

REMEDIAL INVESTIGATION WORK PLAN ADDENDUM

South Park Marina
Seattle, Washington

Prepared for:

City of Seattle, Seattle City Light
The Port of Seattle
South Park Marina Limited Partnership

Project No. 190293-001-1.2 • August 23, 2022 • Final



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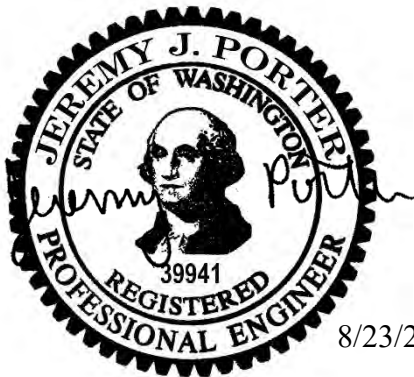
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For submittal to the Washington State Department of Ecology

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Abbreviations

Aspect	Aspect Consulting, LLC
ASTM	ASTM International
bgs	below ground surface
BEHP	bis(2-ethylhexyl)phthalate
COC	chemical of concern
cPAH	carcinogenic polycyclic aromatic hydrocarbons
CSM	Conceptual Site Model
CUL	Cleanup Level
DQO	Data Quality Objectives
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
HASP	Health and Safety Plan
LDW	Lower Duwamish Waterway
MHHW	mean higher-high water
MTCA	Model Toxics Control Act
NAVD88	North American Vertical Datum of 1988
NOAA	National Oceanic and Atmospheric Administration
PAH	polycyclic aromatic hydrocarbons
PARCCS	Precision, Accuracy, Representativeness, Comparability, Completeness, and Sensitivity
PCB	polychlorinated biphenyls
PCE	tetrachloroethylene
PCUL	preliminary cleanup level
PLP	Potentially Liable Party
PQL	practical quantitation limit
QAPP	Quality Assurance Project Plan
RI	Remedial Investigation
SCR	Source Control Review

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SPM	South Park Marina
TCE	trichloroethylene
TEQ	total toxic equivalent concentration
TPH	total petroleum hydrocarbons
UST	underground storage tank
VOC	volatile organic compound
SVOC	semi-volatile organic compound

1 Introduction

In accordance with Agreed Order No. DE 16185 (the Agreed Order; AO) between the Washington State Department of Ecology (Ecology) and the Potentially Liable Parties (PLP) Group, which consists of South Park Marina Limited Partnership (SPM), the Port of Seattle (Port), and the City of Seattle (City), a Remedial Investigation (RI) is being conducted for the South Park Marina Site (Site) located at 8604 Dallas Avenue South in Seattle, Washington (Figure 1.1). The Site is located on the west side of the Lower Duwamish Waterway (LDW) from River Mile approximately 3.3 to 3.5, upstream of (to the south of) the South Park Bridge, and east of Dallas Avenue South (Figure 1.1).

The RI is intended to collect, develop, and evaluate sufficient information regarding a site to select a cleanup action under WAC 173-340-360 through 173-340-390. Additionally, the RI is intended to support Ecology's Source Control Strategy for the LDW by addressing existing, ongoing sources of contaminants to the LDW so as to minimize the risk of recontaminating sediments above levels requiring active remediation (in the near term) and to minimize the risk of recontaminating sediments above the sediment cleanup standards established in the LDW Record of Decision (in the long term) (Ecology, 2016). A draft Source Control Review (SCR) Memorandum was submitted to Ecology on January 21, 2022. Ecology comments on the draft SCR Memorandum were received on March 23, 2022. A draft final version of the SCR was submitted to Ecology on June 14, 2022 (Aspect, 2022) with Ecology comments received on August 10, 2022. The final SCR will be submitted to Ecology in August 2022, and additional explorations identified by Ecology in their review of the SCR are included in this RI Work Plan Addendum (Work Plan Addendum).

In support of the RI goals noted above, the following RI Data Quality Objectives (DQOs) were developed in the Work Plan:

1. Delineate contaminant nature and extent (lateral and vertical) and identify areas and media (soil and groundwater) requiring remediation.
2. Characterize site physical characteristics that influence contaminant fate and transport.
3. Characterize the potential for contamination in Site soil and groundwater to migrate to LDW sediment or surface water.
4. Characterize the potential for contamination to migrate via Site stormwater to sediment or surface water.
5. Characterize the potential for contamination to migrate via soil vapor to indoor air.

The first phase of field work for the RI (Phase 1) was completed in May 2021 in accordance with the RI Work Plan (Work Plan; Aspect, 2020). This Work Plan Addendum documents the data gathered in Phase 1, describes the Conceptual Site Model, identifies remaining data gaps, and describes proposed data collection activities intended to fill those data gaps during Phase 2 of the RI. This Work Plan Addendum is organized as follows:

- **Section 2 – Site Background** describes updates to the information presented in the Work Plan regarding the property location and zoning, operational history, and current and future land use, as obtained from readily available existing information.
- **Section 3 – Environmental Setting** describes updates to the Work Plan regarding topography, geology, and hydrogeology of the Site.
- **Section 4 – Phase 1 Field Investigation** gives an overview of the work conducted during Phase 1 and identifies deviations from the Work Plan.
- **Section 5 – Data Summary** summarizes and displays the Phase 1 field investigation and historical data.
- **Section 6 – Conceptual Site Model** summarizes potential Site contaminants, the potential migration pathways, and the potential receptors and exposure pathways based on the collective information to date.
- **Section 7 – Data Gaps and Phase 2 Investigation** summarizes data gaps for completing the RI and describes the data collection to fill the identified data gaps.
- **Section 8 – Schedule** provides a proposed schedule, including a timeline for completion of Phase 2 and the subsequent RI deliverables.
- **Section 9 – References** lists documents used or referenced in this Work Plan Addendum.
- **Section 10 – Report Limitations and Guidelines for Use** describes the limitations for use of this document.

Tables and figures are located at the end of the Work Plan Addendum text after Section 10 and before the Appendices. Appendices to the Work Plan Addendum support the analyses and discussions presented in the main body of the text and tables and include:

- **Appendix A** – Phase 1 RI Boring and Monitoring Well Logs
- **Appendix B** – Phase 1 and Historical Results – Data Tables and Figures
- **Appendix C** – Phase 2 Sampling and Analysis Plan and Quality Assurance Project Plan

2 Site Background

Site background information, including the Site location, land use, operational history, regulatory history, and infrastructure, and a description of adjacent sites, is provided in Section 2 of the Work Plan. As in the Work Plan, the cardinal directions for the SPM property are used. The SPM Property boundaries are oriented along the LDW, at an angle to true north. Project North refers to the direction downstream along the LDW.

The following sections provide additional background information identified since the Work Plan.

2.1 South Park Marina Fire

On September 2, 2021, a fire (2021 Fire) destroyed several vessels on the south end of the SPM Property and three structures: the lumber storage building and woodworking shop, a building used for boat storage and maintenance, and a storage shed. There was evidence of overland flow of fire-fighting water to the river in the southeast corner of the Site and onto the T117 site. Debris from the 2021 Fire was removed between March 17 and March 24, 2022. The area was visually inspected by Aspect on April 29, 2022, to identify surface materials and condition in advance of the Phase 2 site investigation. The area beneath the former buildings primarily consists of impervious surfaces (concrete slab or asphalt pavement) with limited areas of exposed soil. An updated map of current Site features is provided on Figure 1.1, including pervious surfaces and the approximate extent of the area affected by the 2021 Fire.

The area beneath these former buildings has not been characterized in previous environmental investigations. Removal of these buildings facilitates access for Phase 2 investigations to characterize soil and groundwater conditions. In addition, removal of the structures has potentially changed stormwater runoff characteristics in this area. Additional characterization of topographic drainage patterns in this area is planned for Phase 2.

2.2 South Park Marina Drainage System

Phase 1 activities included review of Site drainage patterns and inspection and sampling of stormwater and catch basin solids from catch basins located as close as practicable to outfalls. In addition, South Park Marina has continued to conduct stormwater sampling in accordance with its Boatyard General Permit and has conducted additional assessment in coordination with Ecology's Water Quality program. Additional information gathered relevant to Phase 2 investigations are as follows:

Drainage observations during the Phase 1 Wet Weather Site Walk and both stormwater sampling events did not identify overland flow of stormwater to the LDW. Stormwater infiltrated or was captured by Site catch basins and was not observed flowing over the shoreline block wall. Stormwater runoff on the boat ramp was not sampled as flow was *de minimis*. Additional observations during rain events to confirm these observations have been requested by Ecology during Phase 2 to support the SCR.

Based on utility locates performed by South Park Marina, catch basins CB-02, CB-03, and CB-04 are inferred to connect to catch basin CB-05 prior to discharging to the SPM

Outfall. Therefore, samples collected during Phase 1 from CB-05 represent combined discharge from those upstream catch basins. An updated drainage map is provided on Figure 2.1.

Uncertainties with respect to the storm drain system are described in Sections 4.2 and 5.4.8 of the SCR Memorandum (Aspect, 2022). The location and condition of the stormwater system has been characterized to the extent practical given access limitations to underground infrastructure. The uncertainties do not represent a data gap for the RI. However, contaminant concentrations in stormwater and catch basin solids can be variable, and stormwater samples have not been analyzed for LDW COCs (SVOCs, PAHs, metals, PCBs, and dioxins/furans) post-2021 fire. In accordance with Ecology comments on the SCR Memorandum, one additional round of stormwater and catch basin solids data for LDW COCs will be collected as part of the Phase 2 investigation to confirm consistency with the source control review analysis presented in the SCR Memorandum (Aspect, 2022). This round will include collecting a sample of StormwaterRx effluent and analysis for LDW COCs to evaluate concentrations that are entering the LDW post-treatment.

2.3 Adjacent Sites

The Work Plan identified four adjacent sites that are potentially relevant to the Site: the LDW, the T-117 Early Action Area (which included the T-117 property and adjacent streets and yards), a historical dry cleaner, and the South Park Bridge. Conditions and available data at these Sites relevant to Phase 2 have generally not changed since the Work Plan, with the following exceptions:

Surface sediment sampling to support remedial design for the LDW Upper Reach was performed in 2020 and 2021 at eight locations offshore of the SPM Property: LDW20-SS154, LDW20-SS158, LDW20-SS159, LDW-SS164, LDW-SS167, LDW20-168, LDW20-SS169, and LDW20-SS559 (LDW Pre-Design Investigation Phase 1 and Phase 2, 2020 and 2021, respectively). Additionally, one sediment sample was collected as part of the T-117 EAA long-term monitoring offshore of the SPM Property: PERIM-5-LTM. These new data, plus other historical sediment data collected within the SPM marina basin, are summarized in the SCR Memorandum (Aspect, 2022). Subsurface sediment sampling was also conducted as part of the LDW Pre-Design Investigation Phase 1 and Phase 2 offshore of the SPM Property: LDW20-SC154, LDW20-SC158, LDW20-SC159, LDW20-SC161, LDW20-SC164, LDW20-SC167, LDW20-SC168, LDW20-SC169, and LDW21-SC560. The sediment data that may be relevant to the RI, including both surface and subsurface sediment, will be considered in the RI.

The T-117 Property has been redeveloped into a park with restored habitat areas.¹ The park features and topography will limit the ability to advance Phase 2 explorations on the T-117 Property adjacent to the SPM Property. If drilled explorations on T-117 adjacent to the SPM Property are required, then access will likely be needed from the SPM Property and temporary removal of the fence would be required. Furthermore, the GAC mat could be compromised if drilling occurs outside of the sheet pile wall.

¹ T-117 Duwamish River Habitat Restoration and Public Access project, <https://www.portseattle.org/sites/default/files/2018-12/Duwamish-river-habitat-restoration-T117.pdf>

3 Environmental Setting

This section provides updated information regarding the SPM Property's physical characteristics, including topography, drainage, geology, and hydrogeology.

3.1 Upland Topography, Surface Drainage, and Shoreline Characteristics

A discussion of the upland topography and surface drainage is available in Section 3.1 of the Work Plan (Aspect, 2021). The following subsection summarizes those key details from the Work Plan as well as observations documented during Phase 1 of the RI that form the basis of the scope of work proposed for Phase 2 of the RI.

3.1.1 Surface Drainage

Approximately 99 percent of the SPM Property is located within four stormwater catchment areas that are described in Section 2.3.2.2.4 of the Work Plan (Aspect, 2021) and in Section 4.2.1 of the SCR Memorandum (Aspect, 2022). An ecology-block wall aligned along most of the SPM Property shoreline prevents stormwater sheet flow over the top of the bank into the LDW. The block wall is absent along the boat ramp in the northeast corner of the SPM Property; the boat ramp comprises approximately 0.1 percent of total property and drains directly to the LDW.

Based on visual observations during a Spring 2021 storm event reconnaissance and the subsequent unsuccessful attempts to capture enough runoff volume on the boat ramp to sample during a storm event as part of the RI Phase 1 data collection, overland runoff from the SPM Property via the boat ramp is considered to be *de minimis* (Aspect, 2022). Additionally, prior to the 2021 Fire (Section 2.1), less than 0.1 percent of the total property was mapped as draining to the 17th Avenue South storm drain in the southwest corner of the SPM Property. During the Spring 2021 storm event reconnaissance and subsequent stormwater sampling events, no overland flow was observed in this area. Drainage patterns in this area after the 2021 Fire have not been assessed.

3.1.2 Erodible Bank Soils

The riprap and bank soils on the waterward side of the ecology-block wall are typically submerged for part of the tide cycle, as the LDW fluctuates in elevation between a MHHW of 9.0 feet and a mean lower-low water (MLLW) of -2.4 feet (in NAVD88 vertical datum).² The upland portion of the SPM Property, and the subject of this Work Plan Addendum, is defined as the portion of SPM Property above the MHHW. The riprap and bank soils on the waterward side of the ecology blocks (and below MHHW) are part of the LDW Superfund Site. The base of the ecology-block wall along the shoreline is below the MHHW elevation.

During a wet-weather site walk in Spring 2021 and subsequent stormwater sampling events, no soil nor erodible bank soils were observed above the MHHW. Seeps have been observed discharging from the base of the bank³ and sediments offshore of it at

² In the MLLW vertical datum, the MHHW water elevation is 11.36 ft and the MLLW elevation is 0.0.

³ The toe/base-of-slope/bank is at approximately +2 Ft MLLW (-2.4 ft NAVD88).

approximate elevations of -2.3 to -2.7 feet during extreme low tide cycles; seeps are further discussed as part of the site hydrostratigraphy in Section 3.2.2 below.

3.2 Geology and Hydrogeology

Regional and Site geology and hydrogeology were described in detail in the Work Plan. Updates to the understanding of Site geology and hydrogeology based on Phase 1 are provided below.

3.2.1 Site Geology

The interpretation of the Site geology in the Work Plan was based on a review of available boring logs from SAIC (2008a) and TIG Environmental (2019), and this section describes updates to that interpretation based on the results of the Phase 1 RI field investigation. Locations of Phase 1 RI borings are shown on Figure 3.1, and the boring logs from the Phase 1 RI field investigation are included as Appendix A. These updates included characterizing the Glacial Till deposits which were not previously encountered and recharacterizing the “Silt with Organics” to “Tidal Flats” based on field observations of larger grain sizes within the unit.

Based on explorations completed to date, soils at the SPM Property are generally divided into five distinct units based on their depositional characteristics, outlined here from top to bottom:

- **Fill Unit.** Anthropogenic fill material, likely a result of the dredging of the LDW and/or regrading of nearby hills, is present throughout the SPM Property. The fill material generally consists of sand, silty sand, or sandy silt and has been documented at thicknesses up to 16 feet (MW-14) and an average thickness of approximately 10 feet. The anthropogenic fill material also includes a layer of base course that is present just beneath the paved portions of the SPM Property.
- **Tidal Flat Deposits (Tidal Flat Unit).** Tidal flat deposits can be characterized by their distinctive coloration (gray to red-brown) and sulfur-like odor, and generally consist of organic silt, silt, sandy silt, and silty sand. These deposits were present in nearly every boring drilled as part of the Phase 1 RI fieldwork, except in the area of the historical boat manufacturing building along the shoreline (further discussed below). Troost et al. (2005) mapped most of the SPM Property as a historical meander/oxbow of the Duwamish River and identified this unit as a younger alluvium that can locally contain soft peat lenses and woody debris, which is consistent with the organic material encountered during the Phase 1 borings. This unit has been documented at thicknesses up to 9.5 feet at the SPM Property, particularly in the northwest corner (further described below).
- **Alluvial Deposits (Alluvial Unit).** Alluvial deposits were present in all borings conducted during the Phase 1 of the RI (except for the hand auger locations which only evaluated soil conditions to 3 feet bgs). The alluvial deposits are typified by a sand with only a trace amount of fines and have been documented at thicknesses up to 10.5 feet, but it is important to note that the bottom of these deposits has only been observed in one boring (MW-05) at the SPM Property, as noted immediately below.

- **Glacial Till (Till Unit).** Glacial till was observed in one boring (MW-05, in the southeast corner of the SPM Property) that was advanced to a depth of 30 feet. The glacial till was described as a low plasticity sandy silt with gravel containing fine-grained sand and fine, rounded gravel, which appeared to be very stiff. The till graded downward to a gray, stiff silt. It should be noted that while the till was only encountered in one boring on the SPM Property, it has been observed in geotechnical borings conducted as part of the South Park Bridge replacement to the north (PB Americas, 2007) and in geotechnical borings conducted in the Dallas Ave ROW to the southwest of the SPM Property and on the T-117 property to the south of the SPM Property (Windward, 2010a).
- **Pond Fill.** Based on available historical data, the former A&B Barrel Co. waste disposal pond (Pond) was allegedly filled with debris from the 1960 Fire which destroyed the former A&B Barrel Co. facility. Pond fill material was not directly encountered in any of the Phase 1 RI borings, but because borings were placed near or outside the estimated extent of the Pond footprint, they were not expected to encounter this particular fill material. SAIC (2008a) described the fill material in the Pond footprint as silty sand and gravelly silt with anthropogenic debris, which was easily recognizable in the field and had a moderately strong chemical odor during drilling. SAIC (2008a) infers the former Pond was roughly 7 feet deep but borings conducted by SAIC and TIG Environmental did not vertically delineate the base of the Pond fill material: three of eight of the borings met refusal within the fill and the remaining five borings targeted shallow soil and were terminated at 8 to 10 feet bgs (SAIC, 2008a and TIG, 2018b). The estimated extent of the Pond footprint is based on available historical information from aerial photographs and Sanborn maps).

Locations of Phase 1 RI explorations are shown on Figure 3.1, which also includes locations of the transects for Cross Sections A-A' through D-D' (Figures 3.2 to 3.5). The following are key geologic interpretation uncertainties that affect the hydrogeologic Conceptual Site Model and will be addressed in the Phase 2 scope of work:

- The bottom of Pond Fill was not delineated in previous borings conducted by SAIC and TIG Environmental and is therefore uncertain ([A-A'] Figure 3.2).
- Variations in the presence and thickness of the Tidal Flat Unit suggest there may be significant heterogeneities in the thicknesses of these deposits across the Property, which affects the hydraulic connectivity of the Fill Unit and Alluvial Unit:
 - In the vicinity of the historical boat manufacturing building, the Tidal Flat Unit was not encountered in shoreline borings SB-27 and MW-08. This unit was observed at SB-28 located slightly further inland, but at a higher elevation and thinner than in other borings throughout the SPM Property ([B-B'] Figure 3.3).
 - The Tidal Flat Unit as observed in nearly all borings and varied in thickness between 0.5 feet at MW-12 and 10.5 feet at MW-13 ([C-C'] Figure 3.4). Additionally, as illustrated on Figure 3.5 [D-D'], the interpreted thickness of the Tidal Flat Unit was substantially different in the historical SAIC boring SB-10 as compared to the Phase 1 RI boring MW-15, even though they are located relatively close to one another.

3.2.2 Site Hydrostratigraphy and Groundwater Conditions

The depth to groundwater at the Site varies from approximately 6 to 14 feet below ground surface (bgs). Groundwater is encountered in the deeper Alluvial Unit and, at least seasonally, in the shallower Fill Unit. Groundwater conditions are affected by seasonal changes, geological variability, and subsurface features (including a sheet pile wall installed at the marina's southeast corner for geotechnical stability during the T-117 EAA Phase 1 removal action). All Site groundwater ultimately discharges to the LDW, with seeps observed at extreme low tides.

Phase 1 measurements included a limited tidal study with conductivity and pressure transducer data loggers,⁴ depth to water measurements during drilling and groundwater sampling events, and measurements of shoreline seeps including location, elevation, flowrate, and field parameters. Representative contour maps showing various tidal stages are included on Figure 3.6, and hydrograph and conductivity responses at Site monitoring wells are shown on Figures 3.7 and 3.8. Key observations that inform the Phase 2 scope of work include:

- **Fill Unit Saturation.** Fill soils were saturated in every location during Phase 1 fieldwork in March 2021. During SAIC's investigation in September 2007, no saturation was encountered in Fill soils at the south end of the Property, suggesting there may be seasonal variation in saturation in the Fill Unit. Depending on timing of the fieldwork for Phase 2 of the RI, different groundwater conditions may be encountered in the Fill Unit.
- **Precipitation Effects.** In unpaved areas of the SPM Property, precipitation results in increased groundwater elevations (e.g., MW-6) in the Fill Unit, whereas responses to precipitation were not as apparent in areas of the SPM Property covered by large portions of asphalt (e.g., MW-12). Additionally, the largest increase in groundwater elevation as a response to precipitation was observed at MW-14 (Figure 3.7), which is near the bioinfiltration gallery constructed as part of the Dallas Ave ROW stormwater infrastructure upgrades. The effects of infiltration close to this portion of the SPM Property will be further evaluated in Phase 2 of the RI.
- **Shoreline Groundwater Elevations.** All shoreline monitoring wells in the Fill Unit go dry during the lower-low tide stages with the exception of MW-07. MW-07 may not go dry due to either the bedding of the Tidal Flat Unit, which forms a trough along the shoreline near MW-07 (Figure 3.8), redirected groundwater flow around the sheet pile wall in the vicinity of the former A&B Barrel Pond, or some combination thereof. It should be noted that there was a distinct high-plasticity clay layer at 9.5 to 10.5 feet bgs at MW-07 at the bottom of the Fill Unit and top of the Tidal Flat Unit that was not encountered in any of the other borings advanced throughout the SPM Property. Further evaluation will be conducted as part of the

⁴ As part of the Phase 1 RI fieldwork, pressure transducers were installed at select monitoring wells throughout the SPM Property to assess tidal lag and choose groundwater sampling times for each well (relative to tide stage): MW-04, MW-06, MW-07, MW-08, MW-09, MW-11, MW-12, MW-13, and MW-14. The transducers were deployed for 10 days prior to retrieval and analysis. The transducer placed in MW-05 malfunctioned so MW-05 data are not depicted in graphs.

Phase 2 of the RI. Additionally, sampling windows relative to tidal stages for Fill Unit monitoring wells which go dry will be adjusted for Phase 2 of the RI.

- **Effect of Sheet Pile Wall.** The monitoring wells in the former Pond Area (MW-04, MW-05, and MW-06) do not go dry, even though they are relatively close to the shoreline (Figure 3.8). This is likely due to mounding of groundwater in the Fill Unit behind the sheet pile wall that fully penetrates the Fill Unit along the southeast SPM Property corner. It is unclear from available records whether the sheet pile wall fully penetrates the Alluvial Unit. The sheet pile wall is thought to act as a barrier to groundwater flow, but Fill Unit groundwater is expected to flow through seams between the individual steel sheets comprising the wall and through weep holes reportedly drilled through the wall, so the wall is not completely impermeable to seepage. Further evaluation of groundwater flow in this area will be conducted as part of Phase 2 of the RI.
- **Connectivity Between the Fill Unit and Alluvial Unit.** Based on the available data reported by SAIC (summarized in the Work Plan) and data collected from Phase 1 of the RI, groundwater elevations in the Fill and Alluvial Units appear to be of similar elevations as shown on Cross Sections A-A' and B-B' (Figures 3.2 and 3.3). However, it is unclear how Fill Unit groundwater may or may not interact with Alluvial Unit groundwater and whether the Tidal Flat Unit acts as an aquitard to limit vertical flow of groundwater between these units. This interconnectivity, or lack thereof, between groundwater present in the Fill Unit and Alluvial Unit remains a data gap and objective of Phase 2 sampling as discussed further below in Section 7.1.6.
- **Marina Corner Seep Observations.** SAIC (2008) did not observe seeps on the SPM Property but did observe some seepage zones on the T-117 Upland Property just south of the SPM Property. Windward (2010) documented a single seep just south of the marina boat ramp on the SPM Property. During the T-117 EAA Phase 1 sediment and upland removal action (2013-2014), the bank at the south end of the SPM Property sloughed during excavation and dredging offshore of this area. The steel sheet pile wall was installed along the SPM Property's southeast corner prior to excavation to provide geotechnical bank stability support during excavation near the marina corner. Groundwater seepage was observed after the bank sloughed during low tide, discharging from an approximate elevation of 4.5 to 5.5 feet NAVD88, which would be in the Tidal Flat Unit. Seep samples were collected.
- **Phase 1 Seep Observations.** During Phase 1 of the RI, the presence of seeps was evaluated during multiple reconnaissance events: the Spring 2021 storm event and during the two stormwater sampling events (March 4 and May 27, 2021). Seeps were observed on May 27, 2021, at an extreme lower-low tide (-6.2 feet NAVD88). On this date, seeps were observed daylighting at the base of the riprap slope along the SPM Property shoreline. Aspect returned to the SPM Property on June 25, 2021, as the lower-low tide reached an elevation of approximately -6.4 feet to document the presence of seeps. A total of 37 unique seeps were identified, and the locations of the northern most 23 were recorded. The southern seeps were observable by field staff standing on the top of the ecology retaining block wall but could not be safely accessed due to the steep slope. The elevations of two seeps

were measured at -2.3 and -2.7 feet NAVD88, and the remainder of the seeps appeared to daylight at similar elevations. All seeps appeared to daylight where the slope of the riprap meets the relatively flat sediment deposits in the marina basin, and not further up the slope behind the riprap.

Aspect returned during a subsequent extreme lower-low tide cycle on July 22 and 23, 2021 (-5.2 and -5.8 feet NAVD88, respectively) to install conductivity dataloggers, record water quality parameters, and measure representative flow rates from six seep locations. Field parameters indicated that water discharging from the seeps at low tide was much more saline than groundwater observed in Fill Unit shoreline monitoring wells. Seep electrical conductance ranged between approximately 25,000 and 40,000 microsiemens per centimeter, indicating that the discharging groundwater was highly saline transitional zone groundwater. Flow rate approximations varied between 12 to greater than 44 liters per minute (approximately 3 to greater than 12 gallons per minute). Further evaluation of groundwater discharge to the LDW, the interconnectivity of Fill Unit groundwater to Alluvial Unit groundwater, and characterization of Alluvial Unit groundwater, is planned for Phase 2. No direct sampling of seeps is currently planned in Phase 2.

4 Phase 1 Field Investigation

Field activities for Phase 1 of the RI were conducted between February and June 2021 and consisted of the following activities:

- February 2021 – Conducted a wet-weather site walk to document stormwater system conditions and the potential for overland flow and/or bank erosion. Conducted an additional site walk to mark locations for soil borings and monitoring wells and coordinate access to the locations with SPM.
- March 2021 – After conducting a utility locate, completed two hand augers (HA-01 and HA-02), nine soil borings (SB-26 to SB-34) and installed 12 monitoring wells (MW-04 to MW-15) as identified in the Work Plan. The field team also collected the first set of stormwater samples and installed and retrieved pressure transducers to monitor tidal responses at monitoring wells. No evidence of potential cultural resources or human skeletal remains was encountered during the Phase 1 field investigation (Willamette 2021).
- April 2021 – Conducted groundwater monitoring and sampling (except for PCB congeners) at all existing SPM Property monitoring wells and conducted catch basin solids sampling.
- May 2021 – Collected the second set of stormwater samples and collected groundwater samples from select monitoring wells for PCB congener analysis based on the analytical results for PCB Aroclors from the Property-wide groundwater sampling event.
- June 2021 – Documented the presence and location of seeps observed at extreme low tides along the shoreline.
- July 2021 – Evaluated water quality and quantity at select seeps observed at extreme lower-low tides along the shoreline.

Phase 1 activities were conducted in accordance with the Work Plan, with the exceptions noted below, and will be further detailed in the RI report.

4.1 Summary of Deviations from Work Plan

Phase 1 of the RI was conducted in general accordance with the Work Plan except for minor deviations. These deviations did not affect data quality objectives, but some of these deviations provide insight into how Phase 2 activities will be conducted. Work Plan deviations and their relevance to Phase 2 activities are summarized as follows, with more detail included in the Phase 2 SAP/QAPP (Appendix C):

- During the initial site walk to mark boring locations, a conflict with an overhead utility was identified and consequently the boring was shifted approximately 12 feet to the east to accommodate the drill rig's mast. During Phase 2 activities, presence of overhead utilities may require boring locations to be shifted and/or the use of different equipment (such as limited access drill rig).

- The Work Plan SAP/QAPP identified the use of 2.25-inch-outer-diameter tooling, which uses 1.5-inch-inner-diameter plastic liners for collecting soil cores. During the Phase 1 RI fieldwork, the volume of soil from these 1.5-inch cores was insufficient to fill all the containers requested by the analytical laboratory. Therefore, 3.75-inch-outer-diameter tooling was used with 3-inch-inner-diameter liners to increase soil volume for chemical analysis. Phase 2 activities will be completed using the 3.75-inch-diameter (or larger) core in order to collect adequate soil volume for analysis. Furthermore, sonic drilling methods will provide more volume; the SAP is written to anticipate potential additional borings if inadequate direct push volume is obtained.
- During Phase 1, a vactor truck was used to clear one drilling location to prevent striking potential private electrical utilities. A hand auger was used to collect shallow samples prior to vac clearance of the borehole to avoid disturbing soil samples before collection for laboratory analysis. During Phase 2 activities, vactor trucks may also be used to clear drilling locations in cases where utility locations are unclear. If a vactor truck is used for shallow utility clearance during Phase 2, a hand auger will be used to collect shallow samples prior to vac clearance.
- During Phase 1, several borings were drilled deeper than anticipated to characterize and confirm the contacts of stratigraphic units. Although expected boring depths will be more accurate for Phase 2 adjustments in the field may be necessary given the fluctuations of geologic contacts. This flexibility is incorporated into the SAP/QAPP.
- The timeframe in which to sample tidally influenced monitoring wells was calculated by correlating the lowest conductivity and water level measurements at each well with the low tide recorded at the NOAA station number 9447130, which is located in Elliott Bay, rather than station number 9447029 identified in the Work Plan, because station 9447130 measures actual tide fluctuations whereas 9447029 is a predictive station. The Elliott Bay station will also be used in the Phase 2.
- Because shoreline monitoring wells dried up during the lower-low tide cycle, groundwater sampling windows were adjusted to be 1.5 hours before the predicted time for the groundwater elevation to reach the bottom of each screen and for the well to go dry. This modification to the sampling window was discussed with and approved by Ecology during the monthly Ecology-PLP meeting on April 8, 2021. This modified sampling window did not result in sufficient groundwater volume for all laboratory analyses at certain shoreline monitoring wells during the 2021 sampling event (particularly MW-09 and MW-10). This sampling protocol has been further revised (i.e., longer sampling window) to maximize groundwater sample volume obtained during Phase 2, as described in the SAP/QAPP (Appendix C).
- For PCB congener groundwater sampling, platinum-cured silicone tubing was used both down well and through the pump head during low-flow sampling conducted for PCB congener analysis, rather than using flexible copper tubing down well as identified in the Work Plan, because a source of suitable non-recycled tubing was not identified. PCB congener analysis is not identified for Phase 2 activities; however, if congener analysis is required, platinum-cured silicone tubing will be used in place of flexible copper tubing to collect groundwater sample volume.

5 Data Summary

The Work Plan identified soil and groundwater screening levels to address the environmental transport and exposure pathways applicable at the Site for the protection of LDW receiving sediment and surface water. These screening levels were based on Ecology's 2019 *Lower Duwamish Waterway Preliminary Cleanup Level [PCUL] Workbook and Supplemental Information* (PCUL Workbook). Screening levels for media not regulated under MTCA (stormwater and catch basin solids) were developed in the Work Plan to assess potential contaminant transport to the LDW via stormwater and the potential for stormwater source control measures. These screening levels were developed as described in Appendix C of the Work Plan. For the purposes of this Work Plan Addendum, RI screening levels have been updated based on the February 2022 update of the PCUL Workbook. These RI screening levels do not necessarily represent cleanup levels for the Site and do not consider potential adjustments for PQLs, background, or empirical demonstration of cross-media transport.

A summary of RI screening level exceedances by media for all samples collected (historical and Phase 1) is included as Table 5.1. Statistical summaries of exceedances for Site media, including the frequency of exceedance and magnitude of exceedance, are included in Appendix B and discussed below. Based on frequency of exceedance and consistency of exceedances across different media, certain analytes are considered key risk drivers and representative of each analyte class and are therefore displayed on figures for the purposes of evaluating data gaps to be addressed in Phase 2. A more extensive summary and discussion of results will be presented in the RI.

Phase 1 data for soil (vadose and saturated zones), groundwater, stormwater, and catch basin solids are included in Appendix B as Tables B.1 through B.5. Statistical summary tables that included both Phase 1 and historic data for soil and groundwater were used to identify contaminants of interest to assist in evaluating data gaps and are included in Appendix B as Tables B.1 through B.9. Statistical summary tables for stormwater and catch basin solids are not included in this Work Plan Addendum.

Figures B.1 through B.18 present select representative contaminants for vadose and saturated zone soil. Figures B.19 through B.27 present the same information for groundwater.

6 Conceptual Site Model

The Preliminary Conceptual Site Model (preliminary CSM) describes potential on-Property and off-Property sources of contaminants (historical and current), potential site contaminants, potential contaminant migration pathways, and potential receptors and pathways by which they may be exposed to SPM Property-derived contaminants. Chemicals detected above screening levels during Phase 1 include metals, PCBs, Dioxin/Furans, PAHs, VOCs, SVOCs, pesticides and herbicides, and TPH, and are summarized in Table 5.1. Potential contaminant migration pathways include but are not limited to soil leaching to groundwater, groundwater discharging to surface water and sediment, and soil erosion to stormwater discharging to surface water and sediment. Potential receptors include humans, wildlife, fish and aquatic organisms, and benthic organisms.

A detailed description of the preliminary CSM is included in Section 7 of the RI WP (Aspect, 2021) and is shown here as Figure 6.1.

The 2021 Fire may have affected the CSM by potentially releasing contaminants to the subsurface soils. The 2021 Fire and subsequent demolition of affected structures also exposed more pervious surfaces to infiltration, although the additional pervious area is relatively small as described in Section 2.1. Firefighting water and the fire itself carried debris and other waste material to and into the river both directly via overland flow as well as indirectly via the stormwater treatment system.

None of the information presented in the preliminary CSM has changed as a result of the Phase 1 investigation, although data gaps have been identified that when filled may change the CSM. These data gaps are discussed in Section 7 below. A more extensive discussion of the CSM will be presented in the RI report.

7 Data Gaps and Phase 2 Investigation

As anticipated in the Work Plan, additional data are needed to complete characterization of the Site in accordance with MTCA. This Section is organized as follows:

- Section 7.1 discusses data gaps identified following the Phase 1 investigation as well as those identified by Ecology in their review of the SCR Memorandum.
- Section 7.2 summarizes the Phase 2 investigation scope and approach.

A detailed description of data collection activities is provided in the Phase 2 SAP/QAPP (Appendix C).

7.1 Identification of Data Gaps

Data gaps were identified following the Phase 1 investigation and during the source control review. These data gaps include:

- **The lateral and vertical extent of soil contamination:** delineation of contamination exceeding soil screening levels at the north and west⁵ of the South Park Marina property; and refining extents of hot spots of contamination identified during Phase 1 to facilitate remedial alternative evaluation.
- **Extent of groundwater contamination at shoreline:** Limited shoreline groundwater data for some analytes to evaluate the potential migration of Site contaminants to the LDW.
- **Extent of groundwater contamination in alluvial groundwater:** Although alluvial groundwater has been historically sampled, there were elevated PAH and PCB detection limits in the historical groundwater samples, and the wells have since been decommissioned. In addition, the historical alluvial groundwater wells were in only the southeast corner of the Site.
- **Leaching of contaminants from soil to groundwater:** The soil-to-groundwater leaching pathway appears to be complete for some potential site contaminants, but not all, based on Phase 1 data. Some potential site contaminants exceed RI screening levels for soil that are based on this pathway but do not exceed RI screening levels for groundwater. Additional groundwater data, including evaluation of seasonality on groundwater quality, is needed to further evaluate this pathway.
- **Potential contamination in surface soil in the 2021 Fire area:** Surface soil quality in the Pond Area was characterized in Phase 1 but may have been affected by the 2021 Fire.
- **Potential contamination in soil and groundwater west of the Pond Area.** This area, which is within the 2021 Fire area, previously had limited accessibility and

⁵ Soil to the south of the SPM Property was remediated as part of the T117 cleanup action. Similarly, soil to the west of the SPM Property was remediated as part of the Streets and Residential Yards cleanup.

had not been characterized. With removal of the buildings, access to this area has been improved.

