	none	very soft, wet,~10% wood debris twigs and chips
	5B-02-SS	8/21/2008	20	0-12	16.6	Olive to Grey	Sandy Silt	Worm tubes	Slight H2S	none	Very soft, wet, <5% wood debris, turbid water form waves
	5B-03-SS	8/21/2008	22	0-12	17.1	Olive to Dark Grey	Sandy Silt	polychaete and snails	H2S	Occasional small spec metallic sheen	Sampled next to dolphin, wet, soft, with some wood debris
	5B-04-SS	8/21/2008	21	0-12	22.1	Olive to Dark Grey	Silt	One worm tube	Moderate H2S	none	8cm long wood chip, soft, wet, slightly turbid water
	5B-05-SS	8/21/2008	19	0-12	12.8	Olive to Dark Grey	Sandy Silt	Shell fragments	Moderate H2S	none	Soft, wet, 20-30% wood, slight water turbidity, abundant wood debris
	5B-06-SS	8/21/2008	22	0-12	12.7	Dark Grey	Sandy Silt	Shell fragments	Moderate H2S	none	Olive sandy veneer, soft, wet to firm wet
	5B-07-SS	8/21/2008	18	0-12	11.4	Grey	Silty Sand	Few shell fragments, 12cm albino shrimp	none	none	Olive silt veneer, soft, wet wood debris
6B	6B-01-SS	8/22/2008	21	0-12	28.4	Black	Silt w/ few Clay	none	none	none	Olive brown mottling, trace wood debris, increase competency with depth
	6B-02-SS	8/22/2008	15	0-12	27.9	Black	Silt	Trace snails, few worms	none	none	Olive brown mottling, increase competency with depth
	6B-03-SS	8/22/2008	20.5	0-12	25.5	Black	Silt	Trace sculpin fish, snail	none	none	Olive brown mottling, 4" long vertebrate (bird?), increase competency with depth
	6B-04-SS	8/22/2008	23	0-12	25.8	Black	Silt	none	none	none	Soft, moist, olive brown mottling, 4" thick piece of red debris (boat bottom?)
	6B-05-SS	8/20/2008	23	0-12	28.8	Black	Silt w/ few Clay	none	none	Occasional rainbow sheen 2cm blebs	wet, soft
6C	6C-01-SS	8/22/2008	18	0-12	19.9	Black	Silt	Trace mussel shells, polychaetes, snail, seaweed	none	Trace rainbow sheen	Moist, soft, olive brown mottling, wood debris
	6C-02-SS	8/22/2008	20	0-12	21.4	Black	Silt w/ few Clay	Half cockle shell, trace snail substantial worm tubes	none	none	Moist, soft, olive brown mottling, wood debris
Monitored Natural Recovery Areas											
3A	3A-01-SS	8/21/2008	21	0-12	16.5	Black	Silt with Sand	Plants and few shell fragments	Stung H2S	Occasional metallic sheen	Soft, wet, organic, with wood debris
	3A-02-SS	8/22/2008	21.5	0-12	9.3	Black	Sandy Silt	Trace barnacles, shell frags, whole cockle and mussel shells and organic fibers	none	none	Moist, soft to med stiff, with olive brown mottling
	3A-03-SS	8/22/2008	16	0-12	8.2	Black	Silty Sand	Trace cockles and shell frags, substantial worm tubes	none	Trace rainbow bleb	Moist, medium stiff, olive brown mottling with wood debris
	3A-04-SS	8/22/2008	20	0-12	19.5	Black	Silt w/ few Clay	Trace half intact cockle and worms	none	none	Moist, medium stiff, olive brown mottling with wood debris
	3A-05-SS	8/22/2008	23	0-12	16.9	Black	Silt	1 1/2" female crab, trace blue worms, worm tubes, snails, polychaetes 1 1/2" bivalve	none	none	moist, soft, olive brown mottling, wood debris, clay is clump when homogenized
5C	5C-01-SS	8/20/2008	19	0-12	10.1	Black	Silt w/ coarse Sand	Trace worm burrows and live clam	none	Slight sheen bleb (2cm)	grab located with in 10' of creosote pile
	5C-02-SS	8/21/2008	18	0-12	13.9	Olive Grey to Dark Grey	Silt	Shell fragments, clam and polychaete	Strong H2S	none	soft, wet, large rocks and gravel
Outer Waterway Areas											
1B	1B-01-SS	8/20/2008	18	0-12	41.6	Black	Silt	none	Slight H2S	Slight (1cm)	Mottled olive grey, Trace oolids (black round)
1C	1C-01-SS	8/20/2008	34	0-12	39.8	Black	Silt	none	Moderate H2S	<1cm sheen	Wet, loose, olive brown mottling
Reference Area											
REF	REF-01-SS	8/20/2008	22	0-12	60.2	Black	Silt	Trace worm tubes and trace polychaetes	none	none	Wet, soft, olive brown mottling
	REF-02-SS	8/20/2008	21	0-12	61.0	Black	Silt	One blade of eel grass	none	none	Wet, soft, olive brown mottling, 1" wood debris

Notes:
All samples collected using pneumonically controlled Van Veen grab sampler.