- **Changes in Infiltration in the 2021 Fire Area.** Infiltration in the 2021 Fire area may have increased due to changes in the ground surface (building removal), which includes limited areas of pervious material being exposed. An evaluation of groundwater quality in this area is warranted for Phase 2.
- **Site-wide groundwater flow/tidal response, and migration of dissolved-phase contaminants in groundwater and discharge to sediment and then surface water of the LDW:** Groundwater flow patterns at the Site were characterized in Phase 1 with a limited tidal study and did not include characterization of alluvial groundwater. This characterization indicated that flow patterns are sensitive to precipitation, tides, and geology. Groundwater flow patterns at the Site, including around the sheet pile wall, along the shoreline, and in the boat maintenance area, need further definition in Phase 2. The relationship /connectivity of groundwater between the Fill Unit and Alluvial Unit groundwater (e.g., does Fill Unit groundwater migrate vertically to the Alluvial Unit, or the degree to which the Tidal Flat Unit functions as an aquitard) needs to be further defined through both physical evaluation and assessment of Alluvial Unit groundwater quality.
- **Vapor-phase transport of volatile contaminants from vadose zone soil or shallow groundwater to soil gas and then to indoor air inside existing structures:** Soil and groundwater concentrations of volatile organic compounds (VOCs) in the area downgradient of the former off-property dry cleaner are a potential vapor intrusion concern to occupied structures. More data are needed in the former service station/tire shop area to evaluate potential migration of VOCs to soil vapor and indoor air.
- **Limited geologic information at depth:** Only one boring at the Site has gone deep enough to identify the base of the Alluvial Unit, and the depth likely varies across the Site. More data are needed regarding geology within the depth of impacted soil and groundwater.

More detail on data gaps and Phase 2 activities to address them⁶ are discussed below, organized into subsections representing the following site areas:

- Former A&B Barrel Pond (Pond) Area, which includes the area around the former Pond, the southern portion of the shoreline, and a portion of the 2021 Fire area
- Southwest Property Area, which includes a portion of the 2021 Fire area
- Boat Wash and Historical Boat Manufacturing Area, which includes the central portion of the shoreline
- Boat Maintenance Area, which includes the northern portion of the shoreline and the central portion of the SPM Property

⁶ In identifying Phase 2 actions to address data gaps related to the lateral extent of contamination, remedial actions on adjacent sites were considered: e.g., soil sampling was not proposed within the T117 Early Action Area which includes the T-117 property as well as portions of Dallas Avenue.

- Former Service Station Area, which includes areas downgradient of the off-property former dry cleaner.

The general extent of each of these areas, and the proposed exploration locations for each area⁷, are shown on Figure 7.1.

7.1.1 Pond Area

The A&B Barrel Pond Area has been the most highly characterized area of the Site, and relatively high exceedances of many contaminants including PCBs, metals, TPH, PAHs, pesticides, and VOCs have been detected in this area, with the highest concentrations detected within or immediately adjacent to the former Pond location.

Soil and groundwater data gaps remaining in the Pond Area after the Phase 1 investigation are described below.

7.1.1.1 Soil Data Gaps

Soil data gaps include:

- The vertical extent of soil contamination in the former Pond Area. The deepest soil sample collected in the former pond area (26.5 to 28 feet bgs at MW-5) had exceedances of PCBs (Figure B.12), aldrin (Figure B.2), TBT (Figure B.10), chromium, nickel, and PAHs (Tables B.1 and B.2 in Appendix B).
- The lateral extent of soil contamination to the west of the former Pond Area and west of SB-26. Multiple potential site contaminants exceeded screening levels including copper and zinc (Figures B.5 and B.7), PCBs (Figure B.12), Diesel- and Oil-Range TPH (Figure B.17), cPAHs, and dioxins/furans in the vadose zone and PCE (Figure B.14), PCBs (Figure B.12), pesticides including aldrin (Figure B.2), and PAHs (Tables B.1 and B.2 in Appendix B) in the saturated zone.
- The lateral and vertical extent of dioxin/furan contamination. Limited sampling was performed in Phase 1 for these analytes. The one soil sample analyzed (surface soil at SB-26) indicated a relatively high total dioxin/furan TEQ concentration above screening levels (0.00255 J mg/kg) but was also collocated with high concentrations of other contaminants. Additional data are needed to determine if this correlation is consistent in this area.
- Surface soil quality in this southern portion of the Site may have been affected by the 2021 Fire.

7.1.1.2 Groundwater Data Gaps

Groundwater data gaps include:

- The Fill Unit water bearing zone contains PCB and pesticide concentrations above screening levels throughout the former Pond Area. These groundwater exceedances

⁷ Additional step-out soil borings may be deemed necessary by field staff to delineate contamination exceeding soil screening levels at the north and west edges of the Site if clear evidence of contamination (e.g., strong odors, sheens, or product) is observed in the field at a boring that is not bounded. This will ensure a comprehensive Phase 2 investigation when complete; more detail is included in the Phase 2 SAP/QAPP (Appendix C).

have not been laterally delineated to the west (upgradient of Pond Area), to the south (towards the T-117 property line), and to the northwest (in the Boat Wash area).

- Historical groundwater samples from the Alluvial Unit contained pesticide concentrations, including aldrin, which exceeded screening levels (Figure B.19). There are no existing Alluvial Unit groundwater wells in the Pond Area, and the historical Alluvial Unit groundwater data was collected prior to installation of the sheet pile wall which may affect vertical distribution of contaminants. Further investigation of Alluvial Unit groundwater quality is needed.
- In addition to Alluvial Unit groundwater quality, the flow dynamics of Alluvial Unit groundwater require further investigation. Concentrations of potential site contaminants were generally higher in the Fill Unit soil as compared to the Alluvial Unit soil, and the interconnectivity of these units is critical to inform the conceptual site model. Both the interconnectivity of Fill Unit and Alluvial Unit groundwater and potential flow effects from the sheet pile wall in both units require investigation in Phase 2.
- The effects of the sheet pile wall on groundwater flow are not fully understood. Existing water level data indicate that the sheet pile wall redirects the majority of the Fill unit groundwater flow in the Pond area northward to the edge of the sheet pile wall (MW-6 location) where it discharges eastward to the LDW. However, some Fill unit groundwater is expected to flow through seams between the individual steel sheets comprising the wall and through weep holes reportedly drilled through the sheets. It is assumed that the Tidal Flats deposit is present in this area, but that has not been verified below the Pond footprint. In addition, it is unclear whether the toe of the sheet pile wall fully penetrates the Alluvial unit. Further water level data collection and geologic characterization is warranted. It should be noted that access constraints will preclude the installation of monitoring wells to the south or east of the sheet pile wall, which may prevent resolution of every data gap related to groundwater flow in the vicinity of the sheet pile wall; however, the proposed scope of work in Section 7.2 will provide additional data to refine the understanding of groundwater flow conditions in the southeast portion of the SPM Property.

7.1.1.3 Proposed Explorations

To fill the data gaps in the former Pond Area, the following work will be performed during the Phase 2 investigation, as outlined in Tables 7.1 and 7.2 and on Figure 7.1:

- Three new Alluvial Unit wells will be installed to be generally collocated with existing Fill Unit wells, as follows:
 - MW-04D will be installed near MW-04 to characterize Alluvial Unit groundwater quality and flow direction near/around the upgradient end of sheet pile wall.
 - MW-05D will be installed near MW-05 to characterize the vertical extent of soil and groundwater contamination on the downgradient edge of the assumed historical extent of the A&B Barrel Pond.

- MW-06D will be installed near MW-06 to characterize Alluvial Unit groundwater quality and flow direction at shoreline and around the sheet pile wall that extends into the Alluvial Unit.
- One new Fill Unit monitoring well (MW-16) will be installed to characterize Fill Unit groundwater within the former A&B Barrel building footprint, on the upgradient (west) side of the Pond Area and downgradient side of the Southwest Property Area, and for lateral characterization of soil exceedances at SB-26. One additional Alluvial Unit monitoring well will be installed to characterize Alluvial Unit groundwater in the Southwest Property Area. The default location for this well will be next to MW-16, but the location may be adjusted based on field observations during the completion of soil borings SB-35 to SB-39 (see Section 7.1.2.3 for further information).
- Soil samples will be collected approximately every 5 feet during well installation. Shallower samples will be collected to provide additional information regarding lateral and vertical delineation of contamination. Shallow soil samples will also be collected for a broader range of contaminants to re-evaluate surface soil quality with regard to potential impacts of the 2021 Fire. Deeper samples will be collected in the former Pond Area, into the Glacial Till Unit, to verify the prior exceedances in deeper soil at MW-05⁸ and delineate the bottom of contamination. A subset of shallow and deeper soil samples will be analyzed for dioxin/furans to improve the understanding of whether high dioxin/furan concentrations are limited to materials highly impacted by other potential site contaminants.
- One boring (SB-42) will be drilled in the center of the former Pond to determine the thickness of Pond Fill and the presence/absence of the Tidal Flat Unit.
- Soil logging of the deeper borings will characterize the depth to the Till Unit throughout the Pond Area to help evaluate whether the sheet pile wall might fully penetrate the Alluvial Unit.
- One round of groundwater samples will be collected from existing and newly installed wells.

7.1.2 Southwest Property Area

Contaminants exceeding screening levels in this area include PCE, PCBs, metals, TPH, SVOCs (including BEHP), and PAHs. Most borings in this area were limited to shallow depths and prior investigations were not able to access certain areas due to the presence of buildings; however, these buildings were destroyed in the 2021 Fire, improving access for the Phase 2 investigation.

Soil and groundwater data gaps remaining in the Southwest Property Area after the Phase 1 investigation are described below.

7.1.2.1 Soil Data Gaps

Soil data gaps include:

⁸ Based on the high concentrations and sheen observed in shallow soil at MW-05D, the exceedances in deeper soil may be due to carry-down.

- Vertical extent of PCBs soil contamination along the western property line. PCBs have been detected in shallow soil (Figure B.11), and at SS-38 are the highest concentrations detected on the Site (79.8 mg/kg total PCBs), but there are no saturated zone soil data along the Dallas Avenue property line (Figure B.12).
- Vertical extent of soil contamination along T117 property line. Explorations in this area have been limited to shallow hand-auger borings. Exceedances that have not been vertically defined are PCE (Figures B.13 and B.14), PCBs (Figures B.11 and B.12), zinc (Figures B.7 and B.8), Diesel- and Oil-Range TPH (Figures B.17 and B.18), lead, mercury, PCP, and cPAHs (Tables B.1 and B.2 in Appendix B).
- Surface soil quality in this area at locations previously characterized may have been affected by the 2021 Fire.
- The nature and extent of soil contamination beneath former building footprints (including the former A&B building) is unknown, as no samples have been collected here.

7.1.2.2 Groundwater Data Gaps

Groundwater data gaps include:

- Historical groundwater samples from the one well just downgradient of the Southwest Property area (MW-15: screened in the Fill Unit) contained PCBs (Figure B.24), copper (Figure B.21), and alpha-BHC concentrations above screening levels. These groundwater exceedances have not been laterally delineated to the south and west (within the Southwest Property Area). The off property/upgradient contributions to groundwater quality at the southwest corner near HA-01 need further investigation. The impact of high concentrations of PCBs in fill soil near SS-38 along Dallas Ave to Fill Unit shallow groundwater is unknown.
- Vertical extent of groundwater impacts. There are no existing Alluvial Unit groundwater wells in the Southwest Property Area. Further investigation of Alluvial Unit groundwater quality is needed.

7.1.2.3 Proposed Explorations

To fill the data gaps in the Southwest Property Area, the following work will be performed during the Phase 2 investigation, as outlined in Tables 7.1 and 7.2 and on Figure 7.1:

- Five soil borings (SB-35 to SB-39) will be completed to investigate soil beneath the former A&B Barrel building, former marina buildings destroyed in the 2021 fire, and along the south property boundary near HA-01 and HA-02. Three of these borings will target pervious surface areas. Soil sample analysis adjacent to HA-01 and HA-02 will focus on delineating the vertical extent of contamination that was not bounded at HA-01 and HA-02). A broader range of analyses will be included throughout this area due to the lack of prior characterization beneath building footprints. Shallow soil samples from the five new borings will also be analyzed to evaluate surface soil quality in the 2021 Fire Area. Similar to the Pond Area, a subset of shallow and deeper soil samples will be included for dioxin/furan analysis to improve the understanding of whether high dioxin/furan concentrations co-occur with other potential site contaminants.

- One new Fill Unit well (MW-17) will be installed near SS-38 along Dallas Avenue, to evaluate contribution to shallow groundwater from shallow PCB soil impacts and for vertical characterization of PCB soil exceedances.
- One new Alluvial Unit well (MW-18D) and one new Fill Unit well (MW-18) will be installed at the southwest corner of the Site to evaluate flow direction and vertical extent of soil and groundwater impacts near HA-01, and to evaluate upgradient groundwater chemistry in the Fill Unit and Alluvial Unit. Soil sample collection at this location will focus on delineating the vertical and lateral extent of contamination (PCBs, metals, Diesel- and Oil-Range TPH, PCP, and cPAHs that were not vertically bounded at HA-01).
- If field screening conducted during the advancement of soil borings SB-35 to SB-39 indicates a potential discrete point source of contamination, one new Alluvial Unit well will be installed near the boring location with the highest field screening indications⁹ to assess groundwater quality within the Southwest Property Area. Absent field screening indications of contamination at soil borings SB-35 to SB-37, the new Alluvial Unit well will be collocated with Fill Unit well MW-16 at the downgradient edge of the Southwest Property Area bordering the Pond Area and called MW-16D. Due to a lack of data in the Southwest Property Area where buildings were historically present, the location of the alluvial well in this area will be chosen to provide the best potential to observe any impacts to groundwater quality from the Southwest Property Area and evaluate groundwater quality upgradient of the Pond Area.
- One round of groundwater samples will be collected from newly installed wells.

7.1.3 Boat Wash and Historical Manufacturing Building Area

Contaminants exceeding screening levels in this area include PCBs, metals, PAHs, TPH, pesticides, and SVOCs. The highest exceedances were generally located near the east side of the former boat manufacturing building, near the shoreline.

Soil and groundwater data gaps remaining in the Boat Wash and Historical Manufacturing Building Area after the Phase 1 investigation are described below.

7.1.3.1 Soil Data Gaps

Soil data gaps include:

- The lateral extent of soil contamination to the west and south of SB-27 and MW-08. Multiple potential site contaminants exceeded screening levels including PCBs (Figures B.11 and B.12), copper (Figures B.5 and B.6), TBT (Figures B.9 and B.10), chromium, cPAHs (Tables B.1 and B.2 in Appendix B), BEHP (Figure B.3 and B.4), and Diesel- and Oil-Range TPH (Figures B.17 and B.18) in the vadose and saturated zones. No unsaturated soil samples were analyzed at historical boring SB-01, providing uncertainty in delineation of the relatively higher concentrations of TBT and PCBs in surface soil detected at SB-27.

⁹ If field screening indicates potential contamination, field observations and well location will be discussed with Ecology prior to installation.

- The vertical extent of soil contamination along the central shoreline in the vicinity of SB-27, MW-08, SB-01, and/or MW-07. Multiple potential site contaminants exceeded screening levels including PCBs (Figure B.12), TBT (Figure B.10), cPAHs (Tables B.1 and B.2 in Appendix B), BEHP (Figure B.4), and Diesel- and Oil-Range TPH (Figure B.18) at the maximum depths sampled.

7.1.3.2 Groundwater Data Gaps

Groundwater data gaps include:

- Vertical extent of groundwater contamination along central shoreline. PCB (Figure B.24) and pesticides (aldrin [Figure B.19] and alpha-BHC) screening level exceedances in Fill Unit groundwater at MW-08 support the need for additional groundwater data in the Alluvial Unit to understand vertical extent along the shoreline.
- Historical groundwater samples from the Alluvial Unit contained copper concentrations which exceeded screening levels (Figure B.21). There are no existing Alluvial Unit groundwater wells in the Boat Wash and Historical Manufacturing Building Area. Further investigation of Alluvial Unit groundwater quality is needed.

7.1.3.3 Proposed Explorations

To fill the data gaps in the Boat Wash and Historical Manufacturing Building Area, the following work will be performed during the Phase 2 investigation, as outlined in Tables 7.1 and 7.2 and on Figure 7.1:

- One new Alluvial Unit well (MW-08D) will be installed between Fill Unit well MW-08 and SB-27 (the area along the shoreline of highest soil impacts) to evaluate the vertical extent of groundwater and soil impacts, to characterize Alluvial Unit groundwater quality and flow direction at the shoreline, and to provide additional geologic data.
- Two soil borings will be advanced:
 - SB-40 will be installed west of SB-27 for vertical and horizontal delineation of PCBs, chromium, copper, TBT, cPAHs, BEHP, and Diesel- and Oil-Range TPH.
 - SB-41 will be installed south of SB-27 for vertical and horizontal delineation of PCBs, TBT, cPAHs, BEHP, and Diesel- and Oil-Range TPH.
- One round of groundwater samples will be collected from existing and newly installed wells.

7.1.4 Former Service Station Area

Contaminants exceeding screening levels in this area include gasoline-range TPH and related hydrocarbons, and to a lesser extent metals, PAHs, and PCBs. The highest concentrations of gasoline-range TPH were detected in the area of former tanks and fueling islands. In addition, relatively high concentrations of chlorinated VOCs (CVOCs), primarily PCE, were detected in soil and groundwater. This area is downgradient of a former off-Site dry cleaner. The concentrations of VOCs in soil and groundwater represent a potential vapor intrusion concern.

Soil, groundwater, and soil vapor data gaps remaining in the Former Service Station Area after the Phase 1 investigation are described below.

7.1.4.1 Soil Data Gaps

Soil data gaps include:

- The vertical and horizontal extent of soil contamination at MW-13 and SB-31. Multiple service-station related COCs exceeded screening levels including PAHs in the vadose zone (Table B.1 in Appendix B), and gasoline-range TPH (Figure B.16), PAHs and benzene (Table B.2 in Appendix B) in the saturated zone. In addition, potential dry-cleaner related COCs exceeded screening levels including PCE in the vadose zone (Figure B.13), and PCE (Figure B.14), TCE, and vinyl chloride (Table B.2 in Appendix B) in the saturated zone.
- The lateral extent of copper and zinc in vadose zone soil to the north of SB-31 (Figure B.5 and B.7) and mercury and nickel in vadose zone soil to the west of SB-30 (Table B.1 in Appendix B).

7.1.4.2 Groundwater Data Gaps

Groundwater data gaps include:

- Lateral and vertical extent of PCE, copper, and gasoline-range TPH- in Fill Unit groundwater at MW-13. These groundwater exceedances have not been laterally delineated to the north and west (upgradient). There are no Alluvial Unit groundwater wells in the Former Service Station Area to provide vertical delineation.
- Groundwater at MW-13 contains PCE. A former dry cleaner is just upgradient of this well, off Site. Determining whether the dry cleaner is a source of PCE contamination migrating onto the Site represents a data gap. Further evaluation of potential contribution of VOCs from the off-Site dry cleaner is warranted.

7.1.4.3 Soil Vapor Data Gaps

Soil vapor data gaps include:

- CVOC vapor intrusion in the former service station/tire shop building. High concentrations of CVOCs in soil and groundwater indicate a risk of vapor intrusion.
- Potential for petroleum impacts to soil vapor. The former service station/tire shop building is within the vertical separation distance for petroleum vapor intrusion recommended by Ecology. Concentrations of gasoline-range TPH in saturated soil at boring SB-31 indicate a potential vapor intrusion risk.

7.1.4.4. Proposed Explorations

To fill the data gaps in the Former Service Station Area, the following work will be performed during the Phase 2 investigation, as outlined in Tables 7.1 and 7.2 and on Figure 7.1:

- One new Alluvial Unit well (MW-13D) will be installed and collocated with existing Fill Unit well MW-13 to characterize Alluvial Unit groundwater quality and to evaluate potential vertical migration from the Fill Unit to the Alluvial Unit, and to characterize the vertical extent of soil exceedances at nearby SB-31 and

MW-13. The boring will be drilled to approximately 40 feet bgs. Soil samples will be collected from the well boring to characterize the vertical extent of contamination.

- Two new Fill Unit wells (MW-20 and MW-21) will be installed as follows:
 - MW-20 will be installed off Site across Dallas Avenue, west of MW-13 to characterize: Fill Unit groundwater quality on the upgradient (west) side of the Former Service Station; and the lateral characterization of soil exceedances at SB-31, MW-13, and SB-30. These samples will help evaluate any potential contribution of PCE from the former dry cleaner.
 - MW-21 will be installed off Site across Thistle St., north of MW-13 to characterize Fill Unit groundwater quality and to evaluate the extent of gasoline-range TPH, and for lateral characterization of soil exceedances at SB-31, MW-13, and SB-30.
- One soil boring (MW-22) will be drilled downgradient (east) of MW-13 and SB-31. If field observations suggest that this boring is clean,¹⁰ the boring will be completed as a Fill Unit well. If field observations indicate that this boring is impacted, a well will not be installed at that location. Rather, a step-out boring will be placed further downgradient, and the step-out boring will be completed as a Fill Unit well.
- One round of groundwater samples will be collected from existing and newly installed wells.
- A vapor intrusion investigation will be performed in the former service station/tire shop as follows:
 - Plan and conduct a site visit for chemical inventory and meeting with building tenant before determining where soil gas samples will be collected. The target area for soil gas sampling is shown on Figure 7.1.
 - Collection of two soil gas samples beneath former service station building.
 - Indoor air will be sampled, if necessary, based on soil gas results:
 - If Phase 2 soil gas results in the vicinity of the former service station/tire shop exceed VI screening levels (adjusted for commercial use), and the chemicals exceeding VI screening levels are not identified as being used or a component of substances used at the business, then indoor air samples will be collected to evaluate this pathway.
 - If groundwater sampling from Fill Unit wells indicates the potential for groundwater VI screening level exceedances beneath other structures on the SPM Property, then soil gas sampling and/or indoor air sampling will be conducted to evaluate this pathway.

¹⁰ Field determinations of “clean” vs. “impacted” soil are described in the SAP/QAPP (Appendix C). In general, field observations of heavy sheen, product, or PID readings greater than 15 ppm will be indicators of “impacted” borings.

7.1.5 Boat Maintenance Area

Contaminants exceeding screening levels in this area include PCBs, pesticides, TPH, and metals. Exceedances are generally low and sporadically located across the Boat Maintenance Area.

Soil and groundwater data gaps remaining in the Boat Maintenance Area after the Phase 1 investigation are described below.

7.1.5.1 Soil Data Gaps

Soil data gaps include:

- The concentration of pesticides in soils (vadose and saturated zones), especially around MW-11. One groundwater sample from MW-11 exceeded the screening levels for aldrin (Figure B.19), but the pesticide dataset for soil is limited to only one surface soil sample in the entire Boat Maintenance Area (Figures B.1 and B.2).
- The lateral extent of PCB contamination in vadose and saturated zone soil, to the north of MW-11 (Figures B.11 and B.12).
- The lateral extent of gasoline-, diesel-, and oil-Range TPH, TBT, zinc, and copper soil contamination in vadose zone soil to the north of MW-11 (Figures B.15, B.16, B.9, B.7, and B.5).
- The vertical extent of PCB and VOC contamination near MW-11.

7.1.5.2 Groundwater Data Gaps

Groundwater data gaps include:

- Fill Unit groundwater quality along shoreline. Two of three shoreline wells (MW-09 and MW-10) yielded limited volume at the time of Phase 1 sampling, so there are no PCB, metals, or pesticides groundwater data for these wells. There are PCB (Figure B.11) and copper (Figure B.5) exceedances in vadose zone soil upgradient of these wells, and PCB (Figure B.24), aldrin (Figure B.19) and copper (Figure B.21) exceedances in Fill Unit groundwater to the north of these wells at MW-11.
- The Fill Unit water bearing zone contains PCBs (Figure B.24), aldrin (Figure B.19) and copper concentrations (Figure B.21) above screening levels along the shoreline at MW-11. Groundwater exceedances have not been laterally delineated to the north of MW-11.
- The Fill Unit water bearing zone contains PCE (Figure B.25) concentrations above screening levels along the shoreline at MW-09. These groundwater exceedances have not been laterally delineated to the west (upgradient of shoreline) and it is unknown whether the PCE exceedance in the Fill Unit water bearing zone at MW-09 is connected to the exceedance in Fill Unit water bearing zone at MW-13 in the northwest corner of the Former Service Station area.
- There are no Alluvial Unit groundwater wells in the Boat Maintenance Area. Given PCB, pesticides, and PCE exceedances at MW-11 and/or MW-09, further investigation of Alluvial Unit groundwater quality is needed.

7.1.5.3 Proposed Explorations

To fill the data gaps in the Boat Maintenance Area, the following work will be performed during the Phase 2 investigation, as outlined in Tables 7.1 and 7.2 and on Figure 7.1:

- One Alluvial Unit well (MW-11D) will be installed near MW-11 for spatial distribution, delineation of soil and groundwater contamination, and Alluvial groundwater unit characterization. Based on the sporadic nature of groundwater in the Fill Unit along the shoreline,¹¹ groundwater delineation in this area will focus on Alluvial Unit groundwater.
- One new Alluvial Unit well (MW-09D) will be installed and collocated with Fill Unit well MW-09. MW-09D will be installed just south of MW-09 to evaluate the vertical extent of groundwater impacts, to characterize Alluvial Unit groundwater quality and flow direction at the shoreline, and to provide additional geologic data. This location was chosen based on the exceedances of PCE and the depressed groundwater elevations observed in the Fill Unit at MW-09.
- One new Alluvial Unit well (MW-19D) and one new Fill Unit well (MW-19) will be installed between MW-13 and MW-09 (near SB-33) to evaluate the potential migration of PCE between these two wells, as well as the vertical and horizontal delineation of TPH and cPAHs identified in shallow soil at SB-33. Groundwater quality in the Fill Unit at MW-12, MW-14, and MW-15 was of similar quality during Phase 1 of the RI; therefore, the location of an Alluvial Unit well within the boat maintenance area was paired with Fill Unit well MW-19 based on spatial distribution (within the interior of the SPM Property) and the greatest potential to assess whether a preferential flowpath exists between MW-13 and MW-09 in both units.
- Five hand augers (HA-03 through HA-07) will be completed throughout the boat maintenance area to evaluate TBT and pesticides in surface soil (0 to 1 foot bgs). Additionally, samples will be collected from 2 to 3 feet bgs at these locations and archived for potential vertical delineation of surface soil samples.
- One round of groundwater samples will be collected from existing and newly installed wells. Groundwater from Fill Unit wells MW-09 and MW-10 will be sampled during sequential higher tide cycles to maximize potential volume. If limited volume is experienced, sampling will be conducted on successive days to obtain enough sample volume for analysis of a full suite of chemicals.
- Soil samples will be collected during well installation to further delineate the lateral and vertical extent of contaminants detected above screening levels in this area (PCBs, pesticides, gasoline-, diesel-, and oil-Range TPH, TBT, zinc, and copper).
- If groundwater sampling from Fill Unit wells indicates the potential for groundwater VI screening level exceedances beneath residential structures on the SPM Property, then soil gas sampling and/or indoor air sampling would be conducted to evaluate this pathway.

¹¹ Based on the available data, the transitional zone groundwater along the shoreline is present only at higher tidal stages.

7.1.6 Site-Wide Data Needs

The following Site-wide, non-area specific data gaps remain after the Phase 1 investigation:

- Site-wide groundwater flow/tidal response characterization of the Fill and Alluvial Units
- Seasonality of groundwater quality
- Variability in stormwater and catch basin solids concentrations

To fill these data gaps, the following work will be performed during the Phase 2 investigation:

- Installation of ten new Alluvial Unit and seven new Fill Unit monitoring wells, as described in the previous area-specific sections.
- Water level monitoring from all new and existing monitoring wells
- A tidal study will be performed on all wells, including installation of transducers that continuously log head, electrical conductivity (EC), and temperature. A transducer will also be sited in a stilling well in the LDW.
- One round of groundwater sampling will be performed during the dry season and will include wells that were previously installed and sampled during the wet season in Phase 1. If concentrations in groundwater along the shoreline in the new Alluvial Unit wells exceed screening levels, sampling of seeps or porewater downgradient of Alluvial Unit wells may be proposed.
- One additional round of stormwater and catch basin solids samples will be collected, at the same locations that were sampled in Phase 1, and analyzed for LDW COCs. Additionally, a sample of StormwaterRx effluent will be collected and analyzed for LDW COCs.

7.2 Summary of Phase 2 Tasks

Phase 2 field investigation activities including exploration objectives, depths, and target analytes, are summarized in Table 7.1 (soil, soil gas, and catch basin solids) and 7.2 (groundwater and stormwater). Figure 7.1 depicts proposed Phase 2 exploration locations.

Details on the methods and protocols for conducting the Phase 2 investigation, including field procedures, specific intervals and analyses for soil sampling including archiving, techniques and quality assurance/quality control procedures to be employed for collecting reliable data, are described in the Phase 2 Sampling and Analysis Plan/Quality Assurance Project Plan (SAP/QAPP; Appendix C). The Site-specific Health and Safety Plan that Aspect field personnel will follow during the Phase 2 data collection work is in Appendix F of the RI Work Plan. RI Work Plan Appendix G presents the Archaeological Monitoring and Inadvertent Discovery Plan providing notification procedures to follow if potential cultural resources or human skeletal remains are discovered during subsurface investigations.

8 Schedule

The schedule for field work will depend on the approval date of this Work Plan Addendum and contractor availability. Table 8.1 presents a summary of the estimated dates for upcoming project milestones in accordance with the AO based on an estimated duration of field work and Ecology reviews. This schedule includes time for one round of archive sample analysis (approximately 6 weeks).

Table 8.1. Project Milestones and Estimated Dates

Milestone	Estimated Date
Final Work Plan Addendum Issued & Approval ¹²	August 26, 2022
Phase 2 Field Work	September 12 to November 1, 2022
Agency Review Draft RI to Ecology (approximately 135* days after validation of data is complete)	July 16, 2023*
Agency Review Draft Final RI to Ecology	October 8, 2023*
Public Comment Period	October 8 to December 18, 2023*
Final RI to Ecology	January 28, 2024*

*RI dates will be re-evaluated after Phase 2 data are received and are subject to change.

Phase 2 field work includes sample collection, analysis, data validation, and submittal of data to EIM. Phase 2 field work will begin within 30 days of RI Work Plan Addendum approval by Ecology, in accordance with the AO.

¹² Final Work Plan Addendum approval date assumes 28 days for Ecology review of this Draft Work Plan Addendum and 5 days for Ecology review and approval of the Final Work Plan Addendum.

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10 Report Limitations and Guidelines for Use

Work for this project was performed for the Port of Seattle, City of Seattle, and South Park Marina (collectively the Client), and this report was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This report does not represent a legal opinion. No other warranty, expressed or implied, is made.

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Please refer to Appendix D titled "Report Limitations and Guidelines for Use" for additional information governing the use of this report.

TABLES

Table 5.1. Summary of RI Screening Level Exceedances

Project No. 190293, South Park Marina, Seattle, Washington

	Media:	Groundwater	Vadose Soil (0-6 ft bgs)	Saturated Soil (6+ ft bgs)	Catch Basin Solids	Stormwater
Metals	Arsenic	X (T,D)	X	X		X (T,D)
	Barium			X		
	Cadmium		X	X	X	
	Chromium	X (T)	X	X	X	
	Copper	X (T,D)	X	X	X	X (T,D)
	Lead		X	X	X	X (T)
	Mercury		X	X	X	
	Nickel	X (T,D)	X	X		
	Silver			X		
	Zinc	X (T,D)	X	X	X	X (T,D)
Org. Metals	Tributyltin Ion		X	X		X
PCBs	Total PCB Aroclors (ND=1/2 RDL)	X	X	X	X	X
	Total PCBs (Sum of Aroclors)	X	X	X	X	X
	Total PCB Congeners	X	X	X		X
	Total PCB TEQ (ND = 0)	X	X	X		X
	Total PCB TEQ (ND = 1/2 RDL)	X	X	X		X
Dioxins/Furans	Total Dioxin/Furan TEQ (ND = 0)		X	X		X
	Total Dioxin/Furan TEQ (ND = 1/2 RDL)		X	X		X
PAHs	2 Methylanthracene		X	X	X	
	Acenaphthene			X		
	Anthracene			X		
	Benz(a)anthracene	X			X	X
	Benzo(a)pyrene	X	X	X	X	X
	Benzo(b)fluoranthene	X				X
	Benzo(g,h,i)perylene				X	
	Benzo(k)fluoranthene					X
	Chrysene				X	X
	Dibenzo(a,h)anthracene				X	X
	Fluoranthene			X	X	
	Fluorene		X	X	X	
	Indeno(1,2,3 cd)pyrene	X			X	X
	Naphthalene		X	X	X	X
	Phenanthrene			X	X	
	Pyrene			X	X	
	Total Benzo(a)fluoranthenes				X	
	Total cPAHs TEQ (ND = 0)		X	X		X
	Total cPAHs TEQ (ND = 1/2 RDL)		X	X		X
	Total HPAHs				X	
Total LPAHs				X		
Other SVOCs	2,4 Dimethylphenol			X		
	2,4 Dinitrophenol			X		
	2 Methylphenol		X			
	4 Methylphenol				X	
	Benzoic acid			X	X	
	Benzyl alcohol		X		X	
	Benzyl butyl phthalate		X	X	X	X
	Bis(2 ethylhexyl) phthalate	X	X	X	X	X
	Dibenzofuran			X		
	Diethyl phthalate		X	X		
	Dimethyl phthalate		X	X	X	
	Di n butyl phthalate		X		X	
	Hexachlorobenzene			X		
	Hexachlorobutadiene			X		
	Hexachloroethane		X			
	Isophorone		X	X		
	N Nitrosodiphenylamine		X	X		
	Pentachlorophenol		X	X	X	X
	Phenol				X	
	Pesticides/Herbicides	4,4' DDD		X	X	
4,4' DDE			X	X		
4,4' DDT		X	X	X		
Aldrin		X	X	X		
Alpha BHC		X		X		
cis Chlordane				X		
Dieldrin		X	X	X		
Endrin Aldehyde				X		
Heptachlor				X		
trans Chlordane		X	X	X		
1,2 Dichlorobenzene			X	X		
1,3 Dichlorobenzene				X		
1,4 Dichlorobenzene				X		
Benzene		X	X			
Bromomethane			X			
Ethylbenzene		X	X			
Methylene Chloride			X			
Tetrachloroethene (PCE)	X	X	X			
Toluene		X				
Total Xylenes			X			
Trichloroethene (TCE)	X	X	X			
Vinyl Chloride	X	X	X			
TPHs	Gasoline Range Organics	X	X	X		
	Diesel Range Organics	X	X	X		
	Motor Oil Range Organics	X	X	X		X
	Diesel and Oil Extended Range Organics	X	X	X		X

Notes:

X = screening level was exceeded for one or more detected samples

blank = no detected results exceeded the screening level, analyte was not analyzed, or there is no screening level for the analyte/matrix

Table 7.1. Proposed Phase 2 Field Investigation Sampling Matrix - Soil, Soil Gas, and Catch Basin Solids
 Project No. 190293, South Park Marina, Seattle, Washington