Table A-2
Summary of Sediment Porewater Collection

Station ID	Date Collected	Field Observations and In Situ Measurements							
		Water Depth-Leadline (ft)	Color	Odor	pH	Cond. (mS/cm, mS/cm3)	Temp. (C)	D. O. (mg/L)	Redox (ORP)
2C-01-PW	8/18/2008	37.0	Black to grey	Strong H2S	7.61	35.2, 41.9	16.6	0.86	-366.5
2C-02-PW	8/19/2008	26.8	NA	NA	7.39	36.1, 41.7	17.9	0.30	-311.1
5B-01-PW	8/18/2008	10.0	Black to clear	Strong H2S	6.92	NA, 40.4	17.3	0.09	-304.6
5B-02-PW	8/18/2008	13.0	Grey	Strong H2S	6.80	40.7, 34.3	16.8	6.8	-321.6
6B-01-PW	8/19/2008	23.5	Milky to clear	Strong H2S	6.89	35.0, 42.7	15.6	6.9	-372.1
6C-01-PW	8/19/2008	19.0	Chalky grey	Strong H2S	7.77	34.5, 41.7	15.9	2.9	-181.5

Notes:
All samples collected using a diver assisted mini-piezometer using low-flow methodology.
Cond = conductivity, Temp.= temperature, D.O.= dissolved oxygen, ORP= oxidation reduction potential

Table A-3
Summary of Surface Sediment Methyl Mercury Sampling In Situ Measurements

Station ID	Date Collected	In Situ Field Measurements		
		pH	Temp. (C)	Redox (ORP)
1B-01-SS	8/20/2008	7.4	13.7	27.5
1C-01-SS	8/20/2008	7.45	13.39	-212.7
2C-01-SS	8/20/2008	7.46	13.54	-105.4
2C-02-SS	8/20/2008	7.59	15.33	-4.9
5C-01-SS	8/20/2008	7.51	15.51	-118.4
6B-05-SS	8/20/2008	7.54	14.89	8.2
REF-01-SS	8/20/2008	7.68	12.97	39.6

Notes:
All samples collected using pneumonically controlled Van Veen grab sampler.
Temp.= temperature, ORP= oxidation reduction potential
Refer to Table B-1 for surface sediment sampling field observations.