Investigation Area	Exploration	Matrix	Proposed Easting / Northing ⁽¹⁾		Planned Exploration Depth ⁽²⁾ (ft bgs)	Objective(s)	Analyses											
							Metals ⁽³⁾	TBT	TPH	VOCs	SVOCs	Low-Level PAHs (SIM)	Organochlorine Pesticides	Aroclors	Congeners ⁽⁴⁾	Dioxins / Furans ⁽⁵⁾		
Former A&B Barrel Pond Area	MW-04D	Soil	1275109	195752	30	Assess surface soil to characterize direct contact pathways and characterize changes to surface soil quality from fire and evaluation of D/F. Vertical delineation of PCB exceedances at MW-04.	x	x	x	x	x	x	x	x				
						Horizontal delineation of deeper metals, PAHs, pesticides, and PCB exceedances at MW-05.	x					x	x	x				
	MW-05D	Soil	1275104	195776	40	Assess surface soil to characterize direct contact pathways and characterize changes to surface soil quality from fire and evaluation of D/F. Collect and analyze additional samples in the alluvial/Till layers of MW-05D to confirm previous exceedances in alluvium and Till at MW-05 to rule out potential cross contamination issue.	x	x	x	x	x	x	x	x				
						Assess vertical extent of former pond and vertical delineation of metals, TBT, pesticide, and PCB exceedances at MW-05.	x	x					x	x				
	MW-06D	Soil	1275105	195786	30	Assess surface soil to characterize direct contact pathways and characterize changes to surface soil quality from fire and evaluation of D/F. Vertical delineation of pesticide and VOC exceedances at MW-06.	x	x	x	x	x	x	x	x				
						Horizontal delineation of deeper metals, PAHs, pesticides, and PCB exceedances at MW-05.	x					x	x	x				
MW-16 ⁽⁶⁾	Soil	1275065	195739	30	Assess surface soil to characterize direct contact pathways and characterize changes to surface soil quality from fire and evaluation of D/F.	x	x	x	x	x	x	x	x					
SB-42	Soil	1275093	195762	10	Lateral extent of PCB, SVOC, pesticide, and VOC exceedances at SB-26.				x	x	x	x	x					
TBD ⁽⁶⁾	Soil	TBD	TBD	30	Assess thickness of Pond Fill; lateral extent of exceedances.				x	x	x	x	x					
					Nature and extent of contamination beneath former building footprints and in fire area.	x	x	x	x	x	x	x	x					
Southwest Property Area	SB-35 ⁽⁶⁾	Soil	1275048	195686	20	Nature and extent of contamination beneath former building footprints and in fire area.	x	x	x	x	x	x	x					
						Lateral delineation of metals, TBT, PCB, SVOC, PAHs, TPH, and VOC exceedances at HA-01 and HA-02.	x	x	x	x	x	x	x					
	SB-36 ⁽⁶⁾	Soil	1275072	195707	20	Vertical delineation of metals, PCB, TPH, and VOC exceedances at HA-02.	x	x	x	x	x	x	x					
	SB-37 ⁽⁶⁾	Soil	1275035	195708	20	Nature and extent of contamination beneath former building footprints and in fire area.	x	x	x	x	x	x	x					
	SB-38 ⁽⁶⁾	Soil	1275002	195688	20	Nature and extent of contamination beneath former building footprints and in fire area.	x	x	x	x	x	x	x					
	SB-39 ⁽⁶⁾	Soil	1275046	195742	20	Nature and extent of contamination beneath former building footprints and in fire area.	x	x	x	x	x	x	x					
	MW-17	Soil	1274862	195724	20	Vertical delineation of PCB exceedances at SB-38 and characterization of surface soil for other Site COPCs.	x	x	x	x	x	x	x					
					Characterize saturated soil conditions on western edge of property, upgradient of groundwater metals, PCB, and pesticide exceedances at MW-15.	x					x	x	x					
MW-18	Soil	1275045	195656	15	Lateral delineation of metals, TBT, PCB, PAH, SVOC, and TPH exceedances at HA-01.	x	x	x	x	x	x	x						
					Characterize saturated soil conditions on upgradient edge of property and near historical results from HA-01.	x	x	x	x	x	x	x						
MW-18D	Soil	1275041	195651	30	Vertical delineation of metals, PCB, PAH, SVOC, and TPH exceedances at HA-01.	x	x	x	x	x	x	x						
					Confirm top of glacial till in SW property corner.													
Boat Wash and Historical Boat Manufacturing Area	SB-40	Soil	1274962	195836	20	Lateral delineation of metals, TBT, PCB, SVOC, PAH, and TPH exceedances at SB-27 and MW-08.	x	x	x	x	x	x	x					
	SB-41	Soil	1275017	195862	20	Lateral delineation of TBT, PCB, PAH, SVOC, and TPH exceedances at SB-27.	x	x	x	x	x	x	x					
	MW-08D	Soil	1274991	195883	20	Vertical delineation of metals, TBT, SVOC, PAH, and TPH exceedances at SB-27 and MW-08.	x	x	x		x	x	x					
Former Service Station Area	MW-13D	Soil	1274517	195888	40	Characterize pesticides in vadose zone at upgradient portion of Property.							x					
						Vertical delineation of TPH and VOC exceedances at SB-31 and MW-13.			x	x								
	MW-20	Soil	1274521	195851	20	Lateral extent of metals, PCB, PAH, TPH, and VOC exceedances at MW-13 and SB-30, including contribution of VOCs from off-site dry cleaner.	x		x	x		x						
	MW-21	Soil	1274482	195911	20	Lateral extent of metals, PCB, PAH, TPH, and VOC exceedances at SB-31.	x		x	x		x						
	MW-22	Soil	1274531	195938	20	Lateral extent of metals, PCB, PAH, TPH, and VOC exceedances at SB-31 and MW-13.	x		x	x		x						
SG-1, SG-2	Soil gas	TBD	TBD	Sub-slab	Assess CVOC and petroleum vapor intrusion in tire shop/service station.			x (APH)	x									
Boat Maintenance Area	HA-03	Soil	1274816	195828	3	Spatial distribution to assess surface soil quality for TBT and pesticides.			x				x					
	HA-04	Soil	1274880	195850	3	Spatial distribution to assess surface soil quality for TBT and pesticides.			x				x					
	HA-05	Soil	1274822	195977	3	Spatial distribution to assess surface soil quality for TBT and pesticides.			x				x					
	HA-06	Soil	1274713	196004	3	Spatial distribution to assess surface soil quality for TBT and pesticides.			x				x					
	HA-07	Soil	1274684	196116	3	Spatial distribution to assess surface soil quality for TBT and pesticides.			x				x					
	MW-09D	Soil	1274884	195979	25	Characterize saturated zone near MW-09 (previously uncharacterized).	x	x	x	x	x	x	x					
	MW-11D	Soil	1274618	196226	25	Lateral delineation of metals, TBT, PCB, PAH, SVOC, and TPH exceedances in surface soil at MW-11.	x	x	x	x	x	x	x					
						Vertical delineation of PCB and VOC exceedances in at MW-11.			x	x		x	x					
	MW-19	Soil	1274702	195917	20	Assess surface soil to characterize direct contact pathways based on metals, TBT, PCB, PAH, SVOC, and TPH exceedances in surface soil at SB-33 and SB-34.	x	x	x	x	x	x	x					
					Assess pesticides in surface soil for previously uncharacterized portion of Property							x						
					Characterize saturated zone soil in central portion of boat maintenance area between SB-33 and SB-34.	x	x	x	x	x	x	x						
MW-19D	Soil	1274703	195905	25	Assess surface soil to characterize direct contact pathways based on metals, TBT, PCB, PAH, SVOC, and TPH exceedances in surface soil at SB-33 and SB-34. Assess pesticides in surface soil in previously uncharacterized portion of the property.	x	x	x	x	x	x	x						
					Characterize saturated zone soil in central portion of boat maintenance area between SB-33 and SB-34.	x	x	x	x	x	x	x						
Catch Basin Solids	CB-02	Catch Basin Solids	1274675	196004	--	Assess erodible soil to characterize transport to stormwater-to-surface water sediment pathways, since 2021 fire, and analyze for LDW COCs.	x*				x*	x					x	
	CB-06	Catch Basin Solids	1274787	195957	--	Assess erodible soil to characterize transport to stormwater-to-surface water sediment pathways, since 2021 fire, and analyze for LDW COCs.	x*				x*	x					x	
	SWRX-Pre	Catch Basin Solids	1275080	195804	--	Assess erodible soil to characterize transport to stormwater-to-surface water sediment pathways, since 2021 fire, and analyze for LDW COCs.	x*				x*	x					x	

Notes:
 (1) - These are approximate locations for planning purposes. Actual soil boring locations will be documented using a hand-held GPS unit during field work. Actual well locations will be surveyed by a licensed surveyor upon completion. Coordinates provided in NAD83 State Plan Washington North, feet.
 (2) - Specific targeted depth intervals for sample collection, analysis, and archival can be found in Table C.2 of the SAP/QAPP.
 (3) - Metals - As, Cd, Cu, Cr, Pb, Hg, Ni, Zn. Metals to be analyzed in catchbasin solids samples are As, Cd, Cu, Cr, Pb, Hg, and Zn only.
 (4) - One archive sample each from Former Pond Area, Southwest Property Area, Boat Wash Area, and Boat Maintenance Area will be selected for PCB congener analysis based on initial PCB Aroclor results. At each of these four Investigation Areas, only one soil sample from the depth with the highest Aroclor results will be submitted for congener analysis. If not detected, samples for analysis will be selected from locations based on Site history including historical PCB data. Additional samples may be collected and archived.
 (5) - At the Former Pond Area and Southwest Area, three surface soil samples will be selected in each of these two areas for dioxin/furan analysis as follows: (1) one surface soil sample from the location and depth with the highest chlorinated PCB concentrations (2) one surface soil sample with the lowest detected chlorinated PCB concentration, and (3) one subsurface soil sample with the highest chlorinated PCB concentration will be submitted for dioxin/furan analysis. In the remaining three Investigation Areas, two surface soil samples will be selected from each of the three areas for dioxin/furan analysis from the location with the highest and lowest chlorinated PCB concentrations detected above the reporting limit.
 (6) - If field screening conducted during the advancement of soil borings SB-35 to SB-39 indicates a potential discrete point source of contamination, one new Alluvial Unit well will be installed near the boring location with the highest field screening indications to assess groundwater quality within the Southwest Property Area. Absent of field screening indications of contamination at soil borings SB-35 to SB-37, the new Alluvial Unit well (MW-16D) will be installed collocated with Fill Unit well MW-16 in the Former A&B Barrel Area.

TPH - total petroleum hydrocarbons, including gasoline-, diesel-, and oil-ranges
 VOCs - volatile organic compounds
 SVOCs - semivolatile organic compounds
 CVOCs - chlorinated volatile organic compounds
 PAHs - polycyclic aromatic hydrocarbons
 PCBs - polychlorinated biphenyls
 TBT - tributyl tin
 APH - air-phase hydrocarbons
 See Appendix C for additional details on sampling protocol, procedures, and analytical methods.
 * Metals to be analyzed in catchbasin solids samples are As, Cd, Cu, Cr, Pb, Hg, and Zn. SVOCs to be analyzed in catch basin solids samples are LDW COCs, as listed in Table 4 of the Source Control Review Memorandum (Aspect 2022), only.

Table 7.2. Proposed Phase 2 Field Investigation Sampling Matrix - Groundwater and Stormwater

Project No. 190293, South Park Marina, Seattle, Washington

Investigation Area	Exploration	Groundwater Unit	Proposed Easting / Northing ⁽¹⁾	Planned Exploration Depth (ft bgs)	As-Built or Planned Screen Interval (ft bgs) ⁽²⁾	Objective(s)	Analyses											
							Metals ⁽³⁾	Tributyl Tin	TPH	VOCs	SVOCs	Low-Level PAHs (SIM)	Organochlorine Pesticides	PCBs		Dioxins / Furans		
														Aroclors	TSS			
Former A&B Barrel Pond Area	MW-04	Fill	1275106	195755	--	6-11	Seasonal variation in groundwater quality, targeting dry season	x	x	x	x	x	x	x	x	x	x	
	MW-04D	Alluvial	1275109	195752	30	15.5-20.5	Current alluvium groundwater quality, best available detection limits; Groundwater flow around sheetpile wall (collocated with MW-04). Leaching of former pond contamination to groundwater and migration from pond area and groundwater-to-surface water sediment pathway.	x	x	x	x	x	x	x	x	x	x	
	MW-05	Fill	1275103	195772	--	4.5-9.5	Seasonal variation in groundwater quality, targeting dry season	x	x	x	x	x	x	x	x	x	x	x
	MW-05D	Alluvial	1275104	195776	40	14-19	Current alluvium groundwater quality, best available detection limits; Groundwater flow around sheetpile wall (collocated with MW-04). Leaching of former pond contamination to groundwater and migration from pond area and groundwater-to-surface water sediment pathway.	x	x	x	x	x	x	x	x	x	x	
	MW-06*	Fill	1275103	195787	--	3.5-8.5	Seasonal variation in groundwater quality, targeting dry season	x	x	x	x	x	x	x	x	x	x	x
	MW-06D*	Alluvial	1275105	195786	30	14-19	Current alluvium groundwater quality, best available detection limits; Groundwater flow around sheetpile wall (collocated with MW-04). Leaching of former pond contamination to groundwater and migration from pond area and groundwater-to-surface water sediment pathway.	x	x	x	x	x	x	x	x	x	x	
	MW-16	Fill	1275065	195740	20	3.5-8.5	Lateral extent of groundwater contamination upgradient of the Former A&B Barrel Pond.	x	x	x	x	x	x	x	x	x	x	
TBD ⁽⁴⁾	Alluvial	TBD	TBD	30	15-20	Vertical extent of groundwater contamination; lateral extent of groundwater contamination downgradient of Southwest Property Area and upgradient of the Former A&B Barrel Pond.	x	x	x	x	x	x	x	x	x	x		
Southwest Property Area	MW-17	Fill	1274862	195724	20	6.5-11.5	Groundwater quality in Fill Unit along western property line	x	x	x	x	x	x	x	x	x	x	
	MW-18	Fill	1275045	195656	15	6.5-11.5	Groundwater quality in Fill Unit at SW property corner	x	x	x	x	x	x	x	x	x	x	
	MW-18D	Alluvial	1275041	195651	30	20-25	Groundwater quality in Alluvial Unit at SW property corner	x	x	x	x	x	x	x	x	x	x	
Boat Wash and Historical Boat Manufacturing Area	MW-07*	Fill	1275052	195833	--	4-9	Seasonal variation in groundwater quality. Resample wells sampled in Phase 1. Target dry season. Assess the groundwater-to-surface water sediment pathway.	x	x	x	x	x	x	x	x	x	x	
	MW-08*	Fill	1274977	195901	--	7-12	Seasonal variation in groundwater quality, targeting dry season	x	x	x	x	x	x	x	x	x	x	
	MW-08D*	Alluvial	1274991	195883	20	14-19	Vertical extent of groundwater contamination in Alluvial Unit along shoreline and groundwater-to-surface water sediment pathway.	x	x	x	x	x	x	x	x	x	x	
Boat Maintenance Area	MW-09*	Fill	1274877	195985	--	4.5-9.5	Seasonal variation in groundwater quality, targeting dry season. Collect sufficient sample volume over potentially multiple tide cycles for analysis of all analyte classes.	x	x	x	x	x	x	x	x	x	x	
	MW-09D*	Alluvial	1274884	195979	20	14-19	Vertical extent of groundwater contamination in Alluvial Unit along shoreline and groundwater-to-surface water sediment pathway.	x	x	x	x	x	x	x	x	x	x	
	MW-10*	Fill	1274735	196116	--	5-10	Seasonal variation in groundwater quality, targeting dry season. Collect sufficient sample volume over potentially multiple tide cycles for analysis of all analyte classes.	x	x	x	x	x	x	x	x	x	x	
	MW-11*	Fill	1274632	196211	--	5-10	Seasonal variation in groundwater quality, targeting dry season. Collect sufficient sample volume over potentially multiple tide cycles for analysis of all analyte classes.	x	x	x	x	x	x	x	x	x	x	
	MW-11D*	Alluvial	1274618	196226	25	20-25	Assess current Alluvial Unit groundwater quality at north end of SPM Property.	x	x	x	x	x	x	x	x	x	x	
	MW-12	Fill	1274617	196055	--	7-12	Seasonal variation in groundwater quality, targeting dry season	x	x	x	x	x	x	x	x	x	x	
	MW-14	Fill	1274743	195834	--	10.5-15.5	Seasonal variation in groundwater quality, targeting dry season	x	x	x	x	x	x	x	x	x	x	
	MW-15	Fill	1274881	195789	--	8-13	Seasonal variation in groundwater quality, targeting dry season	x	x	x	x	x	x	x	x	x	x	
	MW-19	Fill	1274702	195917	20	4-9	Fill Unit groundwater quality upgradient of shoreline, between MW-9 and MW-13. Assess potential PCE connection/migration between MW-13 and MW-09.	x	x	x	x	x	x	x	x	x	x	
MW-19D	Alluvial	1274703	195905	30	15-20	Alluvial Unit groundwater quality in the central portion of the Boat Maintenance Area. Assess potential PCE connection/migration between MW-13D and MW-09D.	x	x	x	x	x	x	x	x	x	x		
Former Service Station Area	MW-13	Fill	1274529	195882	--	10-15	Seasonal variation in groundwater quality, targeting dry season	x	x	x	x	x	x	x	x	x	x	
	MW-13D	Alluvial	1274517	195888	40	23-28	Vertical extent of groundwater contamination	x	x	x	x	x	x	x	x	x	x	
	MW-20	Fill	1274521	195851	20	10-15	Fill Unit groundwater quality - assess contribution of VOCs from off-site dry cleaner, lateral extent of groundwater contamination	x	x	x	x	x	x	x	x	x	x	
	MW-21	Fill	1274482	195911	20	10-15	Fill Unit groundwater quality - assess contribution of VOCs from off-site dry cleaner, lateral extent of groundwater contamination	x	x	x	x	x	x	x	x	x	x	
	MW-22	Fill	1274531	195938	20	10-15	Fill Unit groundwater quality - assess contribution of VOCs from off-site dry cleaner, lateral extent of groundwater contamination	x	x	x	x	x	x	x	x	x	x	
Stormwater	CB-02	--	1274675	196004	--	--	Evaluate the stormwater-to-surface water sediment pathway, since 2021 fire, and analyze for LDW COCs.	x**				x**	x		x	x		
	CB-06	--	1274787	195957	--	--	Evaluate the stormwater-to-surface water sediment pathway, since 2021 fire, and analyze for LDW COCs.	x**				x**	x		x	x		
	SWRX-Pre	--	1275080	195804	--	--	Evaluate the stormwater-to-surface water sediment pathway, since 2021 fire, and analyze for LDW COCs.	x**				x**	x		x	x	x	
	SWRX-Post	--	1275061	195805	--	--	To demonstrate removal efficiency of the system for LDW COCs.	x**				x**	x		x	x		

Notes:
 (1) - These are actual locations for existing wells and approximate locations for Phase 2 wells for planning purposes. Actual well locations will be surveyed by a licensed surveyor upon completion. Coordinates provided in NAD83 State Plan Washington North, feet.
 (2) - As-built well screen intervals are listed for existing wells (gray shading). Planned well screen intervals are listed for proposed wells (white), and will be adjusted based on the observed stratigraphic units at the time of drilling. Fill Unit monitoring wells will be screened from 5 feet above to the top of the Tidal Flat Unit. Alluvial Unit monitoring wells will be screened from 2 to 7 feet below the bottom of the Tidal Flat Unit. Well screen intervals may be adjusted to match well screen intervals for other nearby monitoring wells within the same unit. E.g., the screen at MW-06D may be adjusted downwards greater than 2 feet below the bottom of the Tidal Flat Unit to match the screen interval for MW-05D.
 (3) - Metals - As, Cd, Cu, Cr, Pb, Hg, Ni, Zn. For groundwater, metals samples will be collected for both total and dissolved concentrations. Metals to be analyzed in stormwater samples are As, Cd, Cu, Cr, Pb, Hg, and Zn only.
 (4) - If field screening conducted during the advancement of soil borings SB-35 to SB-39 indicates a potential discrete point source of contamination, one new Alluvial Unit well will be installed near the boring location with the highest field screening indications to assess groundwater quality within the Southwest Property Area, and called MW-23D. Absent of field screening indications of contamination at soil borings SB-35 to SB-39, the new Alluvial Unit well (MW-16D) will be installed collocated with Fill Unit well MW-16.
 TPH - total petroleum hydrocarbons, including gasoline-, diesel-, and oil-ranges
 VOCs - volatile organic compounds
 SVOCs - semivolatile organic compounds
 CVOCs - chlorinated volatile organic compounds
 PAHs - polycyclic aromatic hydrocarbons
 PCBs - polychlorinated biphenyls
 TBT - tributyl tin
 TSS - total suspended solids
 One round of groundwater sampling is proposed. See Appendix C for additional details on sampling protocol, procedures, and analytical methods.
 Gray shading indicates existing monitoring well; other monitoring wells are proposed.
 * Shoreline well
 ** Metals to be analyzed in stormwater samples are As, Cd, Cu, Cr, Pb, Hg, and Zn. SVOCs to be analyzed in stormwater samples are LDW COCs, as listed in Table 4 of the Source Control Review Memorandum (Aspect 2022), only.
 SWRX-Pre - Vault located downstream from CB-09, from which water is pumped into the StormwaterRx system for treatment.

FIGURES



	Existing Outfall		Site Boundary
	Washwater and Stormwater Treatment Areas		King County Tax Parcel
	Approximately Extent of GAC Geocomposite Mat		Historical Parcel Boundary
	Pervious Surface (gravel)	Notes:	
	2021 Approximate Fire-Affected Area	- Site features are approximate.	
	Sheet Pile Wall	- A&B Barrel parcel is a historical parcel.	

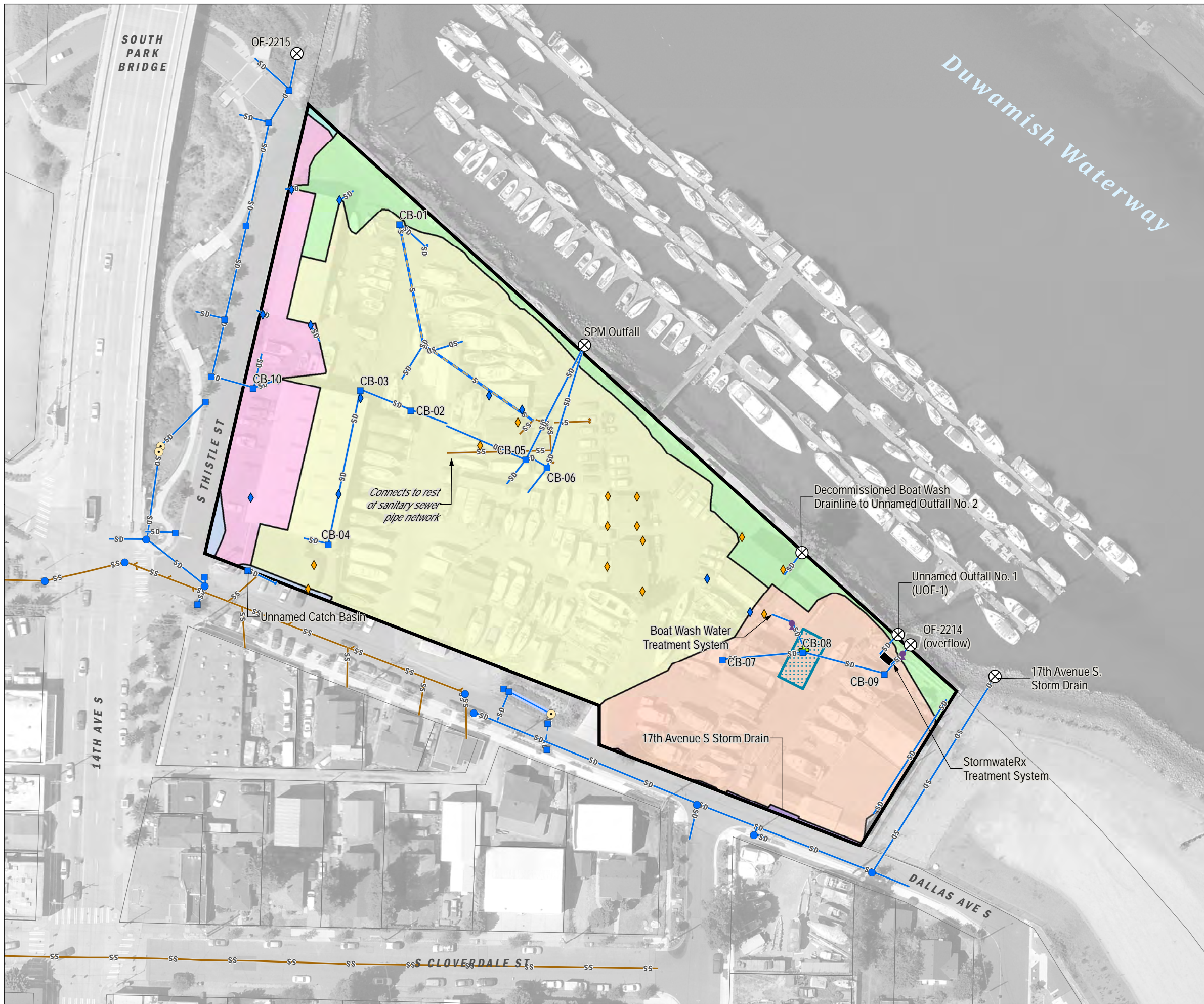
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Feet

N
True North
Project North

Existing Site Features

RIWP Addendum
South Park Marina
Seattle, Washington

	MAY-2022	BY: AY / TDR	FIGURE NO. 1.1
	PROJECT NO. 190293	REVISED BY: NLK	



Site Boundary
 King County Tax Parcel

Stormwater Infrastructure

- Catch Basin
- Overflow
- Manhole
- Metal Roof Drain
- Non Metal Roof Drain
- Outfall (Existing and Decommissioned)
- Pump Station
- Pump Vault
- Vessel Wash Wastewater Catch Basin
- Yard Drain

Sanitary Sewer Line
 Storm Drain Line
 Combined Sewer Line
 Bioswale

Stormwater Catchment Areas and Discharge Areas

- City of Seattle Combined Sewer System
- Infiltrates Through Gravel Surface
- OF-2214 (South Park Marina SD)
- OF-2215
- Offsite Directly to River
- South Park Marina Outfall
- 17th Avenue S Storm Drain
- Boat Wash Pad

Note:
 - Site features are approximate.

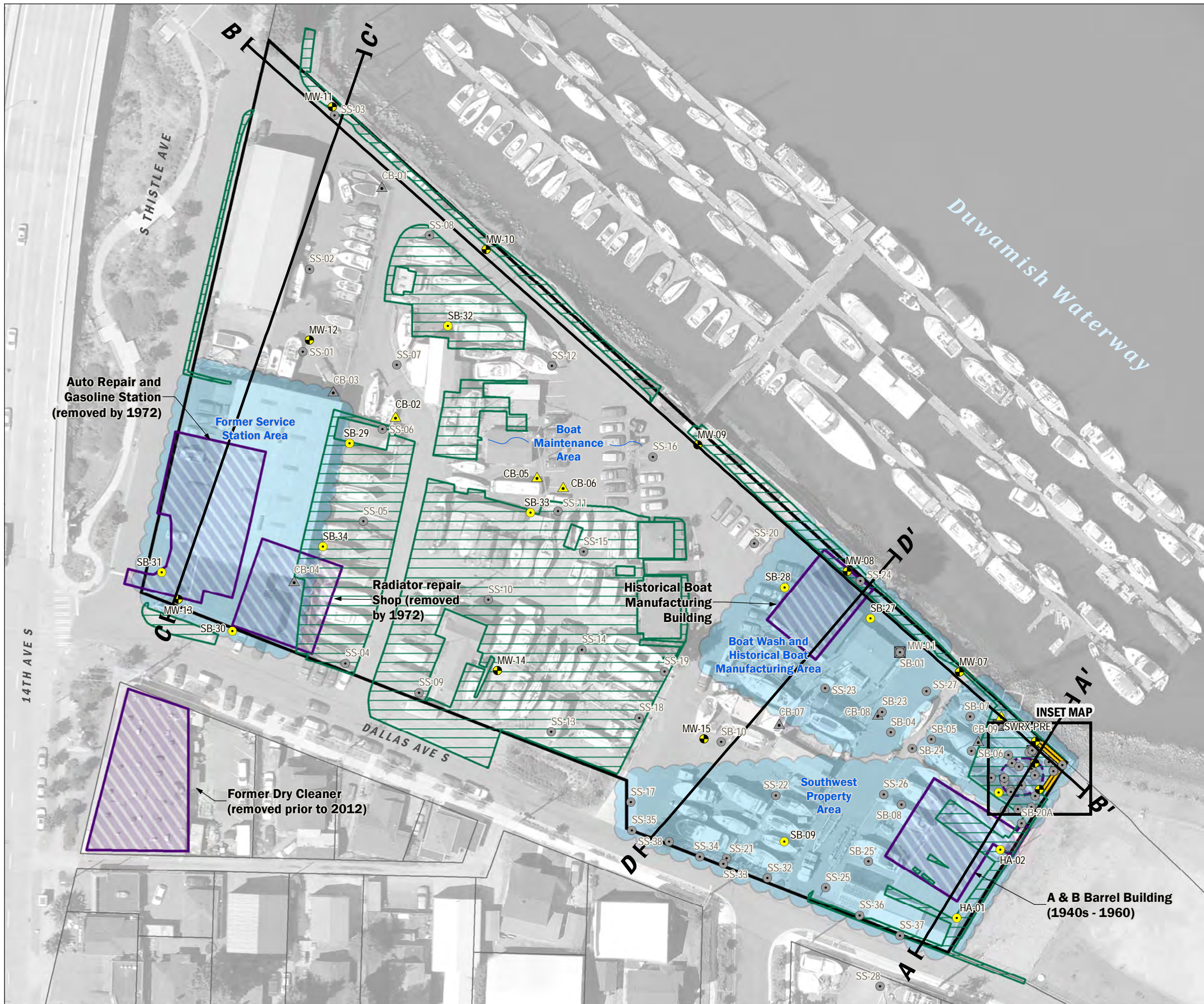
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True North
 Project North

Stormwater Catchment Areas and Infrastructure
 RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

	AUG-2022	BY: TDR	FIGURE NO. 2.1
	PROJECT NO. 190293	REVISED BY: NLK / WEG	

GIS Path: T:\projects_8\Seattle\RIWP\SouthParkMarina_190293\Delivered\RIWP_2021\Final\Drawings_MXD\2.1 Stormwater Catchment Areas and Infrastructure.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 8/16/2022 | User: hgrimm | Print Date: 8/16/2022



Phase 1 Investigation Location

- ▲ CB Solids
- Soil Boring; Soil; Hand Auger Boring; Surface Soil
- Fill Unit Monitoring Well

Historical Investigation Location

- ▲ CB Solids
- Soil Boring; Soil; Hand Auger Boring; Surface Soil
- ⊠ Alluvium Unit Monitoring Well (SAIC 2007; decommissioned)

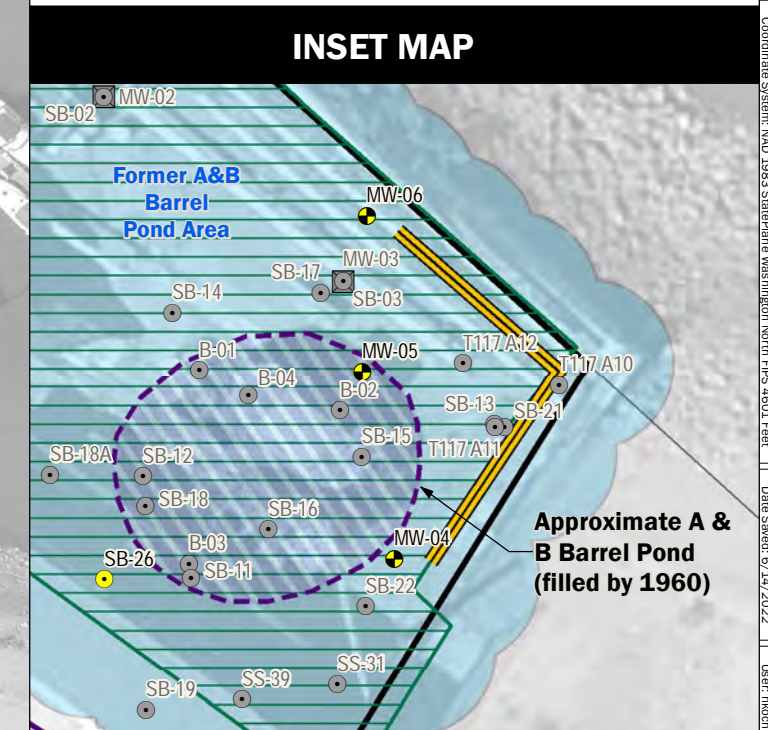
Site Features

- ▭ Site Boundary
- Area of Investigation
- ▨ Pervious Surface (gravel)
- ▨ Historical Site Feature
- ▨ Sheet Pile Wall
- ▨ King County Tax Parcel

Note: Site features are approximate.

0 65
Feet

Project North
True North

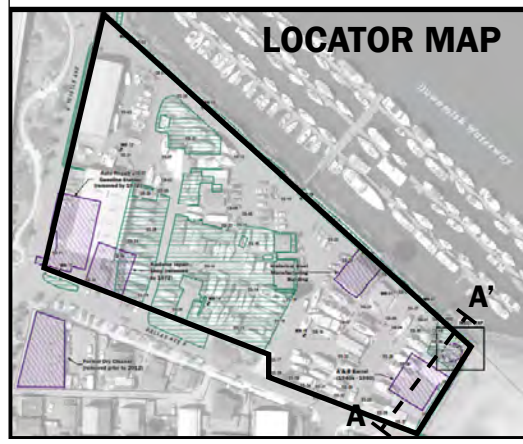
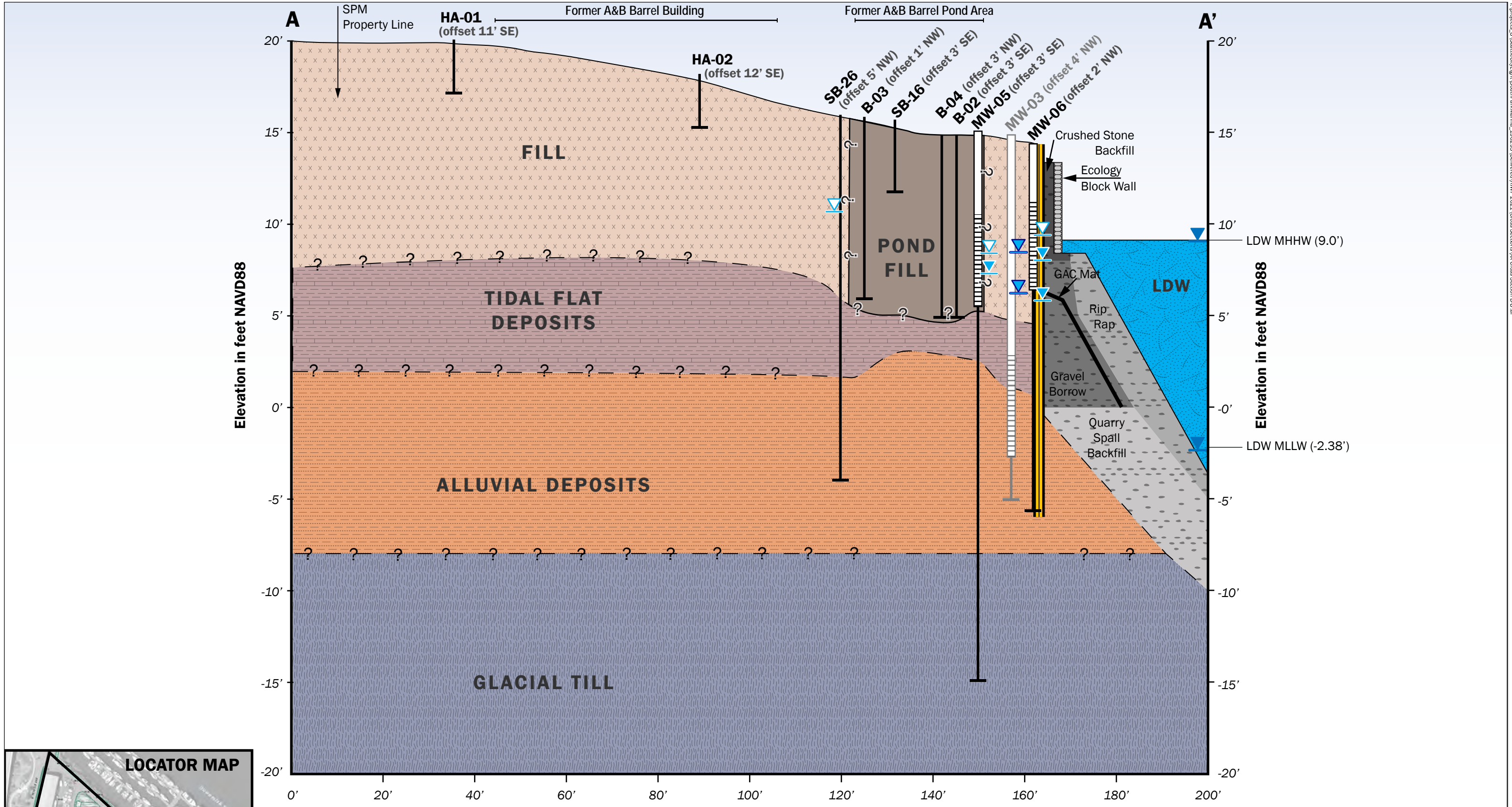


Historical and Phase 1 Exploration Locations

RIWP Addendum
South Park Marina
8604 Dallas Avenue South
Seattle, WA

	JUN-2022	BY: AY / TDR	FIGURE NO. 3.1
	PROJECT NO. 190293	REVISED BY: NLK / ZAS / WEG	

GIS Path: T:\projects_8\Seattle\RIWP\SouthParkMarina_190293\Delivered\RIWP_2021\Final\mxd\Map_3_1_Previous_Exploration_Locations_Map.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/14/2022 | User: mchelle | Print Date: 6/14/2022



Legend:

- MW-3** ← Monitoring Well Name
- Blank PVC Casing
- Well Screen
- Approximate Depth
- SB-9** ← Soil Boring Name
- Groundwater at Time of Drilling
- Range of Observed Groundwater Elevations
- Alluvial Unit Water Levels (Measured Oct. 2007, SAIC 2008)
- Boring Depth
- Sheet Pile Wall
- Ecology Block Retaining Wall
- Granular Activated Carbon Mat

Notes:

- Cross section transect line shown on Figure 2.
- Configuration of sheet pile wall, GAC mat, and shoreline armoring from AECOM (2014).
- Grade elevations are approximate.
- Alluvial Unit Monitoring Wells and Well MW-03 decommissioned.

Vertical Exaggeration = 4X

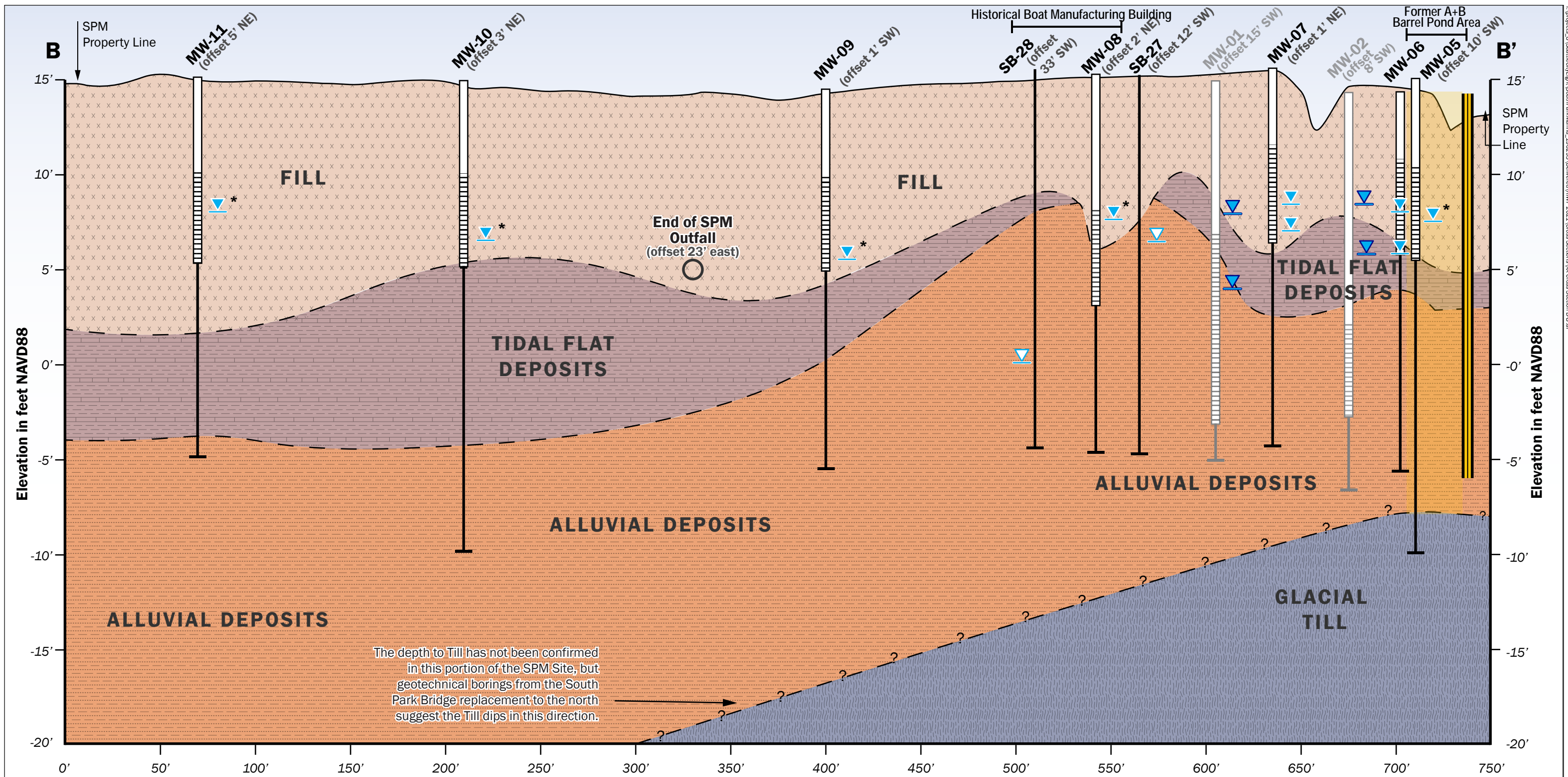
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SCALE IS APPROXIMATE

Cross Section A-A'

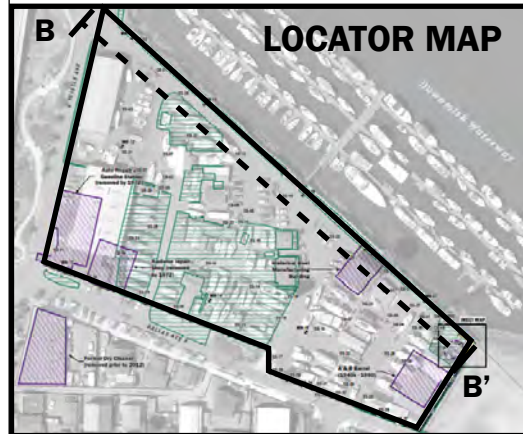
RIWP Addendum
South Park Marina
Seattle, Washington

	MAY-2022	BY: AY / RAC / AWP	FIGURE NO. 3.2
	PROJECT NO. 190293	REV BY: ---	

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The depth to Till has not been confirmed in this portion of the SPM Site, but geotechnical borings from the South Park Bridge replacement to the north suggest the Till dips in this direction.



- MW-3** ← Monitoring Well Name
- ← Blank PVC Casing
- ← Well Screen
- ← Approximate Depth
- ← Sheet Pile Wall
- SB-9** ← Soil Boring Name
- ← Groundwater at Time of Drilling
- ← Range of Observed Groundwater Elevations (Measured Oct. 2007 SAIC, 2008a)
- ← Alluvial Unit Water Levels (Measured Oct. 2007, SAIC 2008)
- ← Boring Depth

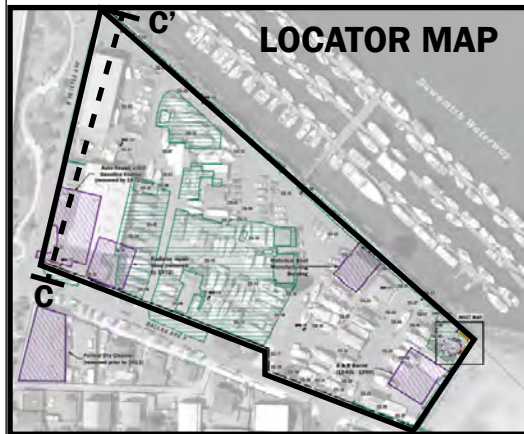
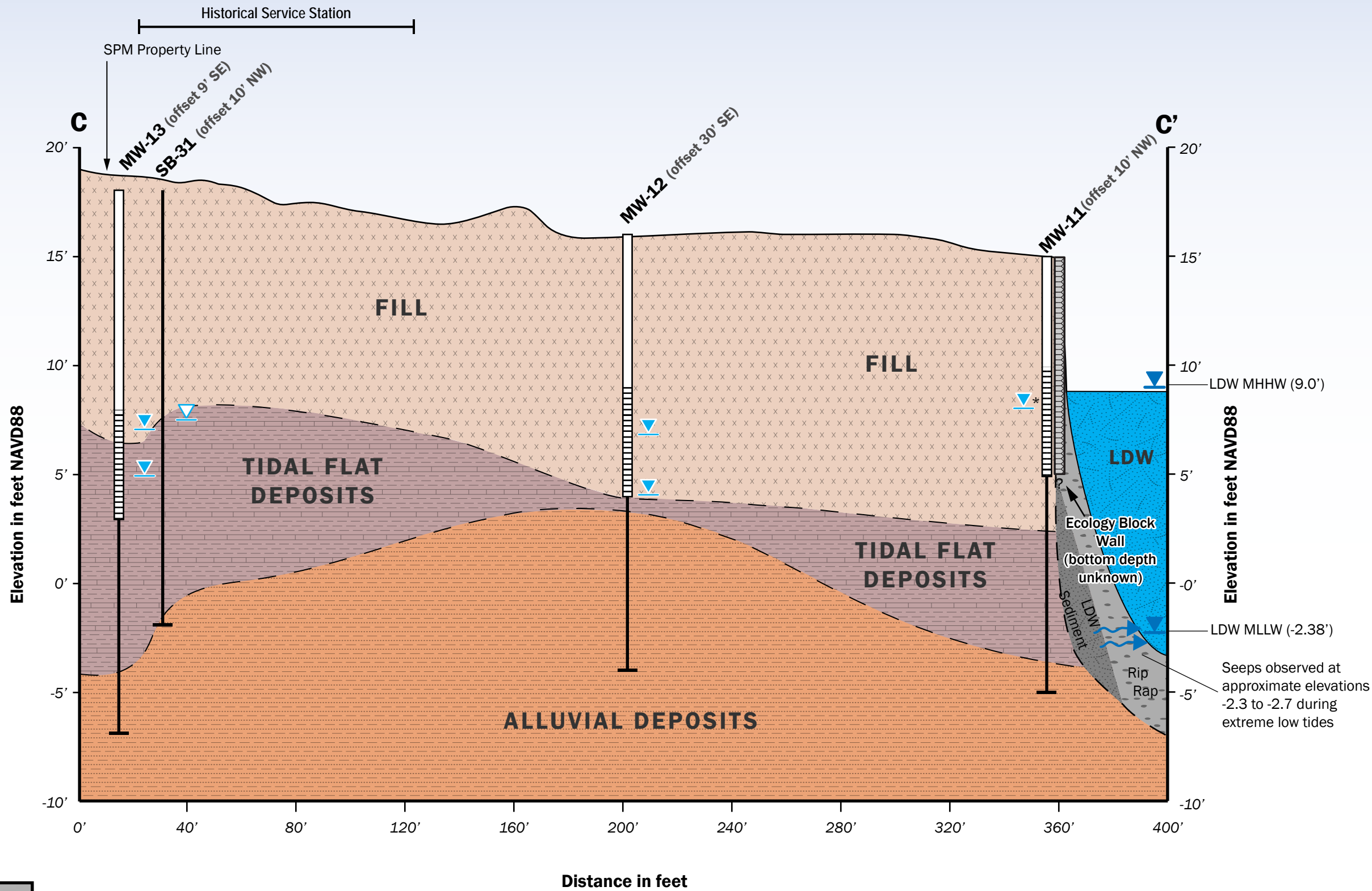
- Notes:**
- *Tidally influenced well; groundwater elevation drops below bottom of screened interval during low tide.
 - Cross section transect line shown on Figure 2.
 - Configuration of sheet pile wall, GAC mat, and shoreline armoring from AECOM (2014).
 - Grade elevations are approximate.
 - Alluvial Unit Monitoring Wells, and Wells MW-01 and MW-02 are decommissioned.

Cross Section B-B'

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South Park Marina
Seattle, Washington

	MAY-2022	BY: AY / RAC / AWP	FIGURE NO. 3.3
	PROJECT NO. 190293	REV BY: ---	

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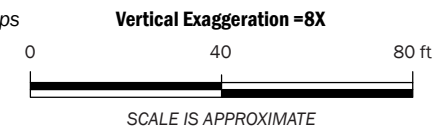


- MW-3** ← Monitoring Well Name
- SB-9** ← Soil Boring Name
- ← Blank PVC Casing
- ← Well Screen
- ← Approximate Depth
- ← Groundwater at Time of Drilling
- ← Range of Observed Groundwater Elevations
- ← Boring Depth



Notes:

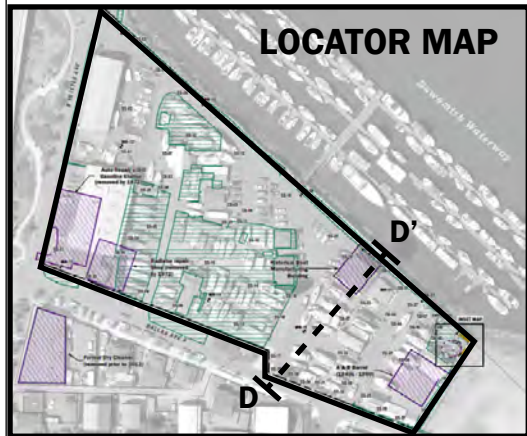
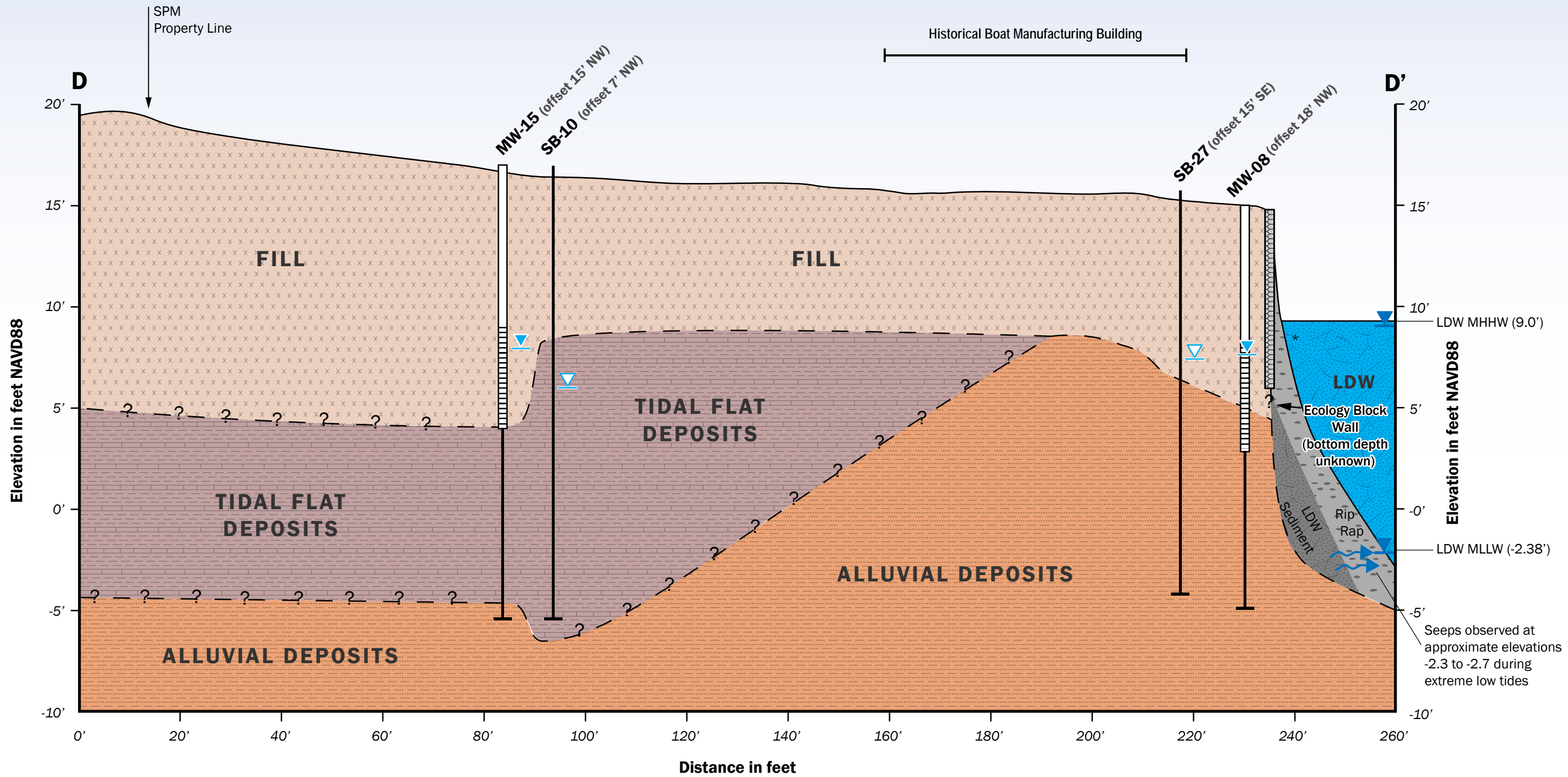
- *Tidally influenced well; groundwater elevation drops below bottom of screened interval during low tide.
- Cross section transect line shown on Figure 2.
- Features are approximate.
- Grade elevations are approximate.



Cross Section C-C'

RIWP Addendum
South Park Marina
Seattle, Washington

	MAY-2022	BY: AY / RAC / AWP	FIGURE NO. 3.4
	PROJECT NO. 190293	REV BY: ---	



- | | | | | | |
|--|-------------|------------------------|--|-------------|--|
| | MW-3 | ← Monitoring Well Name | | SB-9 | ← Soil Boring Name |
| | | ← Blank PVC Casing | | | ← Groundwater at Time of Drilling |
| | | ← Well Screen | | | ← Range of Groundwater Elevations Measured |
| | | ← Approximate Depth | | | ← Boring Depth |

Ecology Block Retaining Wall

Vertical Exaggeration = 4X

0 20 40 ft

SCALE IS APPROXIMATE

- Notes:**
- *Tidally influenced well; groundwater elevation drops below bottom of screened interval during low tide.
 - Cross section transect line shown on Figure 2.
 - Features are approximate.
 - Grade elevations are approximate.

Cross Section D-D'

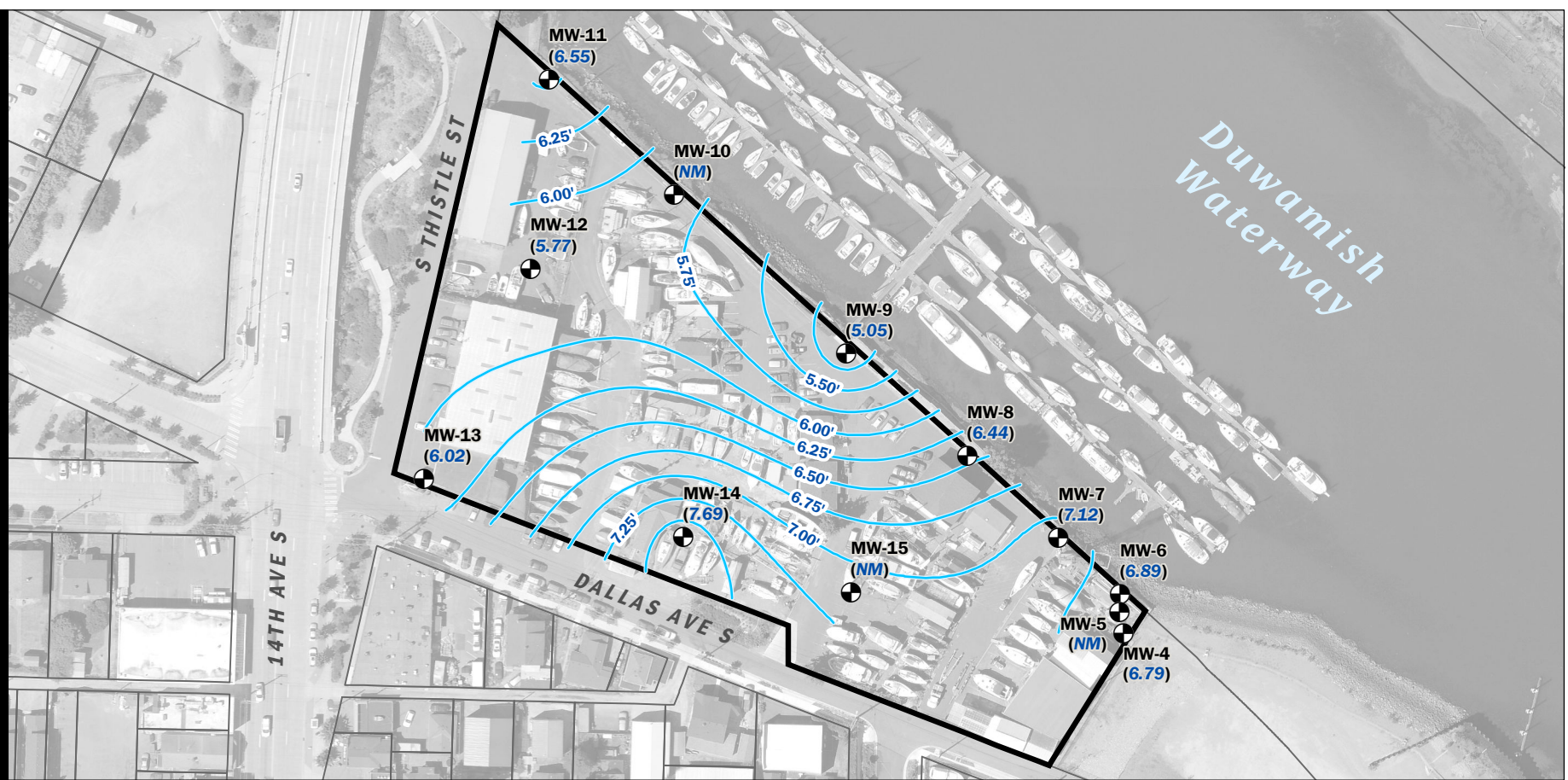
RIWP Addendum
South Park Marina
Seattle, Washington

	MAY-2022	BY: AY / RAC / AWP	FIGURE NO. 3.5
	PROJECT NO. 190293	REV BY: ---	

GIS Path: T:\projects_05\Seattle\CityLight_SouthParkMarina_190293\3_Groundwater\Elevations.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 5/4/2022 | User: micoche | Print Date: 5/4/2022

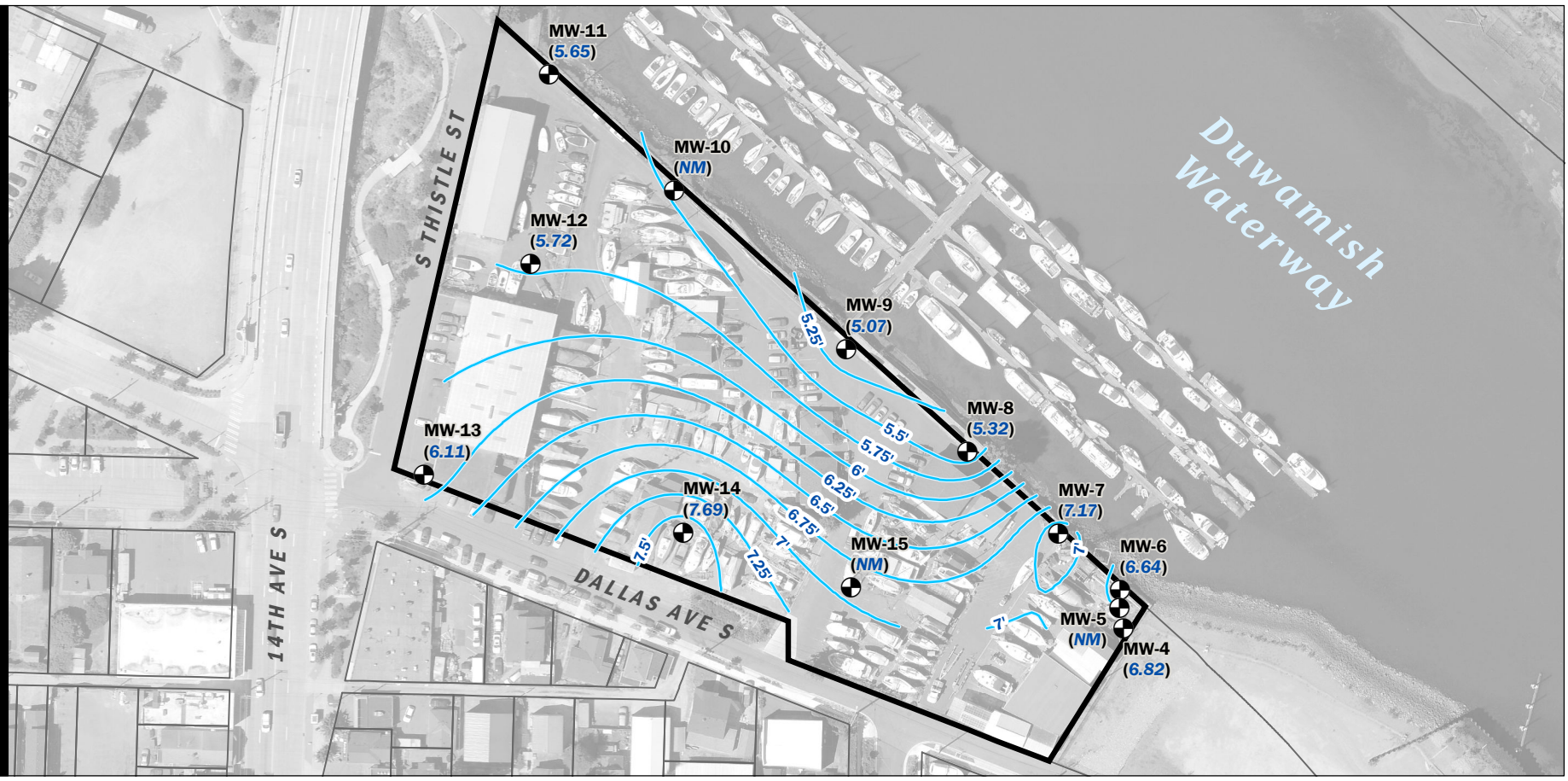
HIGH TIDE

MARCH 17, 2021 AT 07:00



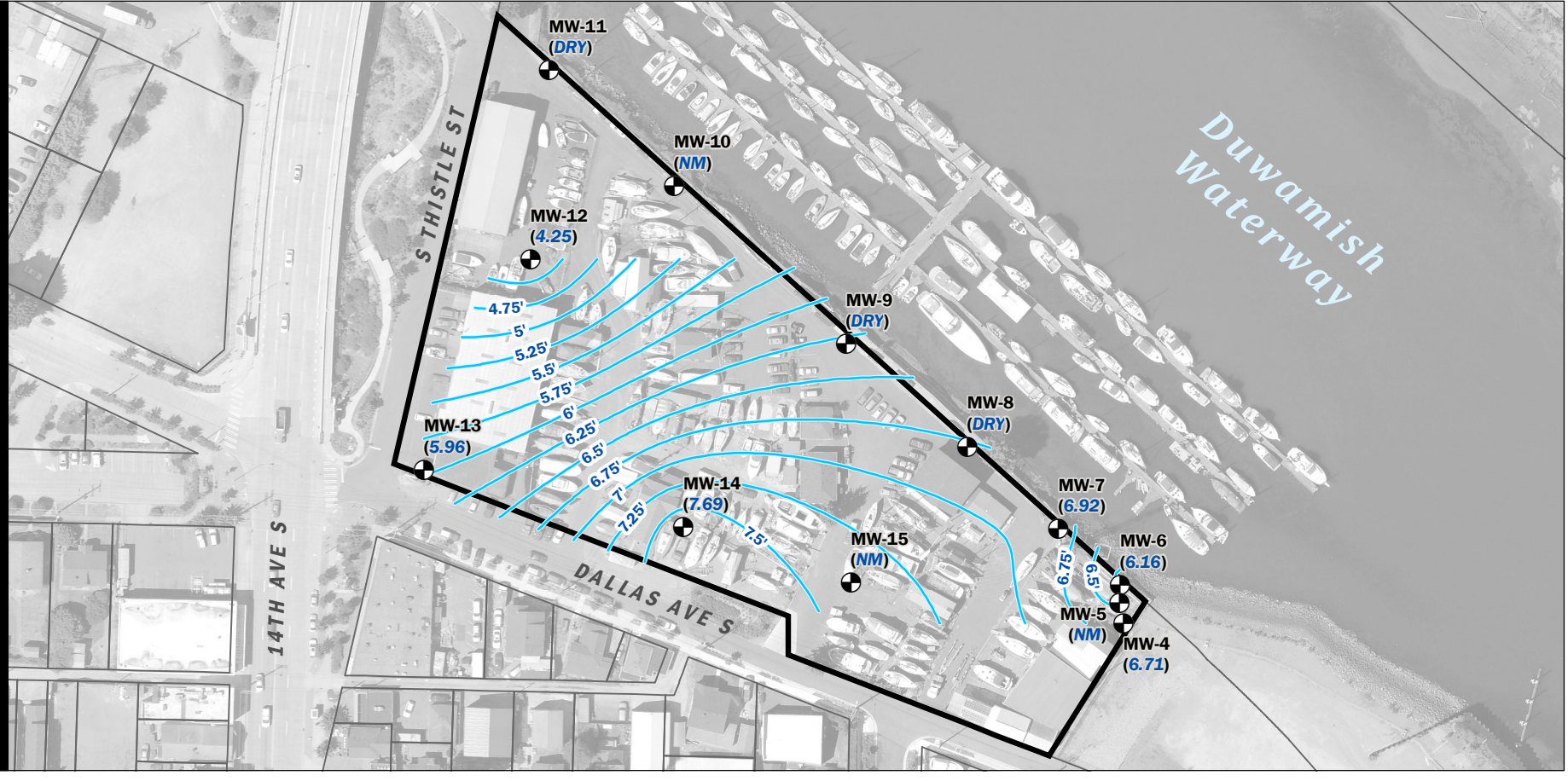
OUTGOING TIDE

MARCH 17, 2021 AT 10:00



LOW TIDE

MARCH 17, 2021 AT 14:30



Monitoring Well
 Groundwater Contour Line (NAVD88, ft)
 Site Boundary
 King County Tax Parcel

Notes:
 - Site features are approximate.
 - NM = Not monitored
 - High Tide - March 17, 2021 at 07:00
 - Outgoing Tide - March 17, 2021 at 10:00
 - Low Tide - March 17, 2021 at 14:30

Monitoring Well ID
 Groundwater Elevation (NAVD88, ft)

True North
 Project North
 0 135 Feet

Groundwater Elevations - Tidal Stages

RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

Aspect <small>CONSULTING</small>	MAY-2022 PROJECT NO. 190293	BY: AY / TDR REVISED BY: NLK
		FIGURE NO. 3.6

Figure 3.7 - Hydrograph for All Monitoring Wells with Transducers

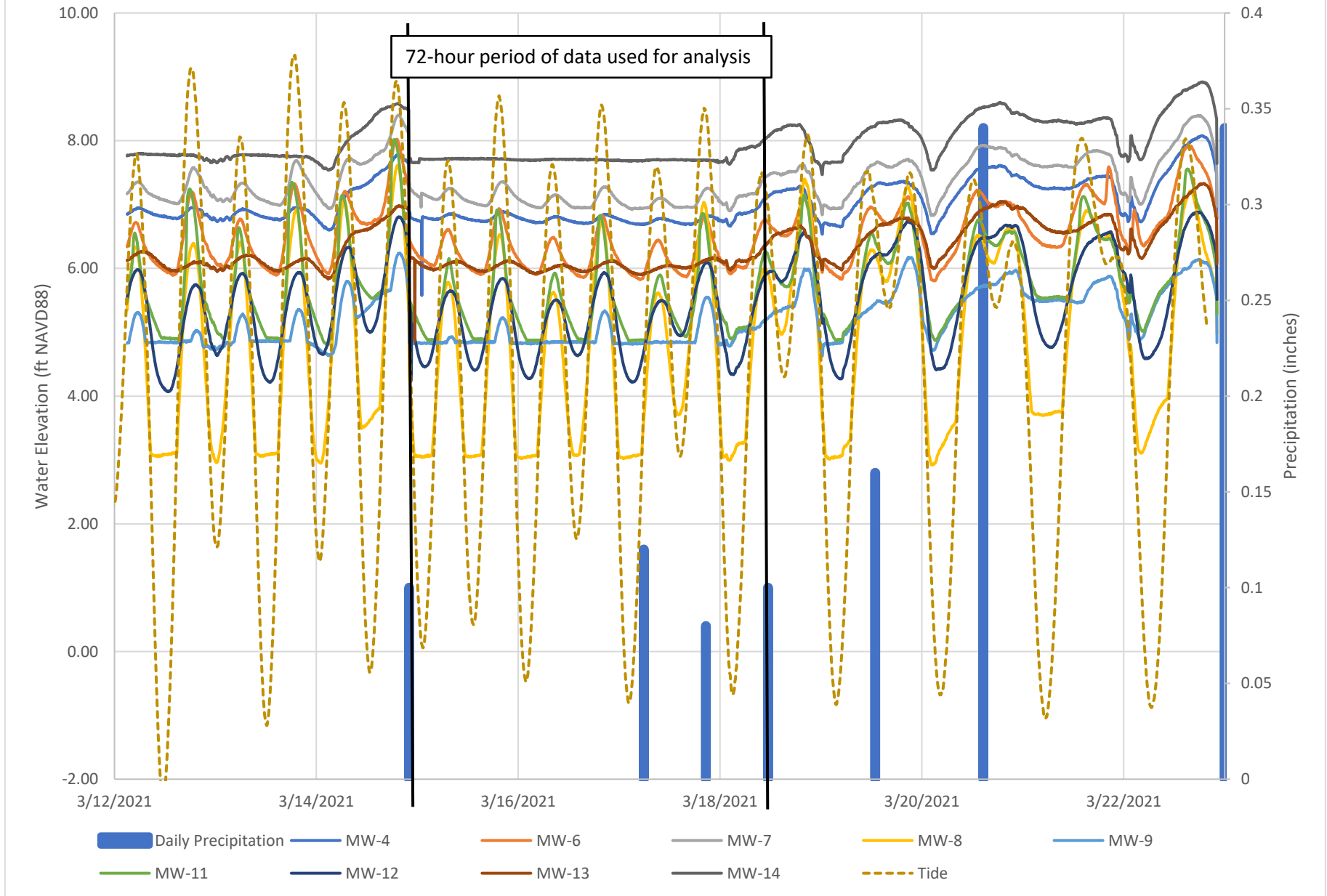
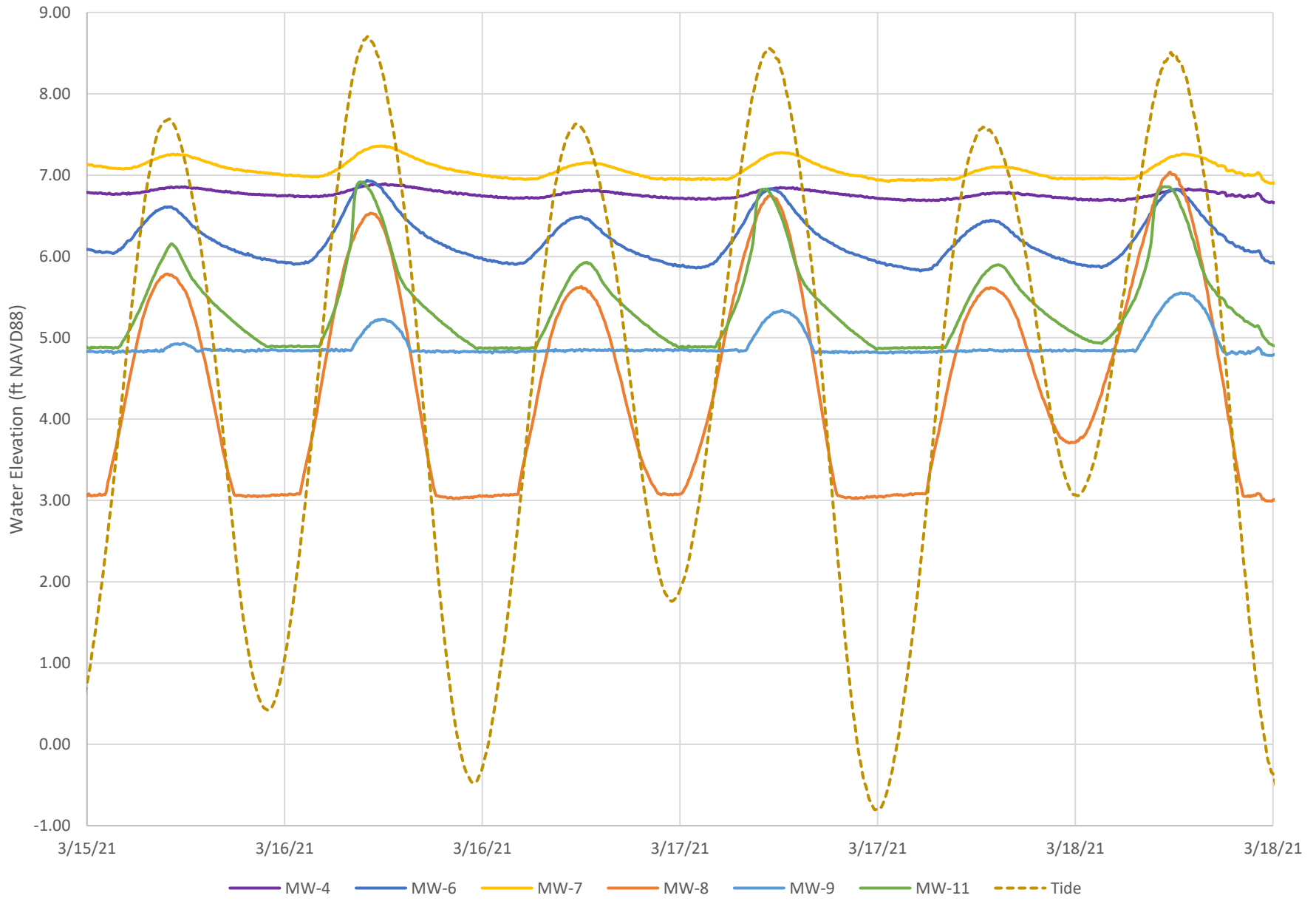


Figure 3.8 - Hydrograph for Shoreline and Former A&B Barrel Pond Area Monitoring Wells