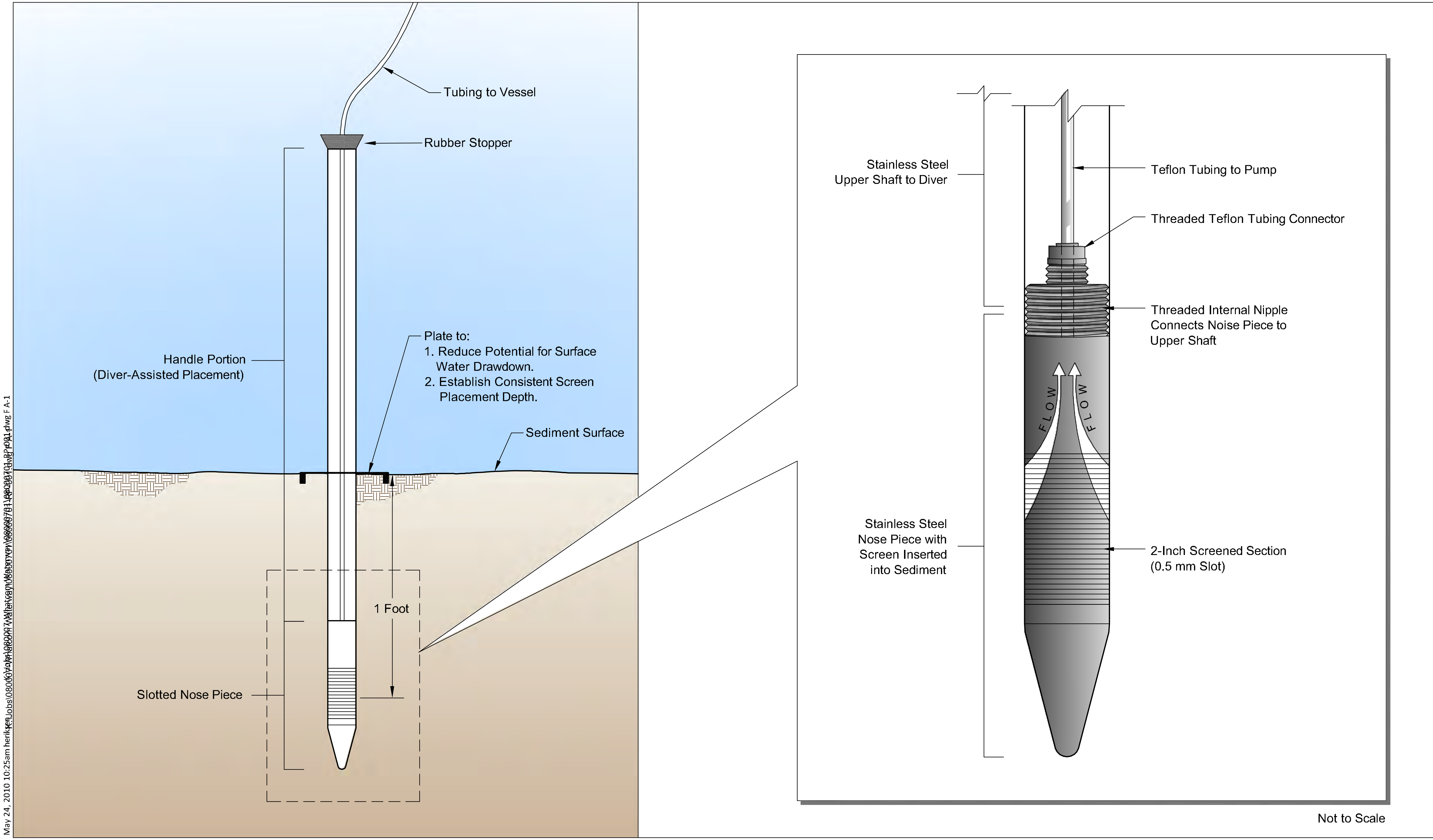
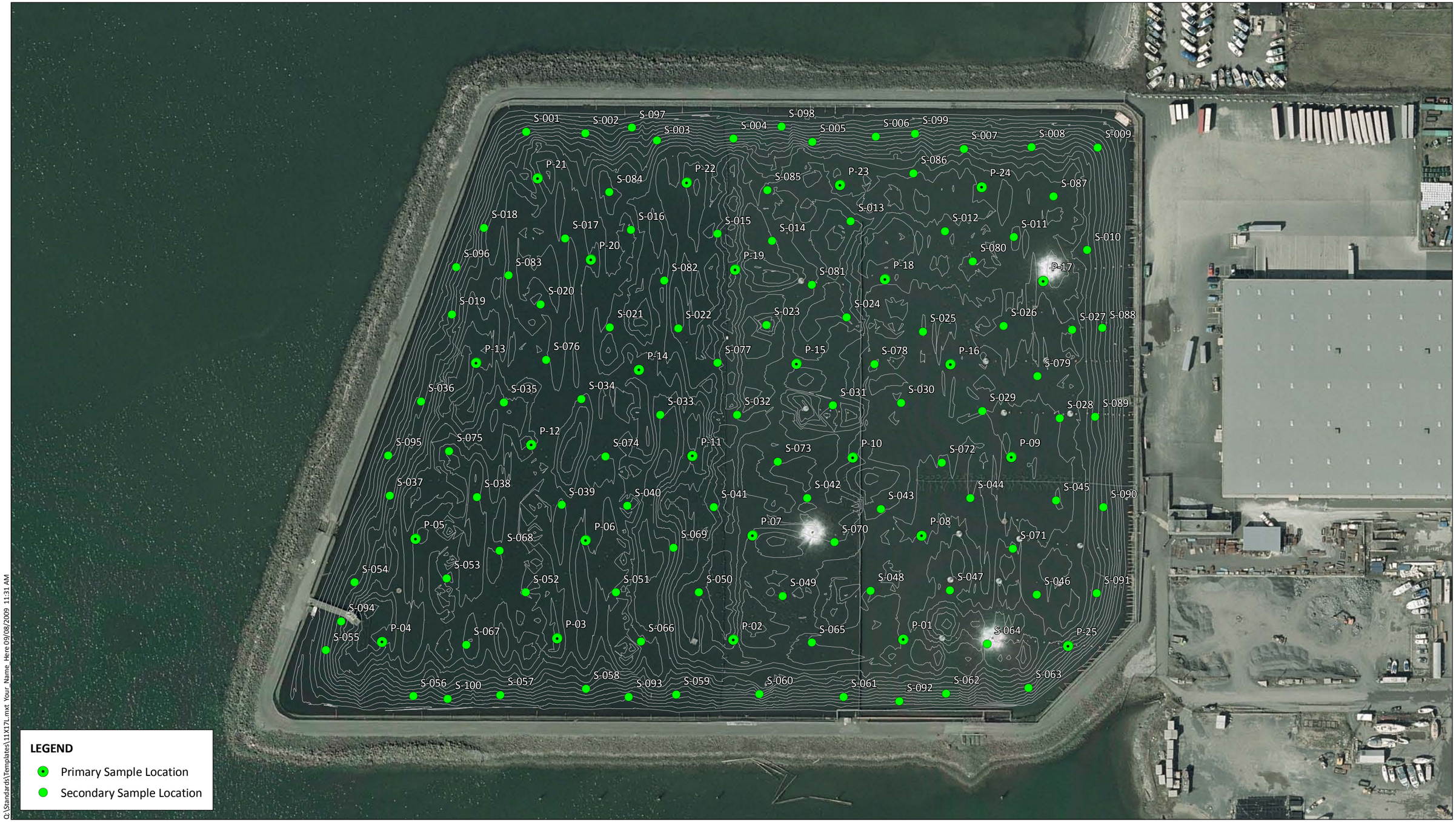