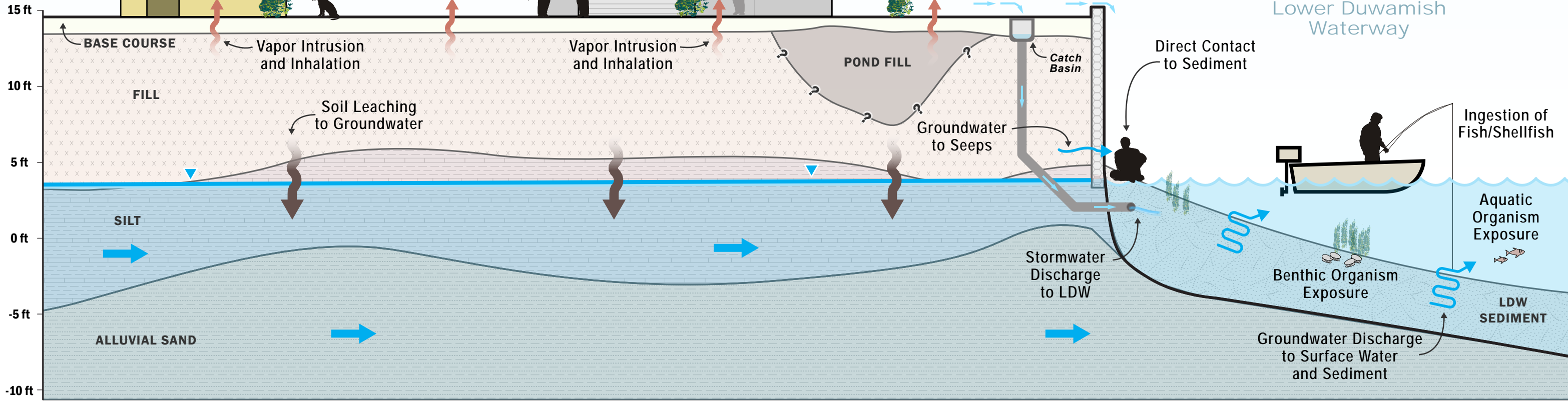
South

North

Office and Industrial
(Workers)

House
(Residents)

Elevation
Scale is in
NAVD88



15 ft

10 ft

5 ft

0 ft

-5 ft

-10 ft

Vapor Intrusion

Groundwater Flow

Stormwater Pipe and Outfall

Soil Leaching to Groundwater

Nearshore Groundwater Mixing and Discharge

Vertical Exaggeration = 2.5X



Preliminary Conceptual Site Model for Migration and Exposure Pathways

RIWP Addendum
South Park Marina
Seattle, Washington

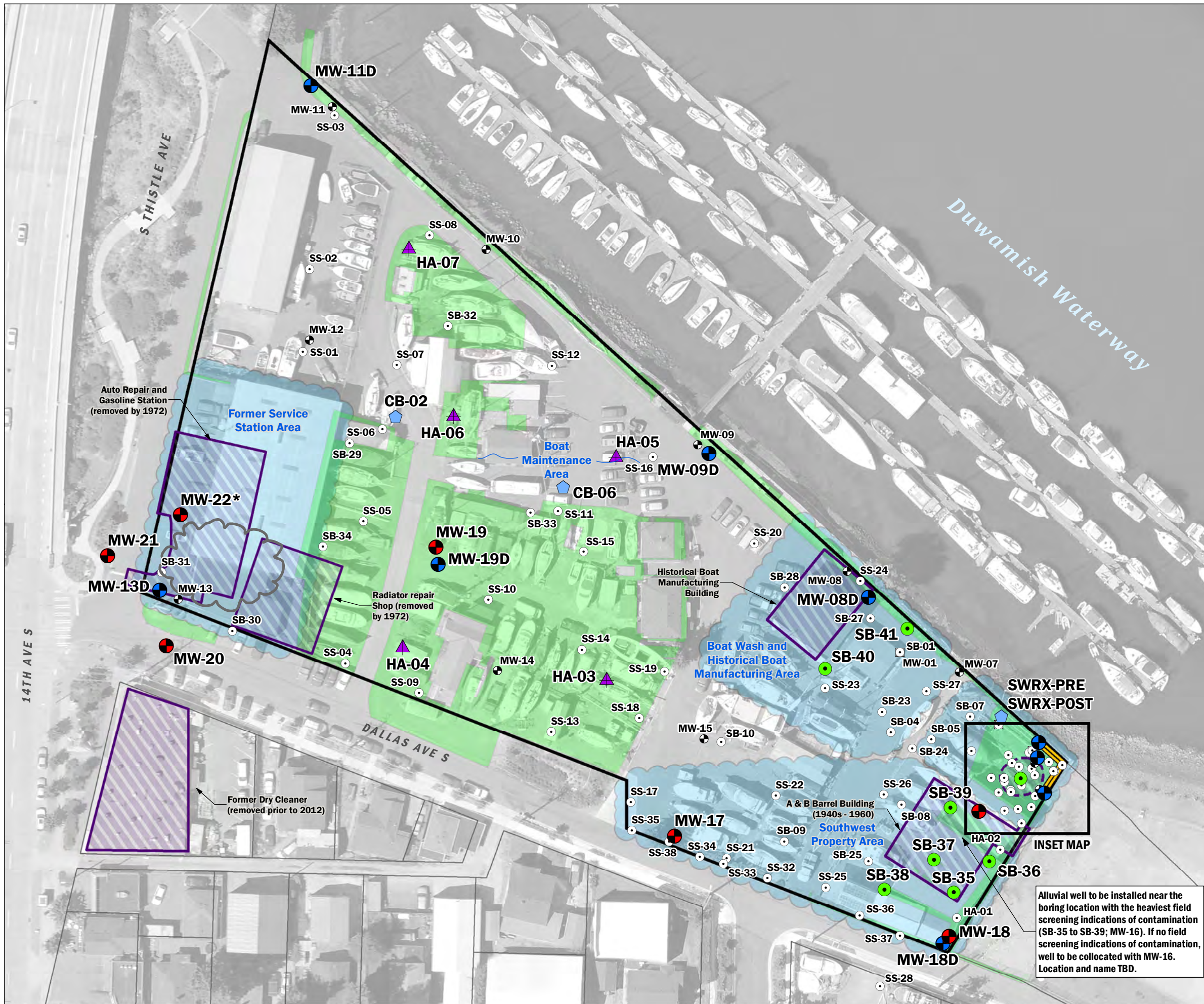


DEC-2019
PROJECT NO.
190293

BY:
AY / TDR
REV BY:

FIGURE NO.
6.1

Projects: 8 SeattleCityLightSouthParkMarina_190293_Deliverable:RIWP 7.1 Preliminary Conceptual Site Model for Migration and Exposure Pathways.ai



Proposed Phase 2 Exploration

- Hand Auger
- Alluvial Unit Well
- Fill Unit Well
- Soil Boring
- Stormwater and CB Solids Sampling Locations
- Soil Gas Samples

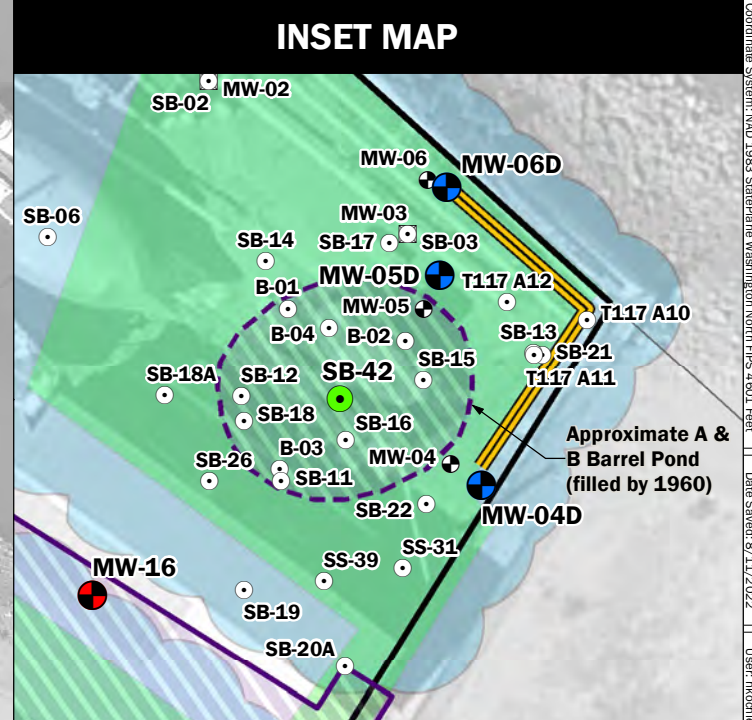
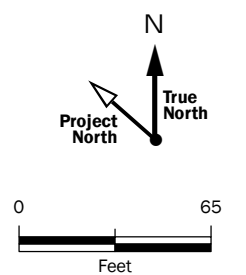
Historical Explorations

- Soil Boring; Soil; Hand Auger Boring; Surface Soil
- Fill Unit Monitoring Well
- Alluvium Unit Monitoring Well (SAIC 2007; decommissioned)

Site Features

- Site Boundary
- Area of Investigation
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

Notes:
 - Site features are approximate.
 *If field observations indicate that this boring is impacted, a well will not be installed at this location. Rather, a step-out boring will be placed further downgradient, as discussed in Section 7, and the step-out boring will be completed as a Fill unit well.



Alluvial well to be installed near the boring location with the heaviest field screening indications of contamination (SB-35 to SB-39; MW-16). If no field screening indications of contamination, well to be collocated with MW-16. Location and name TBD.

Proposed Explorations - Phase 2

RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

Aspect CONSULTING	AUG-2022	BY: AY / TDR	FIGURE NO. 7.1
	PROJECT NO. 190293	REVISED BY: NLK	

S:\Data\1\Projects_8\Seattle\190293\Delivered\RIWP_2021\Facilities\Map\190293_Phase 2 Exploration Map.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 8/11/2022 | User: mcohen | Print Date: 8/22/2022

APPENDIX A

Phase 1 RI Boring and Monitoring Well Logs

Coarse-Grained Soils - More than 50% ¹ Retained on No. 200 Sieve	Gravels - More than 50% ¹ of Coarse Fraction Retained on No. 4 Sieve	≤5% Fines	GW	Well-graded GRAVEL Well-graded GRAVEL WITH SAND
		≥15% Fines	GP	Poorly-graded GRAVEL Poorly-graded GRAVEL WITH SAND
	Sands - 50% ¹ or More of Coarse Fraction Passes No. 4 Sieve	≤5% Fines	GM	SILTY GRAVEL SILTY GRAVEL WITH SAND
		≥15% Fines	GC	CLAYEY GRAVEL CLAYEY GRAVEL WITH SAND
Fine-Grained Soils - 50% ¹ or More Passes No. 200 Sieve	Sands - 50% ¹ or More of Coarse Fraction Passes No. 4 Sieve	≤5% Fines	SW	Well-graded SAND Well-graded SAND WITH GRAVEL
		≥15% Fines	SP	Poorly-graded SAND Poorly-graded SAND WITH GRAVEL
	Silt and Clays Liquid Limit Less than 50%	≤5% Fines	SM	SILTY SAND SILTY SAND WITH GRAVEL
		≥15% Fines	SC	CLAYEY SAND CLAYEY SAND WITH GRAVEL
Highly Organic Soils	Silt and Clays Liquid Limit 50% or More	ML	SILT SANDY or GRAVELLY SILT SILT WITH SAND SILT WITH GRAVEL	
		CL	LEAN CLAY SANDY or GRAVELLY LEAN CLAY LEAN CLAY WITH SAND LEAN CLAY WITH GRAVEL	
	Silt and Clays Liquid Limit 50% or More	OL	ORGANIC SILT SANDY or GRAVELLY ORGANIC SILT ORGANIC SILT WITH SAND ORGANIC SILT WITH GRAVEL	
		MH	ELASTIC SILT SANDY or GRAVELLY ELASTIC SILT ELASTIC SILT WITH SAND ELASTIC SILT WITH GRAVEL	
Highly Organic Soils	Silt and Clays Liquid Limit 50% or More	CH	FAT CLAY SANDY or GRAVELLY FAT CLAY FAT CLAY WITH SAND FAT CLAY WITH GRAVEL	
		OH	ORGANIC CLAY SANDY or GRAVELLY ORGANIC CLAY ORGANIC CLAY WITH SAND ORGANIC CLAY WITH GRAVEL	
Highly Organic Soils	Silt and Clays Liquid Limit 50% or More	PT	PEAT and other mostly organic soils	

"WITH SILT" or "WITH CLAY" means 5 to 15% silt and clay, denoted by a "-" in the group name; e.g., SP-SM • "SILTY" or "CLAYEY" means >15% silt and clay • "WITH SAND" or "WITH GRAVEL" means 15 to 30% sand and gravel. • "SANDY" or "GRAVELLY" means >30% sand and gravel. • "Well-graded" means approximately equal amounts of fine to coarse grain sizes • "Poorly graded" means unequal amounts of grain sizes • Group names separated by "/" means soil contains layers of the two soil types; e.g., SM/ML.

Soils were described and identified in the field in general accordance with the methods described in ASTM D2488. Where indicated in the log, soils were classified using ASTM D2487 or other laboratory tests as appropriate. Refer to the report accompanying these exploration logs for details.

1. Estimated or measured percentage by dry weight
2. (SPT) Standard Penetration Test (ASTM D1586)
3. Determined by SPT, DCPT (ASTM STP399) or other field methods. See report text for details.

MC	=	Natural Moisture Content	GEOTECHNICAL LAB TESTS
PS	=	Particle Size Distribution	
FC	=	Fines Content (% < 0.075 mm)	
GH	=	Hydrometer Test	
AL	=	Atterberg Limits	
C	=	Consolidation Test	
Str	=	Strength Test	
OC	=	Organic Content (% Loss by Ignition)	
Comp	=	Proctor Test	
K	=	Hydraulic Conductivity Test	
SG	=	Specific Gravity Test	

Organic Chemicals			CHEMICAL LAB TESTS
BTEX	=	Benzene, Toluene, Ethylbenzene, Xylenes	
TPH-Dx	=	Diesel and Oil-Range Petroleum Hydrocarbons	
TPH-G	=	Gasoline-Range Petroleum Hydrocarbons	
VOCs	=	Volatile Organic Compounds	
SVOCs	=	Semi-Volatile Organic Compounds	
PAHs	=	Polycyclic Aromatic Hydrocarbon Compounds	
PCBs	=	Polychlorinated Biphenyls	
Metals			
RCRA8	=	As, Ba, Cd, Cr, Pb, Hg, Se, Ag, (d = dissolved, t = total)	
MTCA5	=	As, Cd, Cr, Hg, Pb (d = dissolved, t = total)	
PP-13	=	Ag, As, Be, Cd, Cr, Cu, Hg, Ni, Pb, Sb, Se, Tl, Zn (d=dissolved, t=total)	

PID	=	Photoionization Detector	FIELD TESTS
Sheen	=	Oil Sheen Test	
SPT ²	=	Standard Penetration Test	
NSPT	=	Non-Standard Penetration Test	
DCPT	=	Dynamic Cone Penetration Test	

Descriptive Term	Size Range and Sieve Number	COMPONENT DEFINITIONS
Boulders	= Larger than 12 inches	
Cobbles	= 3 inches to 12 inches	
Coarse Gravel	= 3 inches to 3/4 inches	
Fine Gravel	= 3/4 inches to No. 4 (4.75 mm)	
Coarse Sand	= No. 4 (4.75 mm) to No. 10 (2.00 mm)	
Medium Sand	= No. 10 (2.00 mm) to No. 40 (0.425 mm)	
Fine Sand	= No. 40 (0.425 mm) to No. 200 (0.075 mm)	
Silt and Clay	= Smaller than No. 200 (0.075 mm)	

% by Weight	Modifier	% by Weight	Modifier	ESTIMATED¹ PERCENTAGE
<1	=	Subtrace	15 to 25 = Little	
1 to <5	=	Trace	30 to 45 = Some	
5 to 10	=	Few	>50 = Mostly	

Dry	=	Absence of moisture, dusty, dry to the touch	MOISTURE CONTENT
Slightly Moist	=	Perceptible moisture	
Moist	=	Damp but no visible water	
Very Moist	=	Water visible but not free draining	
Wet	=	Visible free water, usually from below water table	

Non-Cohesive or Coarse-Grained Soils		RELATIVE DENSITY
Density³	SPT² Blows/Foot	
Very Loose	= 0 to 4	≥ 2'
Loose	= 5 to 10	1' to 2'
Medium Dense	= 11 to 30	3" to 1'
Dense	= 31 to 50	1" to 3"
Very Dense	= > 50	< 1"

Cohesive or Fine-Grained Soils		CONSISTENCY
Consistency³	SPT² Blows/Foot	
Very Soft	= 0 to 1	Penetrated >1" easily by thumb. Extrudes between thumb & fingers.
Soft	= 2 to 4	Penetrated 1/4" to 1" easily by thumb. Easily molded.
Medium Stiff	= 5 to 8	Penetrated >1/4" with effort by thumb. Molded with strong pressure.
Stiff	= 9 to 15	Indented ~1/4" with effort by thumb.
Very Stiff	= 16 to 30	Indented easily by thumbnail.
Hard	= > 30	Indented with difficulty by thumbnail.

GEOLOGIC CONTACTS		
Observed and Distinct	Observed and Gradual	Inferred

	Exploration Log Key
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AI Path: C:\ACAD Standards\FIELD REFERENCE\MASTERS\Exploration Log Key-2018.a1 // user: jinman // last saved: 12/31/2018



South Park Marina - 190293

Environmental Exploration Log

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, Near T-117 property line in SW corner

Coordinates (SPN NAD83 ft)

Exploration Number

E:1275000 N:195670 (est)

HA-01

Contractor

Equipment

Sampling Method

Ground Surface Elev. (NAVD88)

Aspect

Hand Auger

Grab

15' (est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

David Unruh

Hand tools

3/11/2021

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Surface restored with surface soils			PID=0.0 Sheen=Slight		Surface: 2 inch gravel base course, 3/4" minus FILL GRAVEL WITH SAND (GP); appears loose, moist, brown, fine to coarse, subrounded gravel; fine- to medium-grained, subangular sand; no odor; slight sheen appears less dense than water.	
1 - 14				HA-1-0-1 *				
					PID=0.3 Sheen=No sheen		SAND WITH SILT (SP-SM); appears loose, moist, brown, fine- to medium-grained, subangular sand; low plasticity fines; trace fine, subrounded gravel; no odor.	1
2 - 13				HA-1-1-2			Becomes very moist	
		Boring backfilled with 3/8-in hydrated bentonite chips, NSF 60.			PID=0.4 Sheen=No sheen			2
3 - 12				HA-1-2-3 *				
							Bottom of exploration at 3 ft. bgs.	3
							Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.	
4 - 11								4

Legend

■ Split Barrel 3" X 2.375"

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
HA-01

Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\190293_SOUTH_PARK_MARINA.GPJ June 22, 2022



South Park Marina - 190293

Environmental Exploration Log

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, Near Central portion of T-117 property line

Coordinates (SPN NAD83 ft)
E:1275100 N:195720 (est)
Ground Surface Elev. (NAVD88)
15' (est)

Exploration Number
HA-02

Contractor

Equipment

Sampling Method

Aspect

Hand Auger

Grab

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

David Unruh

Hand tools

3/11/2021

NA

No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
1	14	Surface restored with surface soils		HA-2-0-1 *	PID=0.4 Sheen=Organic		FILL SAND WITH SILT (SP-SM); appears loose, moist, dark brown, fine to medium, subangular sand; low plasticity fines; little live roots and silt-sized organic debris; no odor. WOODY DEBRIS; appears loose, moist, dark brown, charcoal and wood debris; slight mulch-like odor; blocky organic sheen.	1
2	13	Boring backfilled with 3/8-in hydrated bentonite chips, NSF 60.		HA-2-1-2	PID=0.3 Sheen=Organic		SAND WITH SILT (SP-SM); appears loose, moist, dark brown, fine- to coarse-grained, subangular sand; low plasticity fines; no odor. Sheen appeared biogenic: waxy, discontinuous sheets	2
3	12			HA-2-2-3 *	PID=0.3 Sheen=No sheen		Bottom of exploration at 3 ft. bgs. Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.	3
4	11							4

Legend

Split Barrel 3" X 2.375"

Water Level

No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
HA-02

Sheet 1 of 1



South Park Marina - 190293

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, SE corner of site west of
inferred edge of settling pond

Monitoring Well Log

Coordinates (SPN NAD83 ft)

E:1275100 N:195750

Exploration Number

MW-04

Ecology Well Tag No.
BND 370

Contractor

Holt

Equipment

Geoprobe 7800

Sampling Method

Percussion hammer

Ground Surface Elev. (NAVD88)

15.23'

Operator

Cody

Exploration Method(s)

Direct push

Work Start/Completion Dates

3/4/2021

Top of Casing Elev. (NAVD88)

15.02'

Depth to Water (Below GS)

7.59' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
15		8-in flush mount monument set in concrete		MW-4-0-1 *	PID=0.9 Sheen=Slight		Surface: 3 inch vegetated gravel base course, 3/4" minus FILL	
		3/8-in hydrated bentonite chip seal, NSF 60	S1		PID=1 Sheen=Slight		SAND WITH GRAVEL (SP); appears loose, moist, grey-brown, fine- to medium-grained, subangular sand; fine to coarse, subangular gravel; trace fines; trace brick and charcoal fragments <2 inches in size, very slight chemical-like odor.	
5		2-in, threaded schedule 40 PVC well casing	S2	MW-4-4-5	PID=0.6 Sheen=Moderate		SAND (SP); appears loose, moist, grey-brown, fine- to medium-grained, subangular sand; trace fines; no odor. Consolidated fragments of light brown silty sand; trace coarse-grained sand.	5
		3/4/2021 3/12/2021		MW-4-7-8 *	PID=19 Sheen=Heavy		SILTY SAND (SM); appears loose, wet, grey, fine- to medium-grained, subangular sand; low to medium plasticity fines; moderate chemical-like odor, heavy iridescent sheen.	
10		10-20 silica sand filter pack	S3	MW-4-10.5-11.5 *	PID=18 Sheen=Heavy		Heavy iridescent sheen appears to be denser than water.	10
		2-in, prepacked 0.010-in (10-slot) slotted schedule 40 PVC screen		MW-4-13.5-14.5 *	PID=1.6 Sheen=Slight		TIDAL FLAT DEPOSITS SILT (ML); appears soft, wet, grey, low to medium plasticity; some black organic matter 1-2 inches in size; moderate chemical-like odor.	
		Boring backfilled with 3/8-in hydrated bentonite chips	S4	MW-4-13.5-14.5 *	PID=1.0 Sheen=Very slight PID=15 Sheen=Heavy		SAND (SP); appears loose, wet, grey-brown to red-brown, fine-grained, subangular sand; trace silt; very slight chemical-like odor.	
15			S5	MW-4-18-20 *	PID=1 Sheen=Slight		SILTY SAND (SM); appears loose, wet, grey-brown, fine- to medium-grained, subangular sand; low plasticity fines; some fine, subrounded gravel; moderate petroleum-like odor; heavy sheen appears to be denser than water.	15
					PID=1 Sheen=Very slight		ALLUVIAL DEPOSITS SAND (SP); appears loose, wet, grey-brown, fine-grained, subangular sand; trace fines; slight petroleum-like odor.	
20							Bottom of exploration at 20 ft. bgs.	20
							Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.	
25								25

Legend

- No Soil Sample Recovery
- Continuous core 3" ID

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
MW-04

Sheet 1 of 1



South Park Marina - 190293

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, Inferred former east edge of settling pond

Monitoring Well Log

Coordinates (SPN NAD83 ft)
E:1275100 N:195770

Exploration Number

MW-05

Ecology Well Tag No.
BND 372

Contractor

Holt

Equipment

Geoprobe 7800

Sampling Method

Percussion hammer

Ground Surface Elev. (NAVD88)

14.84'

Operator

Cody

Exploration Method(s)

Direct push

Work Start/Completion Dates

3/5/2021

Top of Casing Elev. (NAVD88)

14.5'

Depth to Water (Below GS)

6.99' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
				MW-5-0-1 *	PID=0.5 Sheen=Slight		Surface: 3 inch vegetated gravel base course, 3/4" minus FILL	
			S1	MW-5-1-1.5			SAND WITH GRAVEL (SP); appears loose, moist, grey-brown, fine- to medium-grained, subangular sand; fine to coarse, subrounded gravel; trace fines. No odor.	
		8-in flush mount monument set in concrete						
		3/8-in hydrated bentonite chip seal, NSF 60						
		2-in, threaded schedule 40 PVC well casing		MW-5-4-5	PID=2 Sheen=Heavy PID=8 Sheen=Heavy		SILTY SAND WITH GRAVEL (SM); appears loose, very moist, red-brown to grey, fine- to medium-grained, subangular sand; low plasticity fines; fine to coarse, subrounded gravel; no odor.	
5	10	10-20 silica sand filter pack	S2	MW-5-6-7 *	PID=26 Sheen=Heavy		SAND (SP); appears loose, moist, grey, fine- to medium-grained, subangular sand; trace fines; slight chemical-like odor.	5
		3/5/2021						
		3/12/2021						
		2-in, prepacked 0.010-in (10-slot) slotted schedule 40 PVC screen	S3	MW-5-8-9.5 *	PID=34 Sheen=Heavy		SILTY SAND WITH GRAVEL (SM); appears loose, very moist, dark grey, fine- to medium-grained, subangular sand; fine, subangular gravel; low plasticity fines; moderate chemical-like odor, heavy iridescent sheen.	
10	5		S4		PID=3 Sheen=Slight		SAND (SP); appears loose, very moist, red-brown to dark grey, fine- to medium-grained, subangular sand; trace fines; moderate chemical-like odor, heavy sheen visible on soil in sample core.	10
		Boring backfilled with 3/8-in hydrated bentonite chips			PID=3 Sheen=Moderate		TIDAL FLAT DEPOSITS	
					PID=0.7 Sheen=Slight		SILT (ML); appears soft, very moist, dark grey, low to medium plasticity; some organic matter; slight chemical-like odor.	
15	0		S5	MW-5-15-16 *	PID=9 Sheen=Heavy		SILTY SAND (SM); appears loose, wet, grey, fine- to medium-grained, subangular sand; low to medium plasticity fines; slight chemical-like odor.	15
					PID=1 Sheen=No sheen		SILT (ML); appears soft, wet, dark grey, medium plasticity; slight chemical-like odor.	
							ALLUVIAL DEPOSITS	
					PID=2 Sheen=Moderate		SAND (SP); appears loose, wet, grey-brown, fine- to medium-grained, subangular sand; trace fines; no odor. Slight petroleum-like odor at 15 feet bgs.	
20	-5		S6	MW-5-20-22.5 *	PID=2 Sheen=Moderate			20
					PID=1 Sheen=No Sheen		GLACIAL TILL	
					PID=0.8 Sheen=No sheen		SANDY SILT WITH GRAVEL (ML); appears stiff, very moist, grey, low plasticity; fine-grained, subangular sand; fine, rounded gravel; trace shell fragments near upper contact; no odor.	
25	-10		S7	MW-5-26.5-28 *	PID=2 Sheen=No sheen		SILT (ML); appears stiff; moist, grey; low plasticity; no odor.	25
30	-15						Bottom of exploration at 30 ft. bgs.	30

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\190293_SOUTH_PARK_MARINA.GPJ June 22, 2022

Legend

- No Soil Sample Recovery
- Continuous core 3" ID

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
MW-05

Sheet 1 of 1

Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.



South Park Marina - 190293

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, N end of sheet pile wall E of inferred settling pond

Monitoring Well Log

Coordinates (SPN NAD83 ft)

E:1275100 N:195790

Exploration Number

MW-06

Ecology Well Tag No. BND 371

Contractor

Holt

Equipment

Geoprobe 7800

Sampling Method

Percussion hammer

Ground Surface Elev. (NAVD88)

14.27'

Operator

Cody

Exploration Method(s)

Direct push

Work Start/Completion Dates

3/5/2021

Top of Casing Elev. (NAVD88)

14.22'

Depth to Water (Below GS)

7.25' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
10		8-in flush mount monument set in concrete	S1	MW-6-0-1 *	PID=0.2 Sheen=Slight		FILL SANDY SILT (ML); appears soft, moist, brown, low plasticity; fine- to coarse-grained, subangular sand; trace fine to coarse, subangular to subrounded gravel; trace brick fragments; root fragments and silt-sized organic debris 0-0.25 ft; no odor.	
5		3/8-in hydrated bentonite chip seal, NSF 60	S2	MW-6-4-5 *	PID=0.3 Sheen=Slight		SAND WITH SILT AND GRAVEL (SP-SM); appears loose, moist, grey-brown, fine- to coarse-grained, primarily medium-grained, subangular sand; fine to coarse, subangular gravel; low plasticity fines; no odor.	5
5		2-in, threaded schedule 40 PVC well casing	S3	MW-6-9 *	PID=0.3 Sheen=Slight		TIDAL FLAT DEPOSITS SILT (ML); appears soft, very moist, dark grey, low to medium plasticity; trace fine- to medium-grained, subangular sand; no odor.	
10		10-20 silica sand filter pack	S4	MW-6-9.75	PID=0.6 Sheen=No sheen PID=0.5 Sheen=No sheen		SAND (SP); appears loose, wet, grey-brown, fine- to medium-grained, subangular sand; trace fines; trace organic matter; no odor.	10
10		2-in, prepacked 0.010-in (10-slot) slotted schedule 40 PVC screen	S5	MW-6-18-20 *	PID=0.5 Sheen=No sheen		SILT WITH SAND (ML); appears soft, wet, dark grey, low plasticity; fine- to medium-grained, subangular sand; no odor.	
15		3/12/2021			PID=0.8 Sheen=No sheen		ALLUVIAL DEPOSITS SAND (SP); appears loose, wet, dark grey, fine- to medium-grained, subangular sand; trace fines; no odor.	15
15		Boring backfilled with 3/8-in hydrated bentonite chips			PID=0.6 Sheen=No sheen		ORGANIC SILT (OL); appears soft, moist, black, low plasticity; mostly black organic matter; slight sulfur-like odor.	
20					PID=0.8 Sheen=No sheen PID=0.6 Sheen=No sheen		SAND (SP); appears loose, wet, dark grey, fine- to medium-grained, subangular sand; trace fines; very slight sulfur-like odor.	20
20							Bottom of exploration at 20 ft. bgs.	20

Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\190293_SOUTH_PARK_MARINA.GPJ June 22, 2022

Legend

- No Soil Sample Recovery
- Continuous core 3" ID

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJJ

Exploration Log
MW-06



South Park Marina - 190293

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, N of crane along shoreline

Monitoring Well Log

Coordinates (SPN NAD83 ft)

E:1275100 N:195830

Exploration Number

MW-07

Ecology Well Tag No.
BND 377

Contractor

Holt

Equipment

Geoprobe 7800

Sampling Method

Percussion hammer

Ground Surface Elev. (NAVD88)

15.2'

Operator

Cody

Exploration Method(s)

Direct push

Work Start/Completion Dates

3/9/2021

Top of Casing Elev. (NAVD88)

14.69'

Depth to Water (Below GS)

7.81' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
15		8-in flush mount monument set in concrete		MW-7-0-1 *	PID=0.7 Sheen=Organic		Surface: 3 inch asphalt, 8 inch gravel base course	
		3/8-in hydrated bentonite chip seal, NSF 60	S1				FILL SAND WITH SILT (SP-SM); appears loose, moist, brown, fine- to medium-grained, trace coarse-grained, subangular sand; fine to coarse, subangular to subrounded gravel; low plasticity fines; no odor.	
		2-in, threaded schedule 40 PVC well casing		MW-7-3-5	PID=0.6 Sheen=Slight		SAND (SP); appears loose, moist, brown, fine- to medium-grained, subangular sand; trace fine to coarse, subangular to subrounded gravel; trace fines; no odor.	
5	10	10-20 silica sand filter pack	S2	MW-7-5-6 *	PID=0.9 Sheen=No sheen		Becomes wet.	5
		3/9/2021						
		2-in, prepacked 0.010-in (10-slot) slotted schedule 40 PVC screen						
		3/12/2021						
10	5	Boring backfilled with 3/8-in hydrated bentonite chips	S3		PID=0.5 Sheen=No sheen		TIDAL FLAT DEPOSITS SANDY SILT (ML); appears soft, wet, grey, low plasticity; fine-grained, subangular sand; no odor.	10
					PID=0.7 Sheen=No sheen		CLAY WITH GRAVEL (CH); appears soft, wet, light brown, high plasticity; fine gravel-sized, red-brown particles of consolidated sand at bottom contact; no odor.	
					PID=0.7 Sheen=No sheen		SILTY SAND (SM); appears loose, wet, grey, fine-grained, subangular sand; medium plasticity fines; trace wood debris near bottom contact; slight sulfur-like odor.	
15	0		S4		PID=0.6 Sheen=No sheen		ALLUVIAL DEPOSITS SAND (SP); appears loose, wet, black, fine- to medium-grained, subangular sand; trace fines; no odor.	15
							Sand becomes majority medium-grained.	
20	-5		S5	MW-7-17-19	PID=0.5 Sheen=No sheen PID=0.8 Sheen=No sheen			20
							Bottom of exploration at 20 ft. bgs.	
							Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.	

Legend

- No Soil Sample Recovery
- Continuous core 3" ID

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
MW-07

Sheet 1 of 1



South Park Marina - 190293

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, E of boat maintenance building along shoreline

Monitoring Well Log

Coordinates (SPN NAD83 ft)

E:1275000 N:195900

Exploration Number

MW-08

Ecology Well Tag No. BND 375

Depth to Water (Below GS)

9.89' (Static)

Contractor

Holt

Equipment

Geoprobe 7800

Sampling Method

Percussion hammer

Ground Surface Elev. (NAVD88)

14.95'

Operator

Cody

Exploration Method(s)

Direct push

Work Start/Completion Dates

3/9/2021

Top of Casing Elev. (NAVD88)

14.33'

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
				MW-8-0-1 *	PID=0.4 Sheen=Slight		Surface: 1 foot gravel base course, 3/4" minus FILL	
		8-in flush mount monument set in concrete	S1				SILTY SAND (SM); appears loose, moist, brown, fine- to medium-grained, subangular sand; low plasticity fines; trace fine, subrounded gravel; no odor.	
		3/8-in hydrated bentonite chip seal, NSF 60		MW-8-3-5	PID=0.5 Sheen=Organic		SAND (SP); appears loose, moist, grey-brown, fine- to medium-grained, subangular sand; trace fines; no odor.	
		2-in, threaded schedule 40 PVC well casing	S2		PID=0.6 Sheen=Organic		SILTY SAND (SM); appears loose, very moist, grey to brown, fine-grained, subangular sand; low plasticity fines; trace organic matter; no odor.	5
		10-20 silica sand filter pack			PID=0.6 Sheen=Slight		SAND (SP); appears loose, moist, brown, fine- to medium-grained, subangular sand; trace fines; no odor.	
		3/9/2021		MW-8-8-9 *	PID=0.8 Sheen=No sheen		SAND WITH SILT (SP-SM); appears loose, wet, grey-brown, fine-grained, subangular sand; fines low plasticity; no odor.	
		3/12/2021			PID=0.7 Sheen=No sheen		ALLUVIAL DEPOSITS SAND (SP); appears loose, wet, dark grey-brown, fine- to medium-grained, subangular sand; trace fines; no odor.	10
		2-in, prepacked 0.010-in (10-slot) slotted schedule 40 PVC screen	S3		PID=0.7 Sheen=No sheen		Becomes brown.	
		Boring backfilled with 3/8-in hydrated bentonite chips	S4		PID=0.5 Sheen=No sheen		Sand becomes majority medium-grained.	15
			S5	MW-8-18-20	PID=0.7 Sheen=No sheen			
					PID=0.7 Sheen=No sheen			
							Bottom of exploration at 20 ft. bgs.	20
							Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.	

Legend

- No Soil Sample Recovery
- Continuous core 3" ID

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
MW-08

Sheet 1 of 1



South Park Marina - 190293

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, S of dock entrance along shoreline

Monitoring Well Log

Coordinates (SPN NAD83 ft)

E:1274900 N:195990

Exploration Number

MW-09

Ecology Well Tag No.
BND 376

Contractor

Holt

Equipment

Geoprobe 7800

Sampling Method

Percussion hammer

Ground Surface Elev. (NAVD88)

14.24'

Operator

Cody

Exploration Method(s)

Direct push

Work Start/Completion Dates

3/9/2021

Top of Casing Elev. (NAVD88)

14.06'

Depth to Water (Below GS)

9.76' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
				MW-9-0-1 *	PID=0.6 Sheen=Slight		Surface: 3 inch asphalt, 3 inch gravel base course	
		8-in flush mount monument set in concrete	S1				FILL	
		3/8-in hydrated bentonite chip seal, NSF 60		MW-9-3-5	PID=0.9 Sheen=Slight		SAND WITH GRAVEL (SW); appears loose, moist, light brown, fine- to coarse-grained, subangular sand; fine to coarse, subrounded gravel; no odor.	
		2-in, threaded schedule 40 PVC well casing			PID=0.9 Sheen=Slight		SILTY SAND (SM); appears loose, moist, brown, fine- to medium-grained, subangular sand; low plasticity fines; trace fine, subangular gravel; No odor.	
10		3/9/2021	S2	MW-9-5-6 *	PID=0.8 Sheen=No sheen		SANDY SILT (ML); appears soft, wet, red-brown to grey, low plasticity; fine-grained, subangular sand; slight sulfur-like odor.	5
5		10-20 silica sand filter pack						
		2-in, prepacked 0.010-in (10-slot) slotted schedule 40 PVC screen			PID=0.7 Sheen=No sheen			
		3/23/2021	S3		PID=1 Sheen=No sheen		TIDAL FLAT DEPOSITS	10
10		Boring backfilled with 3/8-in hydrated bentonite chips			PID=0.9 Sheen=No sheen		SILT (ML); appears soft, wet, grey, low plasticity; trace fine-grained, subangular sand; slight sulfur-like odor.	
			S4		PID=0.8 Sheen=No sheen		SILTY SAND (SM); appears loose, wet, grey to grey-brown, fine-grained, subangular sand; low plasticity; slight sulfur-like odor.	
					PID=0.8 Sheen=No sheen		SANDY SILT (ML); appears soft, wet, grey, low plasticity fines; fine-grained, subangular sand; slight sulfur-like odor.	
0			S5		PID=1 Sheen=No sheen		SAND (SP); appears loose, wet, grey-brown, fine- to medium-grained, subangular sand; trace fines; very slight sulfur-like odor.	15
15				MW-9-18-20	PID=2 Sheen=No sheen		SANDY SILT (ML); appears soft, wet, grey to brown, low plasticity; fine-grained, subangular sand; slight sulfur-like odor.	
					PID=2 Sheen=No sheen		ALLUVIAL DEPOSITS	
							SAND (SP); appears loose, wet, grey-brown, fine- to medium-grained, subangular sand; trace fines; very slight sulfur-like odor.	
							Bottom of exploration at 20 ft. bgs.	20
							Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.	
								25
								-15

Legend

- No Soil Sample Recovery
- Continuous core 3" ID

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
MW-09

Sheet 1 of 1



South Park Marina - 190293

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, E of E wall of Tire Factory

Monitoring Well Log

Coordinates (SPN NAD83 ft)

E:1274600 N:196060

Exploration Number

MW-12

Ecology Well Tag No.
BND 369

Contractor

Holt

Equipment

Geoprobe 7800

Sampling Method

Percussion hammer

Ground Surface Elev. (NAVD88)

15.72'

Operator

Cody

Exploration Method(s)

Direct push

Work Start/Completion Dates

3/3/2021

Top of Casing Elev. (NAVD88)

15.4'

Depth to Water (Below GS)

9.27' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
				MW-12-0-1 *	PID=0.9 Sheen=Slight		Surface: 3 inch asphalt	
15		8-in flush mount monument set in concrete	S1				FILL	
		3/8-in hydrated bentonite chip seal, NSF 60		MW-12-3-5 *	PID=1 Sheen=Slight PID=1 Sheen=Slight		SAND WITH SILT AND GRAVEL (SP-SM); appears loose, moist, grey-brown, fine- to coarse-grained, subangular to subrounded sand; fine to coarse, subrounded gravel; low plasticity fines; no odor.	
		2-in, threaded schedule 40 PVC well casing	S2		PID=2 Sheen=Slight		SANDY SILT (ML); appears soft, moist, grey, low plasticity; fine- to medium-grained, subangular sand; no odor.	5
5		10-20 silica sand filter pack			PID=1 Sheen=Slight		SAND (SP); appears loose, moist, grey-brown, fine- to medium-grained, subangular sand; trace fine to coarse, subrounded gravel; trace fines; no odor.	
10		2-in, prepacked 0.010-in (10-slot) slotted schedule 40 PVC screen	S3				SILTY SAND (SM); appears loose, moist, grey-brown, fine- to medium-grained, subangular sand; low plasticity fines; no odor	
		▼ 3/12/2021		MW-12-9.5-10.5	PID=1 Sheen=No sheen		SAND (SP); appears loose, moist, grey-brown, fine- to medium-grained, subangular sand; trace fines; no odor.	10
		▽ 3/3/2021			PID=2 Sheen=No sheen		TIDAL FLAT DEPOSITS	
10			S4				SILT (ML); appears soft, wet, grey, low plasticity; trace organic matter; no odor.	
5					PID=2 Sheen=No sheen		ALLUVIAL DEPOSITS	
15		Boring backfilled with 3/8-in hydrated bentonite chips	S5				SAND (SP); appears loose, wet, grey-brown, fine- to medium-grained, subangular sand; trace fines; no odor.	15
0				MW-12-18-20	PID=1 Sheen=No sheen PID=1 Sheen=No sheen			
20								
							Bottom of exploration at 20 ft. bgs.	20
							Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.	
								25
								-10
								25

Legend

- No Soil Sample Recovery
- Continuous core 3" ID

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
MW-12

Sheet 1 of 1



South Park Marina - 190293

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, NW of NW corner of Tire Factory

Monitoring Well Log

Coordinates (SPN NAD83 ft)
E:1274500 N:195880

Exploration Number

MW-13

Ecology Well Tag No.
BND 367

Contractor

Holt

Equipment

Geoprobe 7800

Sampling Method

Percussion hammer

Ground Surface Elev. (NAVD88)

18.38'

Operator

Cody

Exploration Method(s)

Direct push

Work Start/Completion Dates

3/2/2021

Top of Casing Elev. (NAVD88)

18.36'

Depth to Water (Below GS)

12.88' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		8-in flush mount monument set in concrete		MW-13-0-1 *	PID=2 Sheen=Slight		Surface: 6 inch asphalt	
		3/8-in hydrated bentonite chip seal, NSF 60	S1				FILL	
15		2-in, threaded schedule 40 PVC well casing	S2	MW-13-3-5 *	PID=2 Sheen=Slight PID=3 Sheen=Slight		SAND (SP); appears loose, moist, grey-brown, fine- to primarily medium-grained, subangular sand; trace fines; no odor.	
5		10-20 silica sand filter pack	S3	MW-13-9.5-10.5 *	PID=3 Sheen=Slight		SAND WITH SILT (SP-SM); appears loose, moist, light grey, fine- to medium-grained, subangular sand; low plasticity fines; no odor.	5
10		3/2/2021			PID=10 Sheen=Slight		SAND (SP); appears loose, moist, grey-brown, fine- to primarily medium-grained sand; trace fines; no odor.	10
10		3/12/2021			PID=8 Sheen=Slight		SAND WITH SILT (SP-SM); appears loose, moist, brown, fine-grained, subangular sand; low plasticity fines; no odor.	
5		2-in, prepacked 0.010-in (10-slot) slotted schedule 40 PVC screen	S4	MW-13-18-19.5 *	PID=9 Sheen=Slight		Becomes wet.	
15		Boring backfilled with 3/8-in hydrated bentonite chips	S5		PID=7 Sheen=No sheen		TIDAL FLAT DEPOSITS	
0					PID=8 Sheen=Slight		SANDY SILT (ML); appears soft, wet, grey, low to medium plasticity fines; fine-grained, subangular sand; slight sulfur-like odor.	
20					PID=9 Sheen=Slight		SAND WITH SILT (SP-SM); appears loose, wet, grey, fine- to medium-grained, subangular sand; low plasticity fines; trace organic matter; very slight sulfur-like odor.	15
20					PID=7 Sheen=No sheen		SANDY SILT (ML); appears soft, moist, grey, medium plasticity; fine-grained, subangular sand; slight sulfur-like odor.	20
20					PID=5 Sheen=No sheen		SAND WITH SILT (SP-SM); appears loose, wet, grey, fine-grained, subangular sand; low plasticity fines; slight sulfur-like odor.	20
5					PID=1 Sheen=No sheen		ALLUVIAL DEPOSITS	
25					PID=2 Sheen=No sheen		SAND (SP); appears loose, wet, grey-brown, fine- to primarily medium-grained, subangular sand; trace fines; no odor.	25
-10							Bottom of exploration at 25 ft. bgs.	

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\190293_SOUTH_PARK_MARINA.GPJ June 22, 2022

Legend

- No Soil Sample Recovery
- Continuous core 3" ID
- Grab sample

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
MW-13

Sheet 1 of 1



South Park Marina - 190293

Project Address & Site Specific Location

8604 Dallas Avenue South, Seattle, WA, 98108, S of W Residence

Monitoring Well Log

Coordinates (SPN NAD83 ft)

E:1274700 N:195830

Exploration Number

MW-14

Ecology Well Tag No.
BND 366

Contractor

Holt

Equipment

Geoprobe 7800

Sampling Method

Percussion hammer

Ground Surface Elev. (NAVD88)

18.47'

Operator

Cody

Exploration Method(s)

Direct push

Work Start/Completion Dates

3/1/2021 to 3/2/2021

Top of Casing Elev. (NAVD88)

18.32'

Depth to Water (Below GS)

9.99' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
				MW-14A-0-1 *	PID=0.3 Sheen=Organic		Surface: 8 inch gravel base course, 3/4" minus FILL SAND WITH SILT AND GRAVEL (SP-SM); appears loose, moist, grey-brown, fine- to coarse-grained, subangular sand; fine to coarse, subangular to subrounded gravel; low plasticity fines; no odor	
		8-in flush mount monument set in concrete		0-5 ft cleared with vacuum truck			SAND (SP); appears loose, moist, grey-brown, fine- to medium-grained, subangular sand; trace fine to coarse gravel; trace silt; no odor.	
15		3/8-in hydrated bentonite chip seal, NSF 60		MW-14-4.5-5 *	PID=0.1 Sheen=Organic			5
5		2-in, threaded schedule 40 PVC well casing			PID=0.1 Sheen=Organic			
10			S1		PID=0.1 Sheen=Organic			
10		▼ 3/12/2021		MW-14-11.5-12.5	PID=0.2 Sheen=No sheen			
		▽ 3/1/2021		MW-14-12.5-15	PID=0.2 Sheen=No sheen			
5		10-20 silica sand filter pack	S2					
15		2-in, prepacked 0.010-in (10-slot) slotted schedule 40 PVC screen			PID=0.1 Sheen=No sheen		TIDAL FLAT DEPOSITS SANDY SILT (ML); appears soft, wet, dark brown, low plasticity; trace fine-grained, subangular sand; some organic matter; slight sulfur-like odor.	15
		Boring backfilled with 3/8-in hydrated bentonite chips	S3	MW-14-18-19.5	Sheen=No sheen			
0				MW-14-19.5-20	PID=0.5		ALLUVIAL DEPOSITS SAND (SP); appears loose, wet, dark grey, fine- to primarily medium-grained, subangular sand; trace fines; no odor. Bottom of exploration at 20 ft. bgs.	20
20							Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.	
-5								25
25								
-10								

Legend

- No Soil Sample Recovery
- Split Barrel 3" X 2.375"
- Continuous core 3" ID

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: Andrew Yonkofski
Approved by: AJY

Exploration Log
MW-14

Sheet 1 of 1

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\190293_SOUTH_PARK_MARINA.GPJ June 22, 2022



South Park Marina - 190293

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, W of boat maintenance building

Monitoring Well Log

Coordinates (SPN NAD83 ft)

E:1274900 N:195790

Exploration Number

MW-15

Ecology Well Tag No.
BND 368

Contractor

Holt

Equipment

Geoprobe 7800

Sampling Method

Percussion hammer

Ground Surface Elev. (NAVD88)

16.88'

Operator

Cody

Exploration Method(s)

Direct push

Work Start/Completion Dates

3/3/2021

Top of Casing Elev. (NAVD88)

16.57'

Depth to Water (Below GS)

9.58' (Static)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
				MW-15-0-1 *	PID=0.8 Sheen=No sheen		Surface: 3 inch asphalt	
				MW-15-1-1.5			FILL SAND (SP); appears loose, moist, grey-brown, fine- to medium-grained, subangular sand; trace fines; trace brick fragments above 0.5 ft; no odor.	
15		8-in flush mount monument set in concrete	S1					
		3/8-in hydrated bentonite chip seal, NSF 60		MW-15-3-5 *	PID=0.3 Sheen=Very slight PID=1 Sheen=Very slight			
5		2-in, threaded schedule 40 PVC well casing	S2		PID=1 Sheen=Very slight			5
10				MW-15-8-9	PID=1 Sheen=Slight			
		3/3/2021		MW-15-9-9.5	PID=1 Sheen=No sheen		Becomes wet.	
10		10-20 silica sand filter pack	S3		PID=1 Sheen=No sheen		SILTY SAND (SM); appears loose, wet, grey, fine- to medium-grained, subangular sand; low plasticity fines; trace organic fragments; no odor.	10
5		2-in, prepacked 0.010-in (10-slot) slotted schedule 40 PVC screen	S4		PID=0.9 Sheen=No sheen		SILT WITH SAND (ML); appears soft, wet, grey, low to medium plasticity; fine-grained, subangular sand; trace organic matter; slight sulfur-like odor.	
15							TIDAL FLAT DEPOSITS ORGANIC SILT (OL); appears soft, wet, grey, medium plasticity; some organic matter consisting of plant debris and silt-sized organic particles; moderate sulfur-like odor.	15
0		Boring backfilled with 3/8-in hydrated bentonite chips	S5		PID=0.7 Sheen=No sheen		SILT (ML); appears soft, wet, grey-brown, medium plasticity; moderate sulfur-like odor.	
20				MW-15-18.5-20	PID=0.9 Sheen=No sheen		ALLUVIAL DEPOSITS SAND (SP); appears loose, wet, black, fine- to medium-grained, subangular sand; trace fines; slight sulfur-like odor. Bottom of exploration at 20 ft. bgs.	20

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\190293_SOUTH_PARK_MARINA.GPJ June 22, 2022

Legend

- No Soil Sample Recovery
- Continuous core 3" ID

Water Level

- Static Water Level
- Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
MW-15

Sheet 1 of 1

Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.



South Park Marina - 190293

Environmental Exploration Log

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, W of inferred settling pond location

Coordinates (SPN NAD83 ft)

Exploration Number

E:1275100 N:195750 (est)

SB-26

Contractor

Equipment

Sampling Method

Ground Surface Elev. (NAVD88)

Holt

Geoprobe 54 LT

Percussion hammer

15' (est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Cody

Direct push

3/4/2021

NA

6' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Surface restored with spoils.		SB-26-0-1 *	PID=0.7 Sheen=Slight		Surface: 3 inch gravel base course, 3/4" minus FILL	
		Boring backfilled with 3/8-in hydrated bentonite chips, NSF 60.	S1	0-2 ft cleared with post hole digger.	PID=1 Sheen=Slight		SAND WITH GRAVEL (SW); appears loose, moist, dark brown, fine- to coarse-grained, subangular sand; fine to coarse, subrounded gravel; trace brick and metal debris; very slight chemical-like odor.	
5	10			SB-26-4-5	PID=0.9 Sheen=Slight		SILTY SAND (SM); appears loose, moist, red-brown, fine- to medium-grained, subangular sand; low plasticity fines; some wood and charcoal fragments; no odor.	
		▽ 3/4/2021	S2	SB-26-5.5-6.5 *	PID=1 Sheen=Slight		SAND (SP); appears loose, moist, grey-brown, fine- to medium-grained, subangular sand; trace fines; no odor.	5
10	5		S3	SB-26-9.5	PID=1 Sheen=Very slight		TIDAL FLAT DEPOSITS ORGANIC SILT (OL); appears soft, moist, grey, medium plasticity; some 2-inch black organic matter; slight sulfur-like odor.	10
			S4	SB-26-12.5 *	PID=1 Sheen=No sheen		SAND (SP); appears loose, moist, grey-brown, fine- to medium-grained, subangular sand; trace coarse, subrounded gravel near upper contact; trace fines; slight sulfur-like odor. SILTY SAND (SM); appears loose, wet, grey, fine- to medium-grained, subangular sand; low to medium plasticity fines; very slight sulfur-like odor.	
15	0		S5	SB-26-18-20	PID=1 Sheen=No sheen PID=0.8 Sheen=No sheen		SILT (ML); appears soft, moist, grey, medium plasticity; some silt-sized organic matter; slight sulfur-like odor. ALLUVIAL DEPOSITS SAND (SP); appears loose, very moist, grey-brown, fine- to medium-grained, subangular sand; grain size decreases near upper contact; trace fines; very slight sulfur-like odor.	15
20	-5						Bottom of exploration at 20 ft. bgs.	20
25	-10						Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.	25

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\190293_SOUTH_PARK_MARINA.GPJ June 22, 2022

Legend

- No Soil Sample Recovery
- Continuous core 3" ID
- Continuous core 1.85" ID

Water Level

▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
SB-26

Sheet 1 of 1



South Park Marina - 190293

Environmental Exploration Log

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, E of boat maintenance building

Coordinates (SPN NAD83 ft)
E:1275000 N:195870 (est)
Ground Surface Elev. (NAVD88)
15' (est)

Exploration Number
SB-27

Contractor

Equipment

Sampling Method

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Holt

Geoprobe 7800

Percussion hammer

NA

8.25' (ATD)

Operator

Exploration Method(s)

Work Start/Completion Dates

NA

8.25' (ATD)

Cody

Direct push

3/9/2021

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Surface restored with concrete.	S1	SB-27-0-1 *	PID=0.6 Sheen=Slight		Surface: 3 inch asphalt	
		Boring backfilled with 3/8-in hydrated bentonite chips, NSF 60.	S2	SB-27-3-5	PID=0.8 Sheen=Slight PID=1 Sheen=No sheen		FILL SANDY SILT WITH GRAVEL (ML); appears soft, moist, black, low to medium plasticity fines; fine- to coarse-grained, subangular sand; fine to coarse, subangular gravel; trace brick fragments; slight asphalt-like odor.	
5	10		S3	SB-27-8-9 *	PID=0.6 Sheen=Slight		SAND (SP); appears loose, moist, grey-brown, fine- to medium-grained, subangular sand; trace fines; no odor.	5
		▽ 3/9/2021	S4		PID=0.5 Sheen=No sheen		SILT WITH SAND (ML); appears soft, moist, grey to red-brown, low plasticity; fine-grained, subangular sand; no odor.	
10	5		S5	SB-27-18-20	PID=0.9 Sheen=No sheen		SILTY SAND (SM); appears loose, very moist, grey to red-brown, fine-grained, subangular sand; low plasticity fines; no odor.	
					PID=1 Sheen=No sheen		ALLUVIAL DEPOSITS SAND (SP); appears loose, wet, black to red-brown, fine- to medium-grained, subangular sand; trace fines; no odor.	10
					PID=0.8 Sheen=No sheen			
15	0				PID=0.8 Sheen=No sheen			15
					PID=0.3 Sheen=No sheen			
20	-5				PID=0.5 Sheen=No sheen			20
					PID=0.6 Sheen=No sheen			
							Bottom of exploration at 20 ft. bgs.	
							Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.	
25	-10							25

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\190293_SOUTH_PARK_MARINA.GPJ June 22, 2022

Legend

- No Soil Sample Recovery
- Continuous core 3" ID
- Continuous core 1.85" ID

Water Level

▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
SB-27



South Park Marina - 190293

Environmental Exploration Log

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, N of boat maintenance building

Coordinates (SPN NAD83 ft)
E:1274900 N:195890 (est)
Ground Surface Elev. (NAVD88)
15' (est)

Exploration Number
SB-28

Contractor

Equipment

Sampling Method

Top of Casing Elev. (NAVD88)
NA

Depth to Water (Below GS)
15' (ATD)

Holt

Geoprobe 7800

Percussion hammer

Operator

Exploration Method(s)

Work Start/Completion Dates

Cody

Direct push

3/1/2021

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Surface restored with concrete.	S1	SB-28-0-1 *	PID=0.8 Sheen=Slight		Surface: 3 inch asphalt	
		Boring backfilled with 3/8-in hydrated bentonite chips, NSF 60.	S2	SB-28-3-5	PID=0.7 Sheen=No sheen		FILL SANDY SILT (ML); appears soft, moist, brown, low plasticity; fine-grained, subangular sand; no odor. SAND (SP); appears loose, moist, grey-brown, fine- to primarily medium-grained, subangular sand; trace fines; no odor.	5
5	10		S3		PID=0.5 Sheen=No sheen		TIDAL FLAT DEPOSITS SANDY SILT (ML); appears soft, very moist, mottled grey to red-brown, medium plasticity; fine-grained, subangular sand; no odor.	
10	5		S4	SB-28-14.5-15.5 *	PID=1 Sheen=Slight		ALLUVIAL DEPOSITS SAND (SP); appears loose, moist, red-brown, fine- to primarily medium-grained, subangular sand; trace fines; no odor.	10
15	0	▽ 3/1/2021	S5	SB-28-15.5-18	PID=0.5 Sheen=No sheen PID=0.7 Sheen=No sheen		Becomes very moist, grey-brown.	
20	-5			SB-28-18-19.5	PID=0.6 Sheen=No sheen PID=0.7 Sheen=No sheen		Becomes wet.	15
20	-5				PID=0.5 Sheen=No sheen		Bottom of exploration at 20 ft. bgs.	20
25	-10						Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.	25

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\190293_SOUTH_PARK_MARINA.GPJ June 22, 2022

Legend

- No Soil Sample Recovery
- Continuous core 1.85" ID

Water Level

▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
SB-28



South Park Marina - 190293

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, SW of SW corner of Tire Factory building

Environmental Exploration Log

Coordinates (SPN NAD83 ft)
E:1274600 N:195990 (est)
Ground Surface Elev. (NAVD88)
16' (est)

Exploration Number

SB-29

Contractor

Holt

Equipment

Geoprobe 7800

Sampling Method

Percussion hammer

Operator

Cody

Exploration Method(s)

Direct push

Work Start/Completion Dates

3/2/2021

Top of Casing Elev. (NAVD88)

NA

Depth to Water (Below GS)

5.5' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
				SB-29-0-1 *	PID=0.8 Sheen=Slight		Surface: 6 inch gravel base course, 3/4" minus FILL SAND WITH GRAVEL (SP); appears loose, moist, light brown, fine- to medium-grained, subangular sand; fine to coarse, subangular to subrounded gravel; no odor.	
15		Surface restored with spoils.	S1					
		Boring backfilled with 3/8-in hydrated bentonite chips, NSF 60.		SB-29A-3-5 *	PID=0.8 Sheen=Organic		SAND (SP); appears loose, moist, brown, fine- to primarily medium-grained, subangular sand; trace fines; no odor.	
5		3/2/2021	SZA	SB-29-5-6	PID=1 Sheen=No sheen			5
10			S2		PID=0.7 Sheen=No sheen		SILTY SAND (SM); appears loose, wet, light brown, fine- to medium-grained, subangular sand; medium plasticity fines; 0.1 ft layer of SILT (ML) at 6.75 ft bgs; very slight sulfur-like odor.	
10					PID=0.6 Sheen=No sheen		ALLUVIAL DEPOSITS SAND (SP); appears loose, wet, grey-brown, fine- to primarily medium-grained, subangular sand; trace fines; no odor.	
5			S3		PID=0.6 Sheen=No sheen		0.1 ft layer trace fine, subrounded gravel.	10
15				SB-29-15-17	PID=0.8 Sheen=No sheen		Some oxide staining.	15
0			S4		PID=2 Sheen=No sheen			
20							Bottom of exploration at 20 ft. bgs.	20
-5							Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.	
25								25
-10								

Legend

- No Soil Sample Recovery
- Continuous core 3" ID
- Continuous core 1.85" ID

Water Level

Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
SB-29

Sheet 1 of 1



South Park Marina - 190293

Environmental Exploration Log

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, W of of Tire Factory maintenance area

Coordinates (SPN NAD83 ft)

Exploration Number

E:1274600 N:195860 (est)

SB-30

Contractor

Equipment

Sampling Method

Ground Surface Elev. (NAVD88)

Holt

Geoprobe 7800

Percussion hammer

18' (est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Cody

Direct push

3/1/2021

NA

11.7' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Surface restored with concrete.		SB-30-0-1 *	PID=0.1 Sheen=Very slight		Surface: 3 inch asphalt	
15		Boring backfilled with 3/8-in hydrated bentonite chips, NSF 60.	S1	SB-30A-3-5 *	PID=0.2 Sheen=No sheen PID=0.2 Sheen=Slight		FILL SAND WITH GRAVEL (SW); appears loose, moist, light brown, fine- to coarse-grained, primarily medium-grained, subangular sand; fine to coarse, subrounded gravel; trace fines; no odor.	
5			SZA					5
10			S2		PID=0.3 Sheen=Organic			
10		▽ 3/1/2021	S3	SB-30-11.5-12.5 * SB-30-12.5-14.5 *	PID=2 Sheen=Slight PID=8 Sheen=Slight		Becomes wet.	10
5								
15			S4		PID=2 Sheen=Slight		TIDAL FLAT DEPOSITS SANDY SILT (ML); appears soft, wet, grey-brown, low to medium plasticity fines; fine-grained, subangular sand; interbedded 0.1-0.2 ft w/ layers of silty sand from 17-19.5 ft; No odor.	15
0								
20			S5	SB-30-23-25 *	PID=1 Sheen=No sheen PID=1 Sheen=No sheen PID=0.3 Sheen=No sheen		ALLUVIAL DEPOSITS SAND (SP); appears loose, wet, black, fine- to medium-grained, mostly medium-grained, subangular sand; trace fines; no odor.	20
-5								
25							Bottom of exploration at 25 ft. bgs.	25
-10							Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.	

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\190293_SOUTH_PARK_MARINA.GPJ June 22, 2022

Legend

- No Soil Sample Recovery
- Continuous core 1.85" ID

Water Level

▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
SB-30

Sheet 1 of 1



South Park Marina - 190293

Environmental Exploration Log

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, N of Tire Factory maintenance area

Coordinates (SPN NAD83 ft)
E:1274500 N:195900 (est)

Exploration Number

SB-31

Contractor

Equipment

Sampling Method

Ground Surface Elev. (NAVD88)

Holt

Geoprobe 7800

Percussion hammer

18' (est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Cody

Direct push

3/1/2021

NA

10.5' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Surface restored with concrete.		SB-31-0-1 *	PID=0.7 Sheen=Slight		Surface: 6 inch asphalt	
15		Boring backfilled with 3/8-in hydrated bentonite chips, NSF 60.	S1	SB-31A-3-5 *	PID=4 Sheen=Slight		FILL SAND WITH GRAVEL (SW); appears loose, slightly moist, brown, fine- to coarse-grained, subangular sand; fine to coarse, subangular to subrounded gravel; no odor.	
5			S2A					5
10			S2		PID=0.3 Sheen=Slight			
10		▽ 3/1/2021		SB-31-10-11	PID=4 Sheen=Slight		Becomes wet.	10
5			S3	SB-31-13-14.5 *	PID=850 Sheen=Heavy		TIDAL FLAT DEPOSITS SANDY SILT (ML); appears soft, wet, dark grey, low to medium plasticity; fine-grained, subangular sand; slight sulfur-like odor.	
15					PID=834 Sheen=Moderate		SAND WITH SILT (SP-SM); appears loose, wet, dark grey, fine-grained, subangular sand; low to medium plasticity fines; moderate petroleum-like odor; heavy iridescent sheen appears lighter than water.	15
							SANDY SILT (ML); appears soft, wet, dark grey, low plasticity; fine-grained, subangular sand; slight petroleum-like odor.	
0			S4	SB-31-19-20 *	PID=2 Sheen=Slight		SILTY SAND (SM); appears loose, wet, dark grey, fine-grained, subangular sand; low plasticity fines; moderate petroleum-like odor; moderate sheen appears slightly iridescent.	
20					PID=3 Sheen=No sheen		SANDY SILT (ML); appears soft, wet, dark grey, low plasticity fines; fine-grained, subangular sand; no odor.	20
							ALLUVIAL DEPOSITS SAND (SP); appears loose, wet, black, fine- to primarily medium-grained, subangular sand; trace fines; no odor. Bottom of exploration at 20 ft. bgs.	20
-5							Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.	
25								25
-10								

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\190293_SOUTH_PARK_MARINA.GPJ June 22, 2022

Legend

- No Soil Sample Recovery
- Continuous core 1.85" ID

Water Level

▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
SB-31

Sheet 1 of 1



South Park Marina - 190293

Environmental Exploration Log

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, NE boat storage/maintenance area

Coordinates (SPN NAD83 ft)
E:1274700 N:196070 (est)
Ground Surface Elev. (NAVD88)
15' (est)

Exploration Number
SB-32

Contractor

Equipment

Sampling Method

Holt

Geoprobe 7800

Percussion hammer

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Cody

Direct push

3/8/2021

NA

7.5' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0		Surface restored with spoils.	S1	SB-32-0-1 *	PID=0.6 Sheen=Slight	FILL SAND WITH SILT (SP-SM); appears loose, moist, brown, fine-grained, subangular sand; low plasticity fines; little roots and organic debris above 0.5 ft; no odor.	0	
5	10	Boring backfilled with 3/8-in hydrated bentonite chips, NSF 60.	S2	SB-32-4-5 *	PID=0.7 Sheen=Organic		5	
		3/8/2021	S3	SB-32-7-8	PID=0.5 Sheen=Organic			
10	5		S4		PID=0.9 Sheen=Organic		TIDAL FLAT DEPOSITS SANDY SILT (ML); appears soft, wet, grey to brown, low plasticity; fine-grained, subangular sand; slight sulfur-like odor.	10
			S5		PID=0.8 Sheen=No sheen		SILTY SAND (SM); appears loose, wet, grey, fine-grained, subangular sand; low plasticity fines; no odor.	15
15	0				PID=0.9 Sheen=No sheen		20	
20	-5			SB-32-18-20	PID=0.6 Sheen=No sheen	ALLUVIAL DEPOSITS SAND (SP); appears loose, wet, black, fine- to medium-grained, subangular sand; trace fines; very slight sulfur-like odor.	20	
25	-10				PID=1 Sheen=No sheen PID=0.9 Sheen=No sheen	Bottom of exploration at 20 ft. bgs.	25	

Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.

NEW STANDARD EXPLORATION LOG TEMPLATE P:\GINT\PROJECTS\190293_SOUTH_PARK_MARINA.GPJ June 22, 2022

Legend

- No Soil Sample Recovery
- Grab sample
- Continuous core 3" ID
- Continuous core 1.85" ID

Water Level

Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
SB-32

Sheet 1 of 1



South Park Marina - 190293

Environmental Exploration Log

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, W of SW corner of bathroom/laundry building

Coordinates (SPN NAD83 ft)
E:1274800 N:195940 (est)
Ground Surface Elev. (NAVD88)
16' (est)

Exploration Number

SB-33

Contractor

Equipment

Sampling Method

Holt

Geoprobe 7800

Percussion hammer

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Cody

Direct push

3/3/2021

NA

6' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Surface restored with concrete.		SB-33-0-1 *	PID=0.2 Sheen=Slight		Surface: 3 inch asphalt	
15			S1	SB-33-1-1.5	PID=0.3 Sheen=Slight		FILL SAND WITH SILT AND GRAVEL (SW-SM); appears loose, moist, light brown, fine- to coarse-grained, subangular sand; fine to coarse, subangular to subrounded gravel; low plasticity fines; no odor.	
		Boring backfilled with 3/8-in hydrated bentonite chips, NSF 60.		SB-33-3-5 *	PID=0.3 Sheen=Slight		SAND (SP); appears loose, moist, grey-brown, fine- to medium-grained, subangular sand; trace fines; no odor	
5			S2	SB-33-5.5-6.5	PID=0.6 Sheen=Slight		Becomes very moist.	5
10		3/3/2021			PID=0.5 Sheen=Very slight		TIDAL FLAT DEPOSITS SILT (ML); appears soft, moist, grey to red-brown, medium plasticity; trace organic matter; slight sulfur-like odor.	
			S3		PID=0.5 Sheen=No sheen		SILTY SAND (SM); appears loose, very moist, grey-brown, fine- to medium-grained, subangular sand; low to medium plasticity; fine content increase downward toward bottom contact; slight sulfur-like odor.	
10					PID=0.6 Sheen=No sheen		ALLUVIAL DEPOSITS SAND (SP); appears loose, wet, grey-brown, fine- to medium-grained, subangular sand; trace fines; slight sulfur-like odor.	10
5			S4		PID=2 Sheen=No sheen			
15					PID=5 Sheen=No sheen			
0			S5	SB-33-18-20	PID=2 Sheen=No sheen		Becomes brown.	15
20					PID=5 Sheen=No sheen			
-5							Bottom of exploration at 20 ft. bgs.	20
							Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.	
25								25
-10								

Legend

- No Soil Sample Recovery
- Continuous core 3" ID
- Continuous core 1.85" ID

Water Level

Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log

SB-33

Sheet 1 of 1



South Park Marina - 190293

Environmental Exploration Log

Project Address & Site Specific Location
8604 Dallas Avenue South, Seattle, WA, 98108, S of SW corner of Tire
Factore building

Coordinates (SPN NAD83 ft)
E:1274600 N:195920 (est)

Exploration Number

SB-34

Contractor

Equipment

Sampling Method

Ground Surface Elev. (NAVD88)

Holt

Geoprobe 7800

Percussion hammer

18' (est)

Operator

Exploration Method(s)

Work Start/Completion Dates

Top of Casing Elev. (NAVD88)

Depth to Water (Below GS)

Cody

Direct push

3/2/2021

NA

6' (ATD)

Depth (feet)	Elev. (feet)	Exploration Notes and Completion Details	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Surface restored with spoils.		SB-34-0-1 *	PID=0.5 Sheen=Slight		Surface: 2 inch gravel base course, 3/4" minus FILL	
15		Boring backfilled with 3/8-in hydrated bentonite chips, NSF 60.	S1	SB-34-3-4 *	PID=0.4 Sheen=Slight		SAND (SP); appears loose, moist, light brown, fine- to primarily medium-grained, subangular sand; trace fines; becomes brown at 0.5 ft bgs; no odor.	
5		▽ 3/2/2021		SB-34-5.5-6.5 *	PID=0.6 Sheen=No sheen		Becomes wet.	5
10			S2	SB-34-6.5-8.5	PID=1 Sheen=No sheen			10
10					PID=1 Sheen=No sheen		TIDAL FLAT DEPOSITS SANDY SILT (ML); appears soft, wet, dark grey, low plasticity; fine-grained, subangular sand; trace organic matter including root fragments near upper contact; slight sulfur-like odor.	
5			S3		PID=1 Sheen=No sheen		SILTY SAND (SM); appears loose, wet, dark grey, fine- to medium-grained, subangular sand; low plasticity fines; subtrace organic matter; slight sulfur-like odor.	
15				SB-34-15-17.5	PID=3 Sheen=No sheen		SILT (ML); appears soft, wet, dark grey, medium plasticity; slight sulfur-like odor.	15
			S4				ALLUVIAL DEPOSITS SAND (SP); appears loose, wet, black, fine- to primarily medium-grained, subangular sand; trace fines; slight sulfur-like odor.	
0							Bottom of exploration at 20 ft. bgs.	20
20							Note: * - Sample submitted to laboratory for analysis. Remaining samples preserved and submitted to laboratory for archival pending results.	
-5								25
25								-10

Legend

- No Soil Sample Recovery
- Continuous core 3" ID
- Continuous core 1.85" ID

Water Level

▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: David Unruh
Approved by: AJY