Figure A-1
Porewater Piezometer Schematic
PRDI Data Report
Whatcom Waterway

ANCHOR QEA



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NOTES:
1. Horizontal Datum: WA State Plane North NAD27 (Feet).
2. ASB contours presented were created from the mult-beam bathymetry survey.

Feet
0 75 150 225 300

Figure A-2
ASB Hard Bottom Investigation Stations
Whatcom Waterway PRDI Data Report

PRE-REMEDIAL DESIGN INVESTIGATION DATA REPORT

APPENDIX B – VIBRACORE RECOVERY APPLICATION

B.1 VIBRACORE RECOVERY APPLICATION

Subsurface sediment sampling was carried out by vibratory core sampler (vibracore) to collect chemical and geotechnical data. Multiple sets of core samples were collected and analyzed throughout the study area. Appendix A describes the vibracore collection and sampling details. The following describes the vibracore penetration and recovery results and how this was applied to determine sample intervals during core processing. The sediment vibracore logs included in Appendix B present the recovered sediment lithology and compaction-corrected (in-situ) sample intervals. Core collection notes, including penetration and recovery information, is also presented on the sediment core logs. Chart B-1 presents a summary of the core recovery results.

Chart B-1: Summary of PRDI Vibracore Recovery Results

Recovery Percentage Range	Unit 1A/1B	Unit 1C	Unit 2B/2C	Unit 3A/3B	Unit 5B/5C	Unit 6B/6C	Unit 8 (basin)	Unit 8 (slope)	Unit 9
Number of Cores	**16**	**8**	**3**	**6**	**6**	**4**	**25**	**24**	**6**
90 - 100%	14	7	1	2	5	1	17	8	5
80 - 90%	2	1	1	2	--	1	8	4	1
75 – 80%	--	--	1	--	--	1	--	1	--
<75%	--	--	--	2	1	1	--	11	--

Note:
Per the SAP, the target acceptable recovery percentage was 75%.
The Unit 8 slope recoveries are presented as observed in the field during core collection.

Compaction-corrected (in-situ) sediment sample depths were calculated during core processing as follows:

Recovery Length (ft) / Penetration Depth (ft) = Calculated Recovery (Equation 1)
Recovered Length (ft) x Calculated Recovery = In-Situ Depth (ft) (Equation 2)

The compaction-corrected (in-situ) sample intervals were applied selectively based on the core lithology and observations during core collection and generally applied to cores collected in individual Site Units as described below.

Unit 1A/1B, 1C, 2A/2B, 3A/3B, 5B/5C, 6B/6C, 9

Core recovery in the Whatcom Waterway (outside ASB) cores were generally well above target acceptable criteria (Chart B-1) and sample intervals were compaction-corrected uniformly throughout the core during core processing in the laboratory. The limited cores with recovery below 75% had multiple collection attempts and the core with the greatest recovery was retained for processing.

Unit 8 (ASB Basin)

Core recovery in the ASB basin cores were well above target acceptable criteria (Chart B-1). Based on field observations at the time of core collection, compaction was only applied to the overlying soft solids. The underlying sand was sampled as recovered and not compaction-corrected during core processing in the laboratory.

Unit 8 (ASB Slope "B" cores)

Core recovery in the ASB upper slope ("B") cores were generally below target acceptable criteria (Chart B-1). Based on field observations at the time of core collection, the penetration length was adjusted to account for pile driving in compact berm sand. The adjusted penetration length is presented on each sediment core log. Sample intervals were compaction-corrected (based on the adjusted penetration length) uniformly throughout the core during core processing in the laboratory.

Unit 8 (ASB Slope "C" cores)

Core recovery in the ASB lower slope ("C") cores were well above target acceptable criteria (Chart B-1). Based on field observations at the time of core collection, compaction was only applied to the overlying soft solids. The underlying sand was sampled as recovered and not compaction-corrected during core processing in the laboratory.