Exploration Log
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APPENDIX B

Phase 1 and Historical Results - Data Tables and Figures

Appendix B – Phase 1 and Historical Results - Data Tables and Figures

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APPENDIX B

Tables

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293 , South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location											
					Date Sample Depth	B-01 11/17/2017 B-01-2-3 2 - 3 ft	B-01 11/17/2017 B-01-3.5-4.5 3.5 - 4.5 ft	B-02 11/17/2017 B-02-2.5-3 2.5 - 3 ft	B-03 11/17/2017 B-03-0-1 0 - 1 ft	B-03 11/17/2017 B-03-2-3 2 - 3 ft	B-03 11/17/2017 B-03-5-6 5 - 6 ft	B-04 11/17/2017 B-04-0-1 0 - 1 ft	B-04 11/17/2017 B-04-2-2.5 2 - 2.5 ft	B-04 11/17/2017 B-04-5-6 5 - 6 ft	HA-01 03/11/2021 HA-1-0-1 0 - 1 ft	HA-01 03/11/2021 HA-1-2-3 2 - 3 ft
Metals																
Arsenic	7440-38-2	mg/kg	7.3	SL-10	--	--	--	--	--	--	--	--	--	7.4 J	4.87 J	6.57 J
Cadmium	7440-43-9	mg/kg	0.77	SL-10	--	--	--	--	--	--	--	--	--	3.25	0.68	3.4
Chromium	7440-47-3	mg/kg	48.2	SL-10	--	--	--	--	--	--	--	--	--	65.4	18	71.3
Copper	7440-50-8	mg/kg	36.4	SL-10	--	--	--	--	--	--	--	--	--	135	23.5	148
Lead	7439-92-1	mg/kg	50	SL-9	--	--	--	--	--	--	--	--	--	426 J	129 J	512 J
Mercury	7439-97-6	mg/kg	0.07	SL-10	--	--	--	--	--	--	--	--	--	1.96 J	0.253 J	2.42 J
Nickel	7440-02-0	mg/kg	48	SL-10	--	--	--	--	--	--	--	--	--	23.3 J	13.3 J	18 J
Silver	7440-22-4	mg/kg	0.323	SL-3	--	--	--	--	--	--	--	--	--	--	--	--
Zinc	7440-66-6	mg/kg	86	SL-9	--	--	--	--	--	--	--	--	--	338	342	471
Butyl Tin Ions																
Dibutyltin Ion	14488-53-0	mg/kg	--	--	--	--	--	--	--	--	--	--	--	0.0802	0.0105	0.0243
Monobutyltin	78763-54-9	mg/kg	--	--	--	--	--	--	--	--	--	--	--	0.0505	0.00619	0.0165
Tetrabutyltin	1461-25-2	mg/kg	--	--	--	--	--	--	--	--	--	--	--	< 0.00494 U	< 0.00498 U	< 0.00495 U
Tributyltin Ion	36643-28-4	mg/kg	0.0021	SL-8	--	--	--	--	--	--	--	--	--	0.0507	0.000985 J	0.0103
Polychlorinated Biphenyl Aroclors																
Aroclor 1016	12674-11-2	mg/kg	--	--	< 0.55 U	< 0.054 U	< 0.58 U	< 1.1 U	< 1.1 U	< 1.2 U	< 0.057 U	< 1.1 U	< 6.3 U	< 0.4 U	< 0.223 U	< 0.232 U
Aroclor 1221	11104-28-2	mg/kg	--	--	< 0.55 U	< 0.054 U	< 0.58 U	< 1.1 U	< 1.1 U	< 1.2 U	< 0.057 U	< 1.1 U	< 6.3 U	< 0.4 U	< 0.223 U	< 0.232 U
Aroclor 1232	11141-16-5	mg/kg	--	--	< 0.55 U	< 0.054 U	< 0.58 U	< 1.1 U	< 1.1 U	< 1.2 U	< 0.057 U	< 1.1 U	< 6.3 U	< 0.4 U	< 0.223 U	< 0.232 U
Aroclor 1242	53469-21-9	mg/kg	--	--	< 0.55 U	< 0.054 U	< 0.58 U	< 1.1 U	3.9	6.2	< 0.057 U	4	< 6.3 U	< 0.4 U	< 0.223 U	< 0.232 U
Aroclor 1248	12672-29-6	mg/kg	--	--	< 0.55 U	< 0.054 U	< 0.58 U	< 1.1 U	< 1.1 U	< 1.2 U	< 0.057 U	< 1.1 U	< 6.3 U	< 0.4 U	< 0.223 U	< 0.232 U
Aroclor 1254	11097-69-1	mg/kg	4.7	1.7	3.5	14	9.8	19	34	5	5.23	6.17				
Aroclor 1260	11096-82-5	mg/kg	2.1	1.7	< 0.58 U	6.1	2.8	7.2	0.64	5.3	10	2.24	1.34	2.14		
Aroclor 1262	37324-23-5	mg/kg	--	--	--	--	--	--	--	--	--	--	< 0.4 U	< 0.223 U	< 0.232 U	
Aroclor 1268	11100-14-4	mg/kg	--	--	--	--	--	--	--	--	--	--	< 0.4 U	< 0.223 U	< 0.232 U	
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	1.1E-05	SL-3	8.18	3.54	5.24	22.9	18.7	33.8	1.48	30.5	59.8	8.64	7.35	9.12
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	1.1E-05	SL-3	6.8	3.4	3.5	20.1	16.5	31.4	1.34	28.3	44	7.24	6.57	8.31
Aroclor 1016 (OC normalized)	12674-11-2-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221 (OC normalized)	11104-28-2-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232 (OC normalized)	11141-16-5-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242 (OC normalized)	53469-21-9-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248 (OC normalized)	12672-29-6-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254 (OC normalized)	11097-69-1-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1260 (OC normalized)	11096-82-5-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1262 (OC normalized)	37324-23-5-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1268 (OC normalized)	11100-14-4-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs (Sum of Aroclors) OC normalized	T-PCBs-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyl Congeners																
Total PCB Congeners	T-PCBCong	mg/kg	1.1E-05	SL-3	5.91	--	--	14.4	--	--	--	107	--	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	6.93E-09	SL-3	0.000158	--	--	0.000428	--	--	--	0.00214 J	--	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	6.93E-09	SL-3	0.000161	--	--	0.000430	--	--	--	0.00215 J	--	--	--	--
Dioxins/Furans																
Total CDD TEQ (ND = 1/2 RDL)	CDD-TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	--	--	--	--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF-TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10	--	--	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10	--	--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons																
1-Methylnaphthalene	90-12-0	mg/kg	34.5	SL-1	--	--	--	--	--	--	--	--	--	0.0168	0.0225	0.0234
2-Methylnaphthalene	91-57-6	mg/kg	0.67	SL-8	--	--	--	--	--	--	--	--	--	0.028	0.0355	0.0278
Acenaphthene	83-32-9	mg/kg	0.5	SL-8	--	--	--	--	--	--	--	--	--	0.0057 J	0.00306 J	0.00496 J
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8	--	--	--	--	--	--	--	--	--	< 0.015 U	0.00627	0.00989 J
Anthracene	120-12-7	mg/kg	0.96	SL-8	--	--	--	--	--	--	--	--	--	0.00908 J	0.0139	0.00793 J
Benzo(a,h)perylene	191-24-2	mg/kg	0.67	SL-8	--	--	--	--	--	--	--	--	--	0.0985	0.108	0.0726
Fluoranthene	206-44-0	mg/kg	1.7	SL-8	--	--	--	--	--	--	--	--	--	0.11	0.053	0.1
Fluorene	86-73-7	mg/kg	0.54	SL-8	--	--	--	--	--	--	--	--	--	0.0104 J	0.0054	0.00625 J
Naphthalene	91-20-3	mg/kg	0.0389	SL-3	--	--	--	--	--	--	--	--	--	0.0412	< 0.00623 U	0.0286
Phenanthrene	85-01-8	mg/kg	1.5	SL-8	--	--	--	--	--	--	--	--	--	0.0656	0.0541	0.246
Pyrene	129-00-0	mg/kg	2.6	SL-8	--	--	--	--	--	--	--	--	--	0.106	0.0589	0.103
Benzo(a)anthracene	56-55-3	mg/kg	--	--	--	--	--	--	--	--	--	--	--	0.0469	0.0222	0.0359
Benzo(a)pyrene	50-32-9	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--	--	--	0.0723	0.0412	0.0528
Benzo(b)fluoranthene	205-99-2	mg/kg	--	--	--	--	--	--	--	--	--	--	--	0.0823	0.0618	0.0588
Benzo(i)fluoranthene	205-82-3	mg/kg	--	--	--	--	--	--	--	--	--	--	--	0.0427	0.0324	0.0284
Benzo(k)fluoranthene	207-08-9	mg/kg	--	--	--	--	--	--	--	--	--	--	--	0.0401	0.023	0.0268
Chrysene	218-01-9	mg/kg	--	--	--	--	--	--	--	--	--	--	--	0.0825	0.0622	0.071
Dibenzo(a,h)anthracene	53-70-3	mg/kg	--	--	--	--	--	--	--	--	--	--	--	0.0168	0.0136	0.0131 J
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	--	--	--	--	--	--	--	--	--	--	--	0.0681	0.0744	0.0516
Total Benzofluoranthenes	TOTBFA	mg/kg	3.2	SL-8	--	--	--	--	--	--	--	--	--	0.164	0.116	0.117
Total HPAHs	T-HPAH	mg/kg	12	SL-8	--	--	--	--	--	--	--	--	--	0.724	0.518	0.586 J
Total LPAHs	T-LPAH	mg/kg	5.2	SL-8	--	--	--	--	--	--	--	--	--	0.132 J	0.143 J	0.304 J

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293 , South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	HA-02	MW-04	MW-04	MW-05	MW-06	MW-06	MW-07	MW-07	MW-07	MW-08	MW-08
					Date Sample	03/11/2021	03/04/2021	03/04/2021	03/05/2021	03/05/2021	03/09/2021	03/09/2021	03/09/2021	03/09/2021	03/09/2021	03/09/2021
					Depth	HA-2-2-3	MW-4-0-1	MW-4-4-5	MW-5-0-1	MW-6-0-1	MW-6-4-5	MW-7-0-1	MW-7-3-5	MW-7-5-6	MW-8-0-1	MW-8-3-5
Metals																
Arsenic	7440-38-2	mg/kg	7.3	SL-10		3.81 J	5.03	1.48	20.7	6.81	2.44	3.71 J	2.26	2.03 J	5.42 J	2.62
Cadmium	7440-43-9	mg/kg	0.77	SL-10		0.96	0.86	0.24	2.09	0.35	0.09 J	0.25	0.06 J	0.06 J	0.48	0.06 J
Chromium	7440-47-3	mg/kg	48.2	SL-10		23.2	33.1	20.3	50.2	17.9	15.1	14.6 J	10.5	17.9 J	10.3 J	9.14
Copper	7440-50-8	mg/kg	36.4	SL-10		27.9	66.3	8.76	135	99.9	31.1	65.3	15	18.1	45.7	12.8
Lead	7439-92-1	mg/kg	50	SL-9		179 J	587 J	23.4	313 J	64.8 J	19.7 J	40 J	8.22	13.3 J	206 J	1.93
Mercury	7439-97-6	mg/kg	0.07	SL-10		0.676 J	0.997	--	0.392	0.0668	0.0162 J	0.0469 J	--	0.0252 J	0.174 J	--
Nickel	7440-02-0	mg/kg	48	SL-10		8.98 J	16.6	6.71	14.9	15.7	11.7	16.3 J	7.9	7.97 J	15.8 J	8.9
Silver	7440-22-4	mg/kg	0.323	SL-3		--	--	--	--	--	--	--	--	--	--	--
Zinc	7440-66-6	mg/kg	86	SL-9		184	124	43	337	127	38.9	71.7	36.8	47.5	90.2	21.3
Butyl Tin Ions																
Dibutyltin Ion	14488-53-0	mg/kg				< 0.0057 U	--	--	0.0564 J	--	--	--	--	--	0.00309 J	--
Monobutyltin	78763-54-9	mg/kg				0.00342 J	--	--	0.0547	--	--	--	--	--	0.00297 J	--
Tetrabutyltin	1461-25-2	mg/kg				< 0.00493 U	--	--	< 0.05 U	--	--	--	--	--	< 0.005 U	--
Tributyltin Ion	36643-28-4	mg/kg	0.0021	SL-8		< 0.0038 U	--	--	0.0894	--	--	--	--	--	0.00291 J	--
Polychlorinated Biphenyl Aroclors																
Aroclor 1016	12674-11-2	mg/kg				< 0.399 U	< 0.217 U	< 0.11 U	< 0.217 U	< 0.0199 U	< 0.004 U	< 0.004 U	--	< 0.004 U	< 0.004 U	--
Aroclor 1221	11104-28-2	mg/kg				< 0.399 U	< 0.217 U	< 0.11 U	< 0.217 U	< 0.0199 U	< 0.004 U	< 0.004 U	--	< 0.004 U	< 0.004 U	--
Aroclor 1232	11141-16-5	mg/kg				< 0.399 U	< 0.217 U	< 0.11 U	< 0.217 U	< 0.0199 U	< 0.004 U	< 0.004 U	--	< 0.004 U	< 0.004 U	--
Aroclor 1242	53469-21-9	mg/kg				< 0.399 U	< 0.217 U	< 0.11 U	< 0.217 U	< 0.0199 U	< 0.004 U	< 0.004 U	--	< 0.004 U	< 0.004 U	--
Aroclor 1248	12672-29-6	mg/kg				< 0.399 U	< 0.217 U	< 0.11 U	< 0.217 U	< 0.0199 U	< 0.004 U	< 0.004 U	--	< 0.004 U	< 0.004 U	--
Aroclor 1254	11097-69-1	mg/kg				6.1	2.41	2.2	2.67	0.0628	0.06	0.0222	--	0.0124	0.021	--
Aroclor 1260	11096-82-5	mg/kg				1.08	1.78	1.34	1.08	0.168	0.0843	0.0703	--	0.0298	0.0591	--
Aroclor 1262	37324-23-5	mg/kg				< 0.399 U	< 0.217 U	< 0.11 U	< 0.217 U	< 0.0199 U	< 0.004 U	< 0.004 U	--	< 0.004 U	< 0.004 U	--
Aroclor 1268	11100-14-4	mg/kg				< 0.399 U	< 0.217 U	< 0.11 U	< 0.217 U	< 0.0199 U	< 0.004 U	< 0.004 U	--	< 0.004 U	< 0.004 U	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	1.1E-05	SL-3		8.58	4.95	3.93	4.51	0.300	0.158	0.107	--	0.0562	0.0941	--
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	1.1E-05	SL-3		7.18	4.19	3.54	3.75	0.231	0.144	0.0925	--	0.0422	0.0801	--
Aroclor 1016 (OC normalized)	12674-11-2-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221 (OC normalized)	11104-28-2-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232 (OC normalized)	11141-16-5-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242 (OC normalized)	53469-21-9-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248 (OC normalized)	12672-29-6-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254 (OC normalized)	11097-69-1-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1260 (OC normalized)	11096-82-5-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1262 (OC normalized)	37324-23-5-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1268 (OC normalized)	11100-14-4-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Total PCBs (Sum of Aroclors) OC normalized	T-PCBs-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyl Congeners																
Total PCB Congeners	T-PCBcong	mg/kg	1.1E-05	SL-3		--	5.65	--	--	--	--	--	--	--	0.216	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	6.93E-09	SL-3		--	0.000240	--	--	--	--	--	--	--	0.0000770	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	6.93E-09	SL-3		--	0.000241	--	--	--	--	--	--	--	0.0000770	--
Dioxins/Furans																
Total CDD TEQ (ND = 1/2 RDL)	CDD-TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CF-TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons																
1-Methylnaphthalene	90-12-0	mg/kg	34.5	SL-1		0.00237 J	0.00706 J	--	0.00643	< 0.00498 U	< 0.00496 U	< 0.00498 U	--	< 0.00496 U	< 0.005 U	--
2-Methylnaphthalene	91-57-6	mg/kg	0.67	SL-8		0.00543	0.0111 J	--	< 0.005 U	< 0.00498 U	< 0.00496 U	< 0.00498 U	--	< 0.00496 U	< 0.005 U	--
Acenaphthene	83-32-9	mg/kg	0.5	SL-8		< 0.005 U	< 0.015 U	--	0.00143 J	< 0.00498 U	< 0.00496 U	< 0.00498 U	--	< 0.00496 U	< 0.005 U	--
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8		0.00211 J	0.00339 J	--	0.00252 J	0.00192 J	< 0.00496 U	0.00364 J	--	< 0.00496 U	0.00549	--
Anthracene	120-12-7	mg/kg	0.96	SL-8		0.00397 J	0.00935 J	--	0.00755	0.00275 J	< 0.00496 U	0.00467 J	--	< 0.00496 U	0.00761	--
Benzo(a,h)perylene	191-24-2	mg/kg	0.67	SL-8		0.0307	0.0358	--	0.0281	0.0199	0.00241 J	0.017	--	0.00129 J	0.0594	--
Fluoranthene	208-44-0	mg/kg	1.7	SL-8		0.00458 J	0.0356	--	0.0419	0.0158	0.00173 J	0.0181	--	0.00166 J	0.263	--
Fluorene	86-73-7	mg/kg	0.54	SL-8		< 0.005 U	< 0.015 U	--	< 0.005 U	< 0.00498 U	< 0.00496 U	0.00092 J	--	< 0.00496 U	0.00094 J	--
Naphthalene	91-20-3	mg/kg	0.0389	SL-3		0.00374 J	< 0.00633 U	--	< 0.00804 U	< 0.00498 U	< 0.00496 U	0.00153 J	--	< 0.00496 U	0.00198 J	--
Phenanthrene	85-01-8	mg/kg	1.5	SL-8		0.00447 J	0.0289	--	0.0251	0.00623	< 0.00496 U	0.0101	--	0.00154 J	0.00793	--
Pyrene	129-00-0	mg/kg	2.6	SL-8		0.00481 J	0.0362	--	0.0398	0.0166	0.00191 J	0.0206	--	0.00177 J	0.303	--
Benzo(a)anthracene	56-55-3	mg/kg				0.00324 J	0.0196	--	0.0145	0.00827	0.00098 J	0.00996	--	< 0.00496 U	0.0165	--
Benzo(a)pyrene	50-32-9	mg/kg	0.00031	SL-3		0.00356 J	0.0252	--	0.0191	0.0124	0.00167 J	0.0163	--	0.00128 J	0.04	--
Benzo(b)fluoranthene	205-99-2	mg/kg				0.00624	0.0274	--	0.0265	0.0254	0.00178 J	0.0173	--	0.00144 J	0.0611	--
Benzo(k)fluoranthene	205-82-3	mg/kg				0.00335 J	0.0147 J	--	0.0114	0.0113	0.00114 J	0.011	--	< 0.00496 U	0.0277	--
Chrysene	207-08-9	mg/kg				0.00295 J	0.0131 J	--	0.0111	0.01	0.00081 J	0.00986	--	< 0.00496 U	0.0275	--
Dibenzo(a,h)anthracene	218-01-9	mg/kg				0.00548	0.0331	--	0.0368	0.0194	0.00167 J	0.0172	--	0.00152 J	0.0391	--
Indeno(1,2,3-cd)pyrene	53-70-3	mg/kg				0.00226 J	0.00688 J	--	0.00598	0.00392 J	< 0.00496 U	0.00355 J	--	< 0.00496 U	0.103	--
Total Benzo(a)anthracenes	TOTBA	mg/kg	3.2	SL-8		0.0084	0.0226	--	0.0207	0.0151	0.00245 J	0.0119	--	< 0.00496 U	0.049	--
Total HPAHs	T-HPAH	mg/kg	12	SL-8		0.0125	0.0584	--	0.0522	0.0454	0.00386 J	0.0376	--	< 0.00991 U	0.115	--
Total LPAHs	T-LPAH	mg/kg	5.2	SL-8		0.0702 J	0.272 J	--	0.258	0.157 J	0.0167 J	0.142 J	--	0.00896 J	0.386	--
						0.0143 J	0.0416 J	--	0.0366 J	0.0109 J	< 0.00496 U	0.0209 J	--	0.00154 J	0.0240 J	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293 , South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	MW-09	MW-09	MW-10	MW-11	MW-11	MW-12	MW-12	MW-13	MW-13	MW-14	MW-14
					Date	03/09/2021	03/09/2021	03/08/2021	03/08/2021	03/03/2021	03/03/2021	03/01/2021	03/01/2021	03/01/2021	03/01/2021	
					Sample Depth	MW-9-0-1	MW-9-5-6	MW-10-0-1	MW-11-0-1	MW-11-3-5	MW-12-0-1	MW-12-3-5	MW-13-0-1	MW-13-3-5	MW-14A-0-1	MW-14-4-5-5
Metals																
Arsenic	7440-38-2	mg/kg	7.3	SL-10		1.84 J	5.58 J	5.08	5.75	--	3.59	10.3	3.77 J	2.23 J	27.4 J	2.14 J
Cadmium	7440-43-9	mg/kg	0.77	SL-10		0.04 J	< 0.12 U	0.26	0.66	--	0.15	0.67	0.07 J	0.04 J	0.3	0.11
Chromium	7440-47-3	mg/kg	48.2	SL-10		14.3 J	9.5 J	12.4	15.1	--	23.1	14.8	7.88	9.85	34.3	9.81
Copper	7440-50-8	mg/kg	36.4	SL-10		12.6	15.5	31.5	71.3	--	22.9	88.1	9.65 J	10.2 J	292	14 J
Lead	7439-92-1	mg/kg	50	SL-9		1.81 J	2 J	34.4	23.4	--	39.4 J	332 J	9.53 J	4.98 J	42 J	29.5 J
Mercury	7439-97-6	mg/kg	0.07	SL-10		0.0103 J	0.0168 J	0.0382	0.0339	--	0.0276	0.302	0.0192 J	0.0161 J	0.187 J	0.0142 J
Nickel	7440-02-0	mg/kg	48	SL-10		22.1 J	8.3 J	12.4	19.7	--	32.3	12	6.57	8.34	52 J	8.34
Silver	7440-22-4	mg/kg	0.323	SL-3		--	--	--	--	--	--	--	--	--	--	--
Zinc	7440-66-6	mg/kg	86	SL-9		24.6	21.2	60.5	104	--	48.7	134	21.7	23.1	145	44
Butyl Tin Ions																
Dibutyltin Ion	14488-53-0	mg/kg				< 0.00571 U	0.00265 J	< 0.00576 U	0.0232	--	--	--	--	--	0.0275	< 0.00578 U
Monobutyltin	78763-54-9	mg/kg				< 0.00403 U	0.00197 J	< 0.00407 U	0.00868	--	--	--	--	--	0.016	< 0.00408 U
Tetrabutyltin	1461-25-2	mg/kg				< 0.00494 U	< 0.00497 U	< 0.00498 U	< 0.00497 U	--	--	--	--	--	< 0.00495 U	< 0.005 U
Tributyltin Ion	36643-28-4	mg/kg	0.0021	SL-8		< 0.00381 U	0.00317 J	0.00058 J	0.0496	--	--	--	--	--	0.0136	< 0.00386 U
Polychlorinated Biphenyl Aroclors																
Aroclor 1016	12674-11-2	mg/kg				< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.02 U	< 0.004 U
Aroclor 1221	11104-28-2	mg/kg				< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.02 U	< 0.004 U
Aroclor 1232	11141-16-5	mg/kg				< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.02 U	< 0.004 U
Aroclor 1242	53469-21-9	mg/kg				< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.02 U	< 0.004 U
Aroclor 1248	12672-29-6	mg/kg				< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.02 U	< 0.004 U
Aroclor 1254	11097-69-1	mg/kg				< 0.004 U	< 0.004 U	0.0129	< 0.004 U	0.008	0.015	< 0.004 U	< 0.004 U	< 0.004 U	0.0266	0.0026 J
Aroclor 1260	11096-82-5	mg/kg				0.0009 J	< 0.004 U	0.0398	0.0799	0.0154	0.013	0.0392	< 0.004 U	< 0.004 U	0.0249	0.004 J
Aroclor 1262	37324-23-5	mg/kg				< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.02 U	< 0.004 U
Aroclor 1268	11100-14-4	mg/kg				< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.02 U	< 0.004 U
Total PCB Aroclors (ND=1/2 RDL)	T-PCBs1/2U	mg/kg	1.1E-05	SL-3		0.0169 J	< 0.004 U	0.0667	0.0959	0.0374	0.0366	0.0682	< 0.004 U	< 0.004 U	0.122	0.0206 J
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	1.1E-05	SL-3		0.000900 J	< 0.004 U	0.0527	0.0799	0.0234	0.0226	0.0542	< 0.004 U	< 0.004 U	0.0515	0.00660 J
Aroclor 1016 (OC normalized)	12674-11-2-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221 (OC normalized)	11104-28-2-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232 (OC normalized)	11141-16-5-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242 (OC normalized)	53469-21-9-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248 (OC normalized)	12672-29-6-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254 (OC normalized)	11097-69-1-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1260 (OC normalized)	11096-82-5-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1262 (OC normalized)	37324-23-5-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1268 (OC normalized)	11100-14-4-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Total PCBs (Sum of Aroclors) OC normalized	T-PCBs-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyl Congeners																
Total PCB Congeners	T-PCBCong	mg/kg	1.1E-05	SL-3		--	--	0.0363	--	--	--	--	--	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	6.93E-09	SL-3		--	--	0.00000172	--	--	--	--	--	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	6.93E-09	SL-3		--	--	0.00000179	--	--	--	--	--	--	--	--
Dioxins/Furans																
Total CDD TEQ (ND = 1/2 RDL)	CDD-TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF-TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons																
1-Methylnaphthalene	90-12-0	mg/kg	34.5	SL-1		< 0.005 U	< 0.00498 U	< 0.005 U	< 0.0249 U	--	< 0.00498 U	< 0.005 U	< 0.00497 U	< 0.005 U	0.00459 J	< 0.00498 U
2-Methylnaphthalene	91-57-6	mg/kg	0.67	SL-8		< 0.005 U	< 0.00498 U	< 0.005 U	< 0.0249 U	--	< 0.00498 U	< 0.005 U	< 0.00497 U	< 0.005 U	< 0.00498 U	< 0.00498 U
Acenaphthene	83-32-9	mg/kg	0.5	SL-8		< 0.005 U	< 0.00498 U	< 0.005 U	< 0.0249 U	--	0.00068 J	< 0.005 U	< 0.00497 U	< 0.005 U	0.00433 J	< 0.00498 U
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8		< 0.005 U	< 0.00498 U	0.00427 J	0.00559 J	--	< 0.00498 U	0.00203 J	< 0.00497 U	< 0.005 U	0.00239 J	< 0.00498 U
Anthracene	120-12-7	mg/kg	0.96	SL-8		< 0.005 U	< 0.00498 U	0.00521	0.00689 J	--	0.00105 J	0.00153 J	< 0.00497 U	< 0.005 U	0.00827	< 0.00498 U
Benzo(a,h)perylene	191-24-2	mg/kg	0.67	SL-8		< 0.005 U	< 0.00498 U	0.065	0.14	--	0.0067	0.0142	0.00935	0.0106	0.027	0.00296 J
Fluoranthene	208-44-0	mg/kg	1.7	SL-8		< 0.005 U	0.00225 J	0.0136	0.0299	--	0.00864	0.0197	0.0102	0.0106	0.061	0.00237 J
Fluorene	86-73-7	mg/kg	0.54	SL-8		< 0.005 U	< 0.00498 U	< 0.005 U	< 0.0249 U	--	< 0.00498 U	< 0.005 U	< 0.00497 U	< 0.005 U	0.00521	< 0.00498 U
Naphthalene	91-20-3	mg/kg	0.0389	SL-3		< 0.005 U	< 0.00498 U	0.00132 J	< 0.00552 U	--	< 0.00474 U	< 0.00486 U	< 0.00497 U	< 0.005 U	0.00307 J	< 0.00498 U
Phenanthrene	85-01-8	mg/kg	1.5	SL-8		< 0.005 U	0.00398 J	0.00366 J	0.0117 J	--	< 0.00498 U	0.0124	0.00351 J	0.00378 J	0.0394	0.00203 J
Pyrene	129-00-0	mg/kg	2.6	SL-8		< 0.005 U	0.0028 J	0.0172	0.0399	--	0.0119	0.0241	0.0132	0.0145 J	0.0533	0.0029 J
Benzo(a)anthracene	56-55-3	mg/kg				< 0.005 U	0.00091 J	0.0126	0.0181 J	--	0.00356 J	0.0112	0.00469 J	0.00579	0.0277	0.00141 J
Benzo(a)pyrene	50-32-9	mg/kg	0.00031	SL-3		< 0.005 U	0.00088 J	0.0627	0.0404	--	0.00587	0.0127	0.0077	0.00909 J	0.0307	0.00189 J
Benzo(b)fluoranthene	205-99-2	mg/kg				< 0.005 U	< 0.00498 U	0.107	0.0495	--	0.00574	0.0137	0.00676	0.00744	0.0305	0.00213 J
Benzo(k)fluoranthene	205-82-3	mg/kg				< 0.005 U	< 0.00498 U	0.0443	0.022 J	--	0.00375 J	0.00637	0.00412 J	0.00525	0.0182	0.00166 J
Chrysene	218-01-9	mg/kg				< 0.005 U	< 0.00498 U	0.0429	0.0184 J	--	0.00332 J	0.0067	0.00331 J	0.00466 J	0.0178	0.00126 J
Dibenzo(a,h)anthracene	53-70-3	mg/kg				< 0.005 U	0.00167 J	0.0423	0.0568	--	0.00663	0.0159	0.0067	0.00739	0.0413	0.00198 J
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg				< 0.005 U	< 0.00498 U	0.012	0.0171 J	--	0.0019 J	0.00326 J	0.00174 J	0.00199 J	0.00565	0.00149 J
Total Benzofluoranthenes	TOTBFA	mg/kg	3.2	SL-8		< 0.00999 U	< 0.00996 U	0.194	0.089	--	0.0128	0.0303	0.0154	0.0174	0.0687	0.00511 J
Total HPAHs	T-HPAH	mg/kg	12	SL-8		< 0.005 U	0.00851 J	0.475	0.480 J	--	0.0627 J	0.144 J	0.0700 J	0.0849 J	0.336	0.0208 J
Total LPAHs	T-LPAH	mg/kg	5.2	SL-8		< 0.005 U	0.00398 J	0.0145 J	0.0242 J	--	0.00173 J	0.0160 J	0.00351 J	0.00378 J	0.0627 J	0.00514 J

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293 , South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	MW-15	MW-15	SB-02	SB-11	SB-12	SB-13	SB-13	SB-14	SB-15	SB-16	SB-18
					Date Sample Depth	03/03/2021 MW-15-0-1	03/03/2021 MW-15-3-5	10/01/2007 SB-02-1	10/01/2007 SB-11-2.5	09/28/2007 SB-12-1.5	10/01/2007 SB-13-1	10/01/2007 SB-13-3.5	10/01/2007 SB-14-3	10/01/2007 SB-15-3.5	10/01/2007 SB-16-3.5	07/27/2011 SB18-5.0-072711
Metals																
Arsenic	7440-38-2	mg/kg	7.3	SL-10		3.24	1.47	1.5	6.7	7.2	1.7	1.3	2.3	4.5	9.4	--
Cadmium	7440-43-9	mg/kg	0.77	SL-10		0.2	< 0.1 U	0.087	31.4	14.6	0.118	0.135	0.501	4.97	23.5	--
Chromium	7440-47-3	mg/kg	48.2	SL-10		8.27	7.75	9	465	212	6.08	6.04	24.2	192	415	--
Copper	7440-50-8	mg/kg	36.4	SL-10		20	8.39	8.9	198	111	8.71	8.02	9.72	69.6	132	--
Lead	7439-92-1	mg/kg	50	SL-9		24.2 J	1.18 J	4.53	3100 J	1000 J	2.05	1.18	198	1030	3180	--
Mercury	7439-97-6	mg/kg	0.07	SL-10		0.0183 J	0.00523 J	0.011	29.5	3.96	0.013	0.006	0.327	5.81	25.2	--
Nickel	7440-02-0	mg/kg	48	SL-10		8.07	6.63	--	--	--	--	--	--	--	--	--
Silver	7440-22-4	mg/kg	0.323	SL-3		--	--	0.052	0.299	0.191	0.056	0.038	0.064	0.136	0.23	--
Zinc	7440-66-6	mg/kg	86	SL-9		93.1	17.9	20.3	1480	649	42.1	30.6	118	515	1510	--
Butyl Tin Ions																
Dibutyltin Ion	14488-53-0	mg/kg				< 0.00578 U	< 0.00577 U	--	--	--	--	--	--	--	--	--
Monobutyltin	78763-54-9	mg/kg				< 0.00408 U	< 0.00407 U	--	--	--	--	--	--	--	--	--
Tetrabutyltin	1461-25-2	mg/kg				< 0.005 U	< 0.00499 U	--	--	--	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	mg/kg	0.0021	SL-8		< 0.00386 U	< 0.00385 U	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyl Aroclors																
Aroclor 1016	12674-11-2	mg/kg				< 0.004 U	< 0.004 U	< 0.0099 U	< 1 U	< 0.099 U	< 0.0099 U	< 0.01 U	< 0.1 U	< 1 U	< 1 U	--
Aroclor 1221	11104-28-2	mg/kg				< 0.004 U	< 0.004 U	--	--	--	--	--	--	--	--	--
Aroclor 1232	11141-16-5	mg/kg				< 0.004 U	< 0.004 U	--	--	--	--	--	--	--	--	--
Aroclor 1242	53469-21-9	mg/kg				< 0.004 U	< 0.004 U	--	--	--	--	--	--	--	--	--
Aroclor 1248	12672-29-6	mg/kg				< 0.004 U	< 0.004 U	< 0.0099 U	< 1 U	< 0.099 U	< 0.0099 U	< 0.01 U	< 0.1 U	< 1 U	< 1 U	--
Aroclor 1254	11097-69-1	mg/kg				0.0834	< 0.004 U	< 0.0099 U	29	4.9	< 0.0099 U	< 0.01 U	5.5	12	36	--
Aroclor 1260	11096-82-5	mg/kg				0.0398	< 0.004 U	< 0.0099 U	< 1 U	< 0.099 U	0.0084	< 0.01 U	5.1	< 1 U	< 1 U	--
Aroclor 1262	37324-23-5	mg/kg				< 0.004 U	< 0.004 U	--	--	--	--	--	--	--	--	--
Aroclor 1268	11100-14-4	mg/kg				< 0.004 U	< 0.004 U	--	--	--	--	--	--	--	--	--
Total PCB Aroclors (ND=1/2 RDL)	T-PCBs1/2U	mg/kg	1.1E-05	SL-3		0.137	< 0.004 U	< 0.0099 UJ	30.5 J	5.05 J	0.0233 J	< 0.01 UJ	10.7 J	13.5 J	37.5 J	--
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	1.1E-05	SL-3		0.123	< 0.004 U	< 0.0099 U	29	4.9	0.0084	< 0.01 U	10.6	12	36	--
Aroclor 1016 (OC normalized)	12674-11-2-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221 (OC normalized)	11104-28-2-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232 (OC normalized)	11141-16-5-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242 (OC normalized)	53469-21-9-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248 (OC normalized)	12672-29-6-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254 (OC normalized)	11097-69-1-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1260 (OC normalized)	11096-82-5-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1262 (OC normalized)	37324-23-5-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Aroclor 1268 (OC normalized)	11100-14-4-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Total PCBs (Sum of Aroclors) OC normalized	T-PCBs-OC	mg/kg-OC				--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyl Congeners																
Total PCB Congeners	T-PCBCong	mg/kg	1.1E-05	SL-3		--	--	--	--	--	--	--	--	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	6.93E-09	SL-3		--	--	--	--	--	--	--	--	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	6.93E-09	SL-3		--	--	--	--	--	--	--	--	--	--	--
Dioxins/Furans																
Total CDD TEQ (ND = 1/2 RDL)	CDD-TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF-TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons																
1-Methylnaphthalene	90-12-0	mg/kg	34.5	SL-1		< 0.00499 U	< 0.00497 U	--	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	mg/kg	0.67	SL-8		< 0.00499 U	< 0.00497 U	< 0.009 U	2	0.26	< 0.0093 U	< 0.0098 U	< 0.48 U	1.1	3	--
Acenaphthene	83-32-9	mg/kg	0.5	SL-8		0.0071 J	0.001 J	< 0.009 U	0.25 J	< 0.099 U	< 0.0093 U	< 0.0098 U	< 0.48 U	< 0.99 U	< 0.92 U	--
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8		0.00168 J	< 0.00497 U	< 0.009 U	< 0.25 U	< 0.099 U	< 0.0093 U	< 0.0098 U	< 0.48 U	< 0.99 U	< 0.92 U	--
Anthracene	120-12-7	mg/kg	0.96	SL-8		0.00182 J	< 0.00497 U	< 0.009 U	0.33	0.065 J	< 0.0093 U	< 0.0098 U	< 0.48 U	< 0.99 U	< 0.92 U	--
Benzo(a,h)perylene	191-24-2	mg/kg	0.67	SL-8		0.0146	< 0.00497 U	< 0.009 U	< 0.25 U	0.13	< 0.0093 U	< 0.0098 U	< 0.48 U	< 0.99 U	< 0.92 U	--
Fluoranthene	208-44-0	mg/kg	1.7	SL-8		0.0181	< 0.00497 U	< 0.009 U	0.46	0.12	< 0.0093 U	< 0.0098 U	< 0.48 U	0.3 J	0.5 J	--
Fluorene	86-73-7	mg/kg	0.54	SL-8		< 0.00499 U	< 0.00497 U	< 0.009 U	< 0.25 U	0.064 J	< 0.0093 U	< 0.0098 U	< 0.48 U	0.39 J	0.67 J	--
Naphthalene	91-20-3	mg/kg	0.0389	SL-3		< 0.00769 U	< 0.011 U	< 0.009 U	2.5	0.36	< 0.0093 U	< 0.0098 U	< 0.48 U	0.36 J	2.4	--
Phenanthrene	85-01-8	mg/kg	1.5	SL-8		0.00793	< 0.00497 U	< 0.009 U	1.3	0.16	< 0.0093 U	< 0.0098 U	< 0.48 U	0.98 J	1.4	--
Pyrene	129-00-0	mg/kg	2.6	SL-8		0.0177	< 0.00497 U	< 0.009 U	0.82	0.17	< 0.0093 U	< 0.0098 U	< 0.48 U	0.5 J	0.81 J	--
Benz(a)anthracene	56-55-3	mg/kg				0.00895	< 0.00497 U	< 0.009 U	0.24 J	0.074 J	< 0.0093 U	< 0.0098 U	< 0.48 U	< 0.99 U	0.22 J	--
Benz(a)pyrene	50-32-9	mg/kg	0.00031	SL-3		0.0134	< 0.00497 U	< 0.009 U	< 0.25 U	< 0.099 U	< 0.0093 U	< 0.0098 U	< 0.48 U	< 0.99 U	< 0.92 U	--
Benz(b)fluoranthene	205-99-2	mg/kg				0.0158	< 0.00497 U	< 0.009 U	< 0.25 U	0.13	< 0.0093 U	< 0.0098 U	< 0.48 U	< 0.99 U	< 0.92 U	--
Benz(i)fluoranthene	205-82-3	mg/kg				0.00812	< 0.00497 U	--	--	--	--	--	--	--	--	--
Benz(k)fluoranthene	207-08-9	mg/kg				0.00766	< 0.00497 U	< 0.009 U	< 0.25 U	< 0.099 U	< 0.0093 U	< 0.0098 U	< 0.48 U	< 0.99 U	< 0.92 U	--
Chrysene	218-01-9	mg/kg				0.0136	< 0.00497 U	< 0.009 U	0.49	0.17	< 0.0093 U	< 0.0098 U	< 0.48 U	< 0.99 U	0.39 J	--
Dibenzo(a,h)anthracene	53-70-3	mg/kg				0.00322 J	< 0.00497 U	< 0.009 U	< 0.25 U	< 0.099 U	< 0.0093 U	< 0.0098 U	< 0.48 U	< 0.99 U	< 0.92 U	--
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg				0.0125	< 0.00497 U	< 0.009 U	< 0.25 U	0.1	< 0.0093 U	< 0.0098 U	< 0.48 U	< 0.99 U	< 0.92 U	--
Total Benzofluoranthenes	TOTBFA	mg/kg	3.2	SL-8		0.0309	< 0.00993 U	--	--	--	--	--	--	--	--	--
Total HPAHs	T-HPAHs	mg/kg	12	SL-8		0.133 J	< 0.00993 U	< 0.009 U	2.01 J	0.894 J	< 0.0093 U	< 0.0098 U	< 0.48 U	0.800 J	1.92 J	--
Total LPAHs	T-LPAHs	mg/kg	5.2	SL-8		0.0121 J	0.00100 J	< 0.009 U	4.38 J	0.649 J	< 0.0093 U	< 0.0098 U	< 0.48 U	1.73 J	4.47 J	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SB-20	SB-23	SB-26	SB-26	SB-27	SB-27	SB-28	SB-28	SB-29	SB-29
					Date	SB-20	SB-23	SB-26-0-1	SB-26-4-5	SB-27-0-1	SB-27-3-5	SB-28-0-1	SB-28-3-5	SB-29-0-1	SB-29A-3-5
					Sample Depth	4 - 4 ft	1 - 1 ft	0 - 1 ft	4 - 5 ft	0 - 1 ft	3 - 5 ft	0 - 1 ft	3 - 5 ft	0 - 1 ft	3 - 5 ft
Metals															
Arsenic	7440-38-2	mg/kg	7.3	SL-10	--	--	4.77	1.43	5.43 J	2.18	4.68 J	2.02	4.28 J	3.14 J	
Cadmium	7440-43-9	mg/kg	0.77	SL-10	--	--	5.09 J	0.16	0.25	0.04 J	0.32	0.04 J	0.27	0.05 J	
Chromium	7440-47-3	mg/kg	48.2	SL-10	--	--	150 J	23.7	10.9	8.23	13.2	10.2	14.6	10.8	
Copper	7440-50-8	mg/kg	36.4	SL-10	--	--	2470 J	7.97	111	9.95	35.8 J	9.63	25.8 J	15.5 J	
Lead	7439-92-1	mg/kg	50	SL-9	--	--	1490 J	23.9	57.6 J	1.32	54.6 J	2.39	33.5 J	3.27 J	
Mercury	7439-97-6	mg/kg	0.07	SL-10	--	--	11.5 J	--	0.0796 J	--	0.0472	--	0.025	0.0134 J	
Nickel	7440-02-0	mg/kg	48	SL-10	--	--	35.7	6.77	13.8 J	6.75	13.3	7.99	17	10.4	
Silver	7440-22-4	mg/kg	0.323	SL-3	--	--	--	--	--	--	--	--	--	--	
Zinc	7440-66-6	mg/kg	86	SL-9	--	--	771	85.7	77.9	18.6	75.5	24.2	60.8	27.7	
Butyl Tin Ions															
Dibutyltin Ion	14488-53-0	mg/kg	--	--	--	--	--	--	0.617	--	0.0024 J	--	0.00893	< 0.00573 U	
Monobutyltin	78763-54-9	mg/kg	--	--	--	--	--	--	0.243	--	< 0.00408 U	--	0.0471	< 0.00405 U	
Tetrabutyltin	1461-25-2	mg/kg	--	--	--	--	--	--	< 0.0497 U	--	< 0.005 U	--	< 0.00497 U	< 0.00496 U	
Tributyltin Ion	36643-28-4	mg/kg	0.0021	SL-8	--	--	--	--	1.12	--	0.00143 J	--	0.00057 J	< 0.00383 U	
Polychlorinated Biphenyl Aroclors															
Aroclor 1016	12674-11-2	mg/kg	--	--	--	--	< 1.39 U	--	< 0.0199 U	--	< 0.004 U	--	< 0.004 U	< 0.0039 U	
Aroclor 1221	11104-28-2	mg/kg	--	--	--	--	< 1.39 U	--	< 0.0199 U	--	< 0.004 U	--	< 0.004 U	< 0.0039 U	
Aroclor 1232	11141-16-5	mg/kg	--	--	--	--	< 1.39 U	--	< 0.0199 U	--	< 0.004 U	--	< 0.004 U	< 0.0039 U	
Aroclor 1242	53469-21-9	mg/kg	--	--	--	--	< 1.39 U	--	< 0.0199 U	--	< 0.004 U	--	< 0.004 U	< 0.0039 U	
Aroclor 1248	12672-29-6	mg/kg	--	--	--	--	< 1.39 U	--	< 0.0199 U	--	< 0.004 U	--	< 0.004 U	< 0.0039 U	
Aroclor 1254	11097-69-1	mg/kg	--	--	--	--	36.7	--	0.0952	--	< 0.004 U	--	< 0.004 U	< 0.0039 U	
Aroclor 1260	11096-82-5	mg/kg	--	--	--	--	6.77 J	--	0.16	--	0.0521	--	0.0199	< 0.0039 U	
Aroclor 1262	37324-23-5	mg/kg	--	--	--	--	< 1.39 U	--	< 0.0199 U	--	< 0.004 U	--	< 0.004 U	< 0.0039 U	
Aroclor 1268	11100-14-4	mg/kg	--	--	--	--	< 1.39 U	--	< 0.0199 U	--	< 0.004 U	--	< 0.004 U	< 0.0039 U	
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	1.1E-05	SL-3	--	--	48.3	--	0.325	--	0.0681	--	0.0359	< 0.0039 U	
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	1.1E-05	SL-3	--	--	43.5	--	0.255	--	0.0521	--	0.0199	< 0.0039 U	
Aroclor 1016 (OC normalized)	12674-11-2-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	
Aroclor 1221 (OC normalized)	11104-28-2-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	
Aroclor 1232 (OC normalized)	11141-16-5-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	
Aroclor 1242 (OC normalized)	53469-21-9-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	
Aroclor 1248 (OC normalized)	12672-29-6-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	
Aroclor 1254 (OC normalized)	11097-69-1-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	
Aroclor 1260 (OC normalized)	11096-82-5-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	
Aroclor 1262 (OC normalized)	37324-23-5-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	
Aroclor 1268 (OC normalized)	11100-14-4-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	
Total PCBs (Sum of Aroclors) OC normalized	T-PCBs-OC	mg/kg-OC	--	--	--	--	--	--	--	--	--	--	--	--	
Polychlorinated Biphenyl Congeners															
Total PCB Congeners	T-PCBCong	mg/kg	1.1E-05	SL-3	--	--	66.8	--	--	--	--	--	--	--	
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	6.93E-09	SL-3	--	--	0.00197	--	--	--	--	--	--	--	
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	6.93E-09	SL-3	--	--	0.00197	--	--	--	--	--	--	--	
Dioxins/Furans															
Total CDD TEQ (ND = 1/2 RDL)	CDD-TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	0.00185 J	--	--	--	--	--	--	--	
Total CDF TEQ (ND = 1/2 RDL)	CDF-TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	0.000692 J	--	--	--	--	--	--	--	
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10	--	--	0.00246 J	--	--	--	--	--	--	--	
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10	--	--	0.00255 J	--	--	--	--	--	--	--	
Polycyclic Aromatic Hydrocarbons															
1-Methylnaphthalene	90-12-0	mg/kg	34.5	SL-1	--	--	0.0277	--	0.0125 J	--	< 0.005 U	--	< 0.005 U	< 0.00499 U	
2-Methylnaphthalene	91-57-6	mg/kg	0.67	SL-8	--	--	0.0555 J	--	0.0125 J	--	< 0.005 U	--	< 0.005 U	< 0.00499 U	
Acenaphthene	83-32-9	mg/kg	0.5	SL-8	--	--	0.0125 J	--	0.00433 J	--	< 0.005 U	--	< 0.005 U	< 0.00499 U	
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8	--	--	0.0632	--	< 0.0248 U	--	0.00217 J	--	0.00157 J	< 0.00499 U	
Anthracene	120-12-7	mg/kg	0.96	SL-8	--	--	0.127 J	--	0.00743 J	--	0.00262 J	--	0.00232 J	< 0.00499 U	
Benzo(a,h)perylene	191-24-2	mg/kg	0.67	SL-8	--	--	0.516 J	--	0.0766	--	0.0298	--	0.0408	< 0.00499 U	
Fluoranthene	206-44-0	mg/kg	1.7	SL-8	--	--	0.283 J	--	0.104	--	0.0161	--	0.0213	0.00122 J	
Fluorene	86-73-7	mg/kg	0.54	SL-8	--	--	0.0285	--	0.0039 J	--	< 0.005 U	--	< 0.005 U	< 0.00499 U	
Naphthalene	91-20-3	mg/kg	0.0389	SL-3	--	--	< 0.00524 U	--	< 0.00665 U	--	< 0.005 U	--	< 0.005 U	< 0.00499 U	
Phenanthrene	85-01-8	mg/kg	1.5	SL-8	--	--	0.199 J	--	0.0433	--	0.0154	--	0.0101	0.00152 J	
Pyrene	129-00-0	mg/kg	2.6	SL-8	--	--	0.211 J	--	0.0905	--	0.0214	--	0.0284	0.00098 J	
Benz(a)anthracene	56-55-3	mg/kg	--	--	--	--	0.178 J	--	0.0363	--	0.0123	--	0.0136	< 0.00499 U	
Benz(a)pyrene	50-32-9	mg/kg	0.00031	SL-3	--	--	0.276 J	--	0.0593	--	0.0243	--	0.0259	< 0.00499 U	
Benz(b)fluoranthene	205-99-2	mg/kg	--	--	--	--	0.24 J	--	0.0803	--	0.0347	--	0.0259	< 0.00499 U	
Benz(k)fluoranthene	205-82-3	mg/kg	--	--	--	--	0.135 J	--	0.0369	--	0.0141	--	0.0136	< 0.00499 U	
Chrysene	207-08-9	mg/kg	--	--	--	--	0.131 J	--	0.0281	--	0.0128	--	0.0122	< 0.00499 U	
Dibenzo(a,h)anthracene	218-01-9	mg/kg	--	--	--	--	0.252 J	--	0.107	--	0.0329	--	0.0245	< 0.00499 U	
Indeno(1,2,3-cd)pyrene	53-70-3	mg/kg	--	--	--	--	0.0657	--	0.0107 J	--	0.00566	--	0.00542	< 0.00499 U	
Total Benzo(a)fluoranthenes	193-39-5	mg/kg	--	--	--	--	0.373 J	--	0.0504	--	0.0201	--	0.0214	< 0.00499 U	
Total Benzo(a)anthracenes	TOTBFA	mg/kg	3.2	SL-8	--	--	0.489 J	--	0.143	--	0.0603	--	0.0529	< 0.00999 U	
Total HPAHs	T-HPAH	mg/kg	12	SL-8	--	--	2.64 J	--	0.643 J	--	0.223	--	0.234	0.00220 J	
Total LPAHs	T-LPAH	mg/kg	5.2	SL-8	--	--	0.430 J	--	0.0590 J	--	0.0264 J	--	0.0140 J	0.00152 J	

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293 , South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SB-30	SB-30	SB-31	SB-31	SB-32	SB-32	SB-33	SB-33	SB-34	SB-34	SB-34
					Date Sample Depth	03/01/2021 SB-30-0-1 0 - 1 ft	03/01/2021 SB-30A-3-5 3 - 5 ft	03/01/2021 SB-31-0-1 0 - 1 ft	03/01/2021 SB-31A-3-5 3 - 5 ft	03/08/2021 SB-32-0-1 0 - 1 ft	03/08/2021 SB-32-4-5 4 - 5 ft	03/03/2021 SB-33-0-1 0 - 1 ft	03/03/2021 SB-33-3-5 3 - 5 ft	03/01/2021 SB-34-0-1 0 - 1 ft	03/23/2021 SB-34R-0-1 0 - 1 ft	03/01/2021 SB-34-3-4 3 - 4 ft
Metals																
Arsenic	7440-38-2	mg/kg	7.3	SL-10		2.9 J	6.01 J	6.42 J	3.38 J	7.47	3.73	4.09	1.99	4.43	--	1.87
Cadmium	7440-43-9	mg/kg	0.77	SL-10		0.12	0.24	0.08 J	0.14	0.49	0.06 J	0.46	0.05 J	0.62	--	< 0.1 U
Chromium	7440-47-3	mg/kg	48.2	SL-10		25.1	9.83	16.2	17.2	12.2 J	12.7	9.99	11.6	11.3	--	6.93
Copper	7440-50-8	mg/kg	36.4	SL-10		19.9 J	19.5 J	37.4 J	19.7 J	50.2 J	25.2	51.5	11.8	25.5 J	--	8.97 J
Lead	7439-92-1	mg/kg	50	SL-9		3.75 J	20.8 J	6.25 J	27.2 J	30.7 J	20.6	41.3 J	2.54 J	47.7 J	--	1.31 J
Mercury	7439-97-6	mg/kg	0.07	SL-10		0.278	0.0234 J	0.0268	0.0194 J	0.0482	0.0334	0.0213 J	0.00687 J	0.0093 J	--	0.00938 J
Nickel	7440-02-0	mg/kg	48	SL-10		38.5	10	22.9	20.2	13.7 J	11.4	13.2	8.49	14.8	--	6.6
Silver	7440-22-4	mg/kg	0.323	SL-3		--	--	--	--	--	--	--	--	--	--	--
Zinc	7440-66-6	mg/kg	86	SL-9		37.3	41.8	40.9	117	73.8 J	81.5	83.7	27.5	106	--	17.3
Butyl Tin Ions																
Dibutyltin Ion	14488-53-0	mg/kg	--	--		--	--	--	--	0.0472 J	< 0.00572 U	< 0.00575 U	< 0.00572 U	--	--	--
Monobutyltin	78763-54-9	mg/kg	--	--		--	--	--	--	0.0308 J	< 0.00404 U	< 0.00406 U	< 0.00404 U	--	--	--
Tetrabutyltin	1461-25-2	mg/kg	--	--		--	--	--	--	< 0.005 U	< 0.00495 U	< 0.00497 U	< 0.00495 U	--	--	--
Tributyltin Ion	36643-28-4	mg/kg	0.0021	SL-8		--	--	--	--	0.0667 J	< 0.00382 U	0.000964 J	0.00567	--	--	--
Polychlorinated Biphenyl Aroclors																
Aroclor 1016	12674-11-2	mg/kg	--	--		< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.0399 U	< 0.004 U	< 0.02 U	< 0.004 U	< 0.0035 U	--	< 0.0035 U
Aroclor 1221	11104-28-2	mg/kg	--	--		< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.0399 U	< 0.004 U	< 0.02 U	< 0.004 U	< 0.0035 U	--	< 0.0035 U
Aroclor 1232	11141-16-5	mg/kg	--	--		< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.0399 U	< 0.004 U	< 0.02 U	< 0.004 U	< 0.0035 U	--	< 0.0035 U
Aroclor 1242	53469-21-9	mg/kg	--	--		< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.0399 U	< 0.004 U	< 0.02 U	< 0.004 U	< 0.0035 U	--	< 0.0035 U
Aroclor 1248	12672-29-6	mg/kg	--	--		< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.0399 U	< 0.004 U	< 0.02 U	< 0.004 U	< 0.0035 U	--	< 0.0035 U
Aroclor 1254	11097-69-1	mg/kg	--	--		< 0.004 U	< 0.004 U	0.0045	< 0.004 U	< 0.0399 U	0.0109	0.271	0.0068	0.038	--	0.002 J
Aroclor 1260	11096-82-5	mg/kg	--	--		0.0033 J	0.0022 J	0.0246	0.0019 J	0.746 J	0.0131	0.467	0.028	0.0557	--	0.0007 J
Aroclor 1262	37324-23-5	mg/kg	--	--		< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.0399 U	< 0.004 U	< 0.02 U	< 0.004 U	< 0.0035 U	--	< 0.0035 U
Aroclor 1268	11100-14-4	mg/kg	--	--		< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.0399 U	< 0.004 U	< 0.02 U	< 0.004 U	< 0.0035 U	--	< 0.0035 U
Total PCB Aroclors (ND=1/2 RDL)	T-PCBs1/2U	mg/kg	1.1E-05	SL-3		0.0193 J	0.0182 J	0.0431	0.0179 J	0.906 J	0.0380	0.808	0.0488	0.106	--	0.0150 J
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	1.1E-05	SL-3		0.00330 J	0.00220 J	0.0291	0.00190 J	0.746 J	0.0240	0.738	0.0348	0.0937	--	0.00270 J
Aroclor 1016 (OC normalized)	12674-11-2-OC	mg/kg-OC	--	--		--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221 (OC normalized)	11104-28-2-OC	mg/kg-OC	--	--		--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232 (OC normalized)	11141-16-5-OC	mg/kg-OC	--	--		--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242 (OC normalized)	53469-21-9-OC	mg/kg-OC	--	--		--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248 (OC normalized)	12672-29-6-OC	mg/kg-OC	--	--		--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254 (OC normalized)	11097-69-1-OC	mg/kg-OC	--	--		--	--	--	--	--	--	--	--	--	--	--
Aroclor 1260 (OC normalized)	11096-82-5-OC	mg/kg-OC	--	--		--	--	--	--	--	--	--	--	--	--	--
Aroclor 1262 (OC normalized)	37324-23-5-OC	mg/kg-OC	--	--		--	--	--	--	--	--	--	--	--	--	--
Aroclor 1268 (OC normalized)	11100-14-4-OC	mg/kg-OC	--	--		--	--	--	--	--	--	--	--	--	--	--
Total PCBs (Sum of Aroclors) OC normalized	T-PCBs-OC	mg/kg-OC	--	--		--	--	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyl Congeners																
Total PCB Congeners	T-PCBCong	mg/kg	1.1E-05	SL-3		--	--	0.0226	--	0.277	--	--	--	0.027	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	6.93E-09	SL-3		--	--	0.00000705 J	--	0.00000424	--	--	--	0.00000869 J	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	6.93E-09	SL-3		--	--	0.000000780 J	--	0.00000424	--	--	--	0.000000945 J	--	--
Dioxins/Furans																
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	0.0000146	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	0.0000110	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10		--	--	--	--	0.0000250	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10		--	--	--	--	0.0000250	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons																
1-Methylnaphthalene	90-12-0	mg/kg	34.5	SL-1		< 0.00498 U	< 0.00498 U	< 0.00499 U	< 0.005 U	0.00553	< 0.005 U	< 0.015 U	< 0.00499 U	0.0189	--	0.00613
2-Methylnaphthalene	91-57-6	mg/kg	0.67	SL-8		< 0.00498 U	< 0.00594 U	< 0.00499 U	< 0.005 U	0.0114	< 0.005 U	< 0.015 U	< 0.00499 U	0.0207	--	< 0.00456 U
Acenaphthene	83-32-9	mg/kg	0.5	SL-8		< 0.00498 U	0.0115	< 0.00499 U	< 0.005 U	0.00183 J	< 0.005 U	0.0031 J	< 0.00499 U	0.00564	--	< 0.00433 U
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8		< 0.00498 U	0.0029 J	< 0.00499 U	< 0.005 U	0.00299 J	< 0.005 U	< 0.015 U	0.00122 J	0.0122	--	< 0.00433 U
Anthracene	120-12-7	mg/kg	0.96	SL-8		0.00093 J	0.0138	0.00129 J	0.00125 J	0.00241 J	< 0.005 U	0.00265 J	< 0.00499 U	0.0167	--	< 0.00433 U
Benzo(a,h)perylene	191-24-2	mg/kg	0.67	SL-8		0.0129	0.0759	0.00805	0.00968	0.0236 J	< 0.005 U	0.0422	0.0137	0.0603	--	< 0.00433 U
Fluoranthene	208-44-0	mg/kg	1.7	SL-8		0.00658	0.097	0.0023 J	0.00937	0.0201 J	0.0007 J	0.0207	0.00457 J	0.115	--	0.00104 J
Fluorene	86-73-7	mg/kg	0.54	SL-8		< 0.00498 U	0.00633	< 0.00499 U	< 0.005 U	0.00276 J	< 0.005 U	0.00369 J	< 0.00499 U	0.0109	--	< 0.00433 U
Naphthalene	91-20-3	mg/kg	0.0389	SL-3		< 0.00498 U	0.00799	< 0.00499 U	< 0.005 U	0.00822	< 0.005 U	< 0.005 U	< 0.00782 U	0.021	< 0.005 U	< 0.00433 U
Phenanthrene	85-01-8	mg/kg	1.5	SL-8		0.0127	0.0665	0.0031 J	0.00608	0.0182 J	0.00276 J	0.0362	0.0136	0.13	--	0.00471
Pyrene	129-00-0	mg/kg	2.6	SL-8		0.0337	0.114	0.00328 J	0.022	0.00097 J	0.0226	0.00631	0.156	0.00157 J	--	0.00157 J
Benz(a)anthracene	56-55-3	mg/kg	0.00031	SL-3		0.00566	0.0543	0.00134 J	0.00395 J	0.00936 J	< 0.005 U	0.0127 J	0.00446 J	0.0507	--	0.00083 J
Benzo(a)pyrene	50-32-9	mg/kg	0.00031	SL-3		0.00518	0.0831	0.00217 J	0.00643	0.0128 J	< 0.005 U	0.0207	0.00562	0.0678	--	0.00086 J
Benzo(b)fluoranthene	205-99-2	mg/kg	--	--		0.00737	0.0718	0.00336 J	0.00611	0.0183 J	< 0.005 U	0.0325	0.0083	0.0459	--	< 0.00433 U
Benzo(k)fluoranthene	205-82-3	mg/kg	--	--		0.0028 J	0.0402	0.00135 J	0.00371 J	0.00988 J	< 0.005 U	0.00922 J	0.00217 J	0.0309	--	< 0.00433 U
Chrysene	207-08-9	mg/kg	--	--		0.00217 J	0.0372	0.0017 J	0.0031 J	0.00856 J	< 0.005 U	0.00912 J	0.00209 J	0.0257	--	< 0.00433 U
Dibenzo(a,h)anthracene	218-01-9	mg/kg	--	--		0.0137	0.067	0.003 J	0.00577	0.0185 J	< 0.005 U	0.0667	0.022	0.0731	--	0.00134 J
Indeno(1,2,3-cd)pyrene	53-70-3	mg/kg	--	--		0.00205 J	0.013	0.00123 J	0.00149 J	0.00365 J	< 0.005 U	0.00715 J	0.00173 J	0.0103	--	< 0.00433 U
Total Benzo(a)fluoranthenes	T-BFA	mg/kg	3.2	SL-8		0.00287 J	0.0544	0.00319 J	0.00617	0.0131 J	< 0.005 U	0.0165	0.00324 J	0.0451	--	< 0.00433 U
Total HPAHs	T-HPAH	mg/kg	12	SL-8		0.012	0.148	0.00631 J	0.0132	0.0391 J	< 0.01 U	0.0508	0.0161	0.102	--	< 0.00866 U
Total LPAHs	T-LPAH	mg/kg	5.2	SL-8		0.0921 J	0.707	0.0296 J	0.0634 J	0.162 J	0.00167 J	0.260 J	0.0777 J	0.680	--	0.00561 J
Total PAHs	T-PAH	mg/kg	17.4	SL-8		0.1036 J	0.855	0.0332 J	0.0768 J	0.224 J	0.00334 J	0.320 J	0.0938 J	0.782	--	0.00690 J

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SB-34	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06
					Date	03/23/2021	02/09/2016	02/09/2016	02/09/2016	02/10/2016	02/10/2016	02/10/2016
					Sample	SB-34R-3-4	SPM-SS-01-02092016	SPM-SS-02-02092016	SPM-SS-03-02092016	SPM-SS-04-02102016	SPM-SS-05-02102016	SPM-SS-06-02102016
					Depth	3 - 4 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft
Metals												
Arsenic	7440-38-2	mg/kg	7.3	SL-10	--	--	--	--	--	--	--	--
Cadmium	7440-43-9	mg/kg	0.77	SL-10	--	--	--	--	--	--	--	--
Chromium	7440-47-3	mg/kg	48.2	SL-10	--	--	--	--	--	--	--	--
Copper	7440-50-8	mg/kg	36.4	SL-10	--	--	--	--	--	--	--	--
Lead	7439-92-1	mg/kg	50	SL-9	--	--	--	--	--	--	--	--
Mercury	7439-97-6	mg/kg	0.07	SL-10	--	--	--	--	--	--	--	--
Nickel	7440-02-0	mg/kg	48	SL-10	--	--	--	--	--	--	--	--
Silver	7440-22-4	mg/kg	0.323	SL-3	--	--	--	--	--	--	--	--
Zinc	7440-66-6	mg/kg	86	SL-9	--	--	--	--	--	--	--	--
Butyl Tin Ions												
Dibutyltin Ion	14488-53-0	mg/kg			--	--	--	--	--	--	--	--
Monobutyltin	78763-54-9	mg/kg			--	--	--	--	--	--	--	--
Tetrabutyltin	1461-25-2	mg/kg			--	--	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	mg/kg	0.0021	SL-8	--	--	--	--	--	--	--	--
Polychlorinated Biphenyl Aroclors												
Aroclor 1016	12674-11-2	mg/kg			--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U
Aroclor 1221	11104-28-2	mg/kg			--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U
Aroclor 1232	11141-16-5	mg/kg			--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U
Aroclor 1242	53469-21-9	mg/kg			--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U
Aroclor 1248	12672-29-6	mg/kg			--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U
Aroclor 1254	11097-69-1	mg/kg			--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U
Aroclor 1260	11096-82-5	mg/kg			--	0.0075	0.014	0.094	0.21	0.82	0.82	< 0.08 U
Aroclor 1262	37324-23-5	mg/kg			--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U
Aroclor 1268	11100-14-4	mg/kg			--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.08 U	< 0.08 U	< 0.08 U	< 0.08 U
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	1.1E-05	SL-3	--	0.0235	0.0300	0.110	0.530	1.14	1.14	< 0.08 U
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	1.1E-05	SL-3	--	0.0075	0.014	0.094	0.21	0.82	0.82	< 0.08 U
Aroclor 1016 (OC normalized)	12674-11-2-OC	mg/kg-OC			--	< 1.951219512 U	< 1.146131805 U	< 0.760456274 U	< 14.285714286 U	< 16.129032258 U	< 16.129032258 U	< 28.985507246 U
Aroclor 1221 (OC normalized)	11104-28-2-OC	mg/kg-OC			--	< 1.951219512 U	< 1.146131805 U	< 0.760456274 U	< 14.285714286 U	< 16.129032258 U	< 16.129032258 U	< 28.985507246 U
Aroclor 1232 (OC normalized)	11141-16-5-OC	mg/kg-OC			--	< 1.951219512 U	< 1.146131805 U	< 0.760456274 U	< 14.285714286 U	< 16.129032258 U	< 16.129032258 U	< 28.985507246 U
Aroclor 1242 (OC normalized)	53469-21-9-OC	mg/kg-OC			--	< 1.951219512 U	< 1.146131805 U	< 0.760456274 U	< 14.285714286 U	< 16.129032258 U	< 16.129032258 U	< 28.985507246 U
Aroclor 1248 (OC normalized)	12672-29-6-OC	mg/kg-OC			--	< 1.951219512 U	< 1.146131805 U	< 0.760456274 U	< 14.285714286 U	< 16.129032258 U	< 16.129032258 U	< 28.985507246 U
Aroclor 1254 (OC normalized)	11097-69-1-OC	mg/kg-OC			--	< 1.951219512 U	< 1.146131805 U	< 0.760456274 U	< 14.285714286 U	< 16.129032258 U	< 16.129032258 U	< 28.985507246 U
Aroclor 1260 (OC normalized)	11096-82-5-OC	mg/kg-OC			--	3.658536585	4.011461318	17.870722433	37.5	165.322580645	165.322580645	< 28.985507246 U
Aroclor 1262 (OC normalized)	37324-23-5-OC	mg/kg-OC			--	< 1.951219512 U	< 1.146131805 U	< 0.760456274 U	< 14.285714286 U	< 16.129032258 U	< 16.129032258 U	< 28.985507246 U
Aroclor 1268 (OC normalized)	11100-14-4-OC	mg/kg-OC			--	< 1.951219512 U	< 1.146131805 U	< 0.760456274 U	< 14.285714286 U	< 16.129032258 U	< 16.129032258 U	< 28.985507246 U
Total PCBs (Sum of Aroclors) OC normalized	T-PCBs-OC	mg/kg-OC			--	3.658536585	4.011461318	17.870722433	37.5	165.322580645	165.322580645	< 28.985507246 U
Polychlorinated Biphenyl Congeners												
Total PCB Congeners	T-PCBCong	mg/kg	1.1E-05	SL-3	--	0.0206	0.0308	0.124	0.221	0.596	0.596	0.0184
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	6.93E-09	SL-3	--	0.000000754 J	0.000000910 J	0.00000255 J	0.00000770 J	0.00000635 J	0.00000635 J	0.00000575 J
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	6.93E-09	SL-3	--	0.000000830 J	0.00000100 J	0.00000255 J	0.00000770 J	0.00000635 J	0.00000635 J	0.00000575 J
Dioxins/Furans												
Total CDD TEQ (ND = 1/2 RDL)	CDD-TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF-TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons												
1-Methylnaphthalene	90-12-0	mg/kg	34.5	SL-1	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	mg/kg	0.67	SL-8	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	mg/kg	0.5	SL-8	--	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8	--	--	--	--	--	--	--	--
Anthracene	120-12-7	mg/kg	0.96	SL-8	--	--	--	--	--	--	--	--
Benzo(a,h)perylene	191-24-2	mg/kg	0.67	SL-8	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	mg/kg	1.7	SL-8	--	--	--	--	--	--	--	--
Fluorene	86-73-7	mg/kg	0.54	SL-8	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	mg/kg	0.0389	SL-3	< 0.00522 U	--	--	--	--	--	--	--
Phenanthrene	85-01-8	mg/kg	1.5	SL-8	--	--	--	--	--	--	--	--
Pyrene	129-00-0	mg/kg	2.6	SL-8	--	--	--	--	--	--	--	--
Benzo(a)anthracene	56-55-3	mg/kg			--	--	--	--	--	--	--	--
Benzo(a)pyrene	50-32-9	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	205-99-2	mg/kg			--	--	--	--	--	--	--	--
Benzo(i)fluoranthene	205-82-3	mg/kg			--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	mg/kg			--	--	--	--	--	--	--	--
Chrysene	218-01-9	mg/kg			--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	53-70-3	mg/kg			--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg			--	--	--	--	--	--	--	--
Total Benzofluoranthenes	TOTBFA	mg/kg	3.2	SL-8	--	--	--	--	--	--	--	--
Total HPAHs	T-HPAH	mg/kg	12	SL-8	--	--	--	--	--	--	--	--
Total LPAHs	T-LPAH	mg/kg	5.2	SL-8	--	--	--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-07	SS-08	SS-09	SS-10	SS-11	SS-12
					Date Sample Depth	02/09/2016 SPM-SS-07-02092016 0 - 1.6 ft	02/09/2016 SPM-SS-08-02092016 0 - 1.6 ft	02/10/2016 SPM-SS-09-02102016 0 - 1.6 ft	02/10/2016 SPM-SS-10-02102016 0 - 1.6 ft	02/10/2016 SPM-SS-11-02102016 0 - 1.6 ft	02/09/2016 SPM-SS-12-02092016 0 - 1.6 ft
Metals											
Arsenic	7440-38-2	mg/kg	7.3	SL-10	--	--	--	--	--	--	--
Cadmium	7440-43-9	mg/kg	0.77	SL-10	--	--	--	--	--	--	--
Chromium	7440-47-3	mg/kg	48.2	SL-10	--	--	--	--	--	--	--
Copper	7440-50-8	mg/kg	36.4	SL-10	--	--	--	--	--	--	--
Lead	7439-92-1	mg/kg	50	SL-9	--	--	--	--	--	--	--
Mercury	7439-97-6	mg/kg	0.07	SL-10	--	--	--	--	--	--	--
Nickel	7440-02-0	mg/kg	48	SL-10	--	--	--	--	--	--	--
Silver	7440-22-4	mg/kg	0.323	SL-3	--	--	--	--	--	--	--
Zinc	7440-66-6	mg/kg	86	SL-9	--	--	--	--	--	--	--
Butyl Tin Ions											
Dibutyltin Ion	14488-53-0	mg/kg	--	--	--	--	--	--	--	--	--
Monobutyltin	78763-54-9	mg/kg	--	--	--	--	--	--	--	--	--
Tetrabutyltin	1461-25-2	mg/kg	--	--	--	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	mg/kg	0.0021	SL-8	--	--	--	--	--	--	--
Polychlorinated Biphenyl Aroclors											
Aroclor 1016	12674-11-2	mg/kg	--	--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1221	11104-28-2	mg/kg	--	--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1232	11141-16-5	mg/kg	--	--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1242	53469-21-9	mg/kg	--	--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1248	12672-29-6	mg/kg	--	--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1254	11097-69-1	mg/kg	--	--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1260	11096-82-5	mg/kg	0.0048	0.0715	0.05	0.05	0.05	0.05	0.019	0.017	0.017
Aroclor 1262	37324-23-5	mg/kg	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1268	11100-14-4	mg/kg	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	1.1E-05	SL-3	0.0208	0.0875	0.0660	0.0660	0.0350	0.0330	0.0330
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	1.1E-05	SL-3	0.0048	0.0715	0.05	0.05	0.019	0.017	0.017
Aroclor 1016 (OC normalized)	12674-11-2-OC	mg/kg-OC	< 1.834862385 U	< 1.058201058 U	< 1.092896175 U	< 1.092896175 U	< 1.092896175 U	< 1.092896175 U	< 1.18694362 U	< 1.18694362 U	< 1.18694362 U
Aroclor 1221 (OC normalized)	11104-28-2-OC	mg/kg-OC	< 1.834862385 U	< 1.058201058 U	< 1.092896175 U	< 1.092896175 U	< 1.092896175 U	< 1.092896175 U	< 1.18694362 U	< 1.18694362 U	< 1.18694362 U
Aroclor 1232 (OC normalized)	11141-16-5-OC	mg/kg-OC	< 1.834862385 U	< 1.058201058 U	< 1.092896175 U	< 1.092896175 U	< 1.092896175 U	< 1.092896175 U	< 1.18694362 U	< 1.18694362 U	< 1.18694362 U
Aroclor 1242 (OC normalized)	53469-21-9-OC	mg/kg-OC	< 1.834862385 U	< 1.058201058 U	< 1.092896175 U	< 1.092896175 U	< 1.092896175 U	< 1.092896175 U	< 1.18694362 U	< 1.18694362 U	< 1.18694362 U
Aroclor 1248 (OC normalized)	12672-29-6-OC	mg/kg-OC	< 1.834862385 U	< 1.058201058 U	< 1.092896175 U	< 1.092896175 U	< 1.092896175 U	< 1.092896175 U	< 1.18694362 U	< 1.18694362 U	< 1.18694362 U
Aroclor 1254 (OC normalized)	11097-69-1-OC	mg/kg-OC	< 1.834862385 U	< 1.058201058 U	< 1.092896175 U	< 1.092896175 U	< 1.092896175 U	< 1.092896175 U	< 1.18694362 U	< 1.18694362 U	< 1.18694362 U
Aroclor 1260 (OC normalized)	11096-82-5-OC	mg/kg-OC	2.201834862	19.1082756	13.661202186	13.661202186	13.661202186	13.661202186	5.637982196	5.637982196	5.637982196
Aroclor 1262 (OC normalized)	37324-23-5-OC	mg/kg-OC	< 1.834862385 U	< 1.058201058 U	< 1.092896175 U	< 1.092896175 U	< 1.092896175 U	< 1.092896175 U	< 1.18694362 U	< 1.18694362 U	< 1.18694362 U
Aroclor 1268 (OC normalized)	11100-14-4-OC	mg/kg-OC	< 1.834862385 U	< 1.058201058 U	< 1.092896175 U	< 1.092896175 U	< 1.092896175 U	< 1.092896175 U	< 1.18694362 U	< 1.18694362 U	< 1.18694362 U
Total PCBs (Sum of Aroclors) OC normalized	T-PCBs-OC	mg/kg-OC	2.201834862	19.1082756	13.661202186	13.661202186	13.661202186	13.661202186	5.637982196	5.637982196	5.637982196
Polychlorinated Biphenyl Congeners											
Total PCB Congeners	T-PCBcong	mg/kg	1.1E-05	SL-3	0.00586	0.0818	0.0544	0.0544	0.0257	0.00638	0.00638
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	6.93E-09	SL-3	0.00000294 J	0.00000291	0.00000180 J	0.00000180 J	0.00000149 J	0.000000560 J	0.000000279 J
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	6.93E-09	SL-3	0.000000294 J	0.00000296	0.00000180 J	0.00000206 J	0.000000632 J	0.000000296 J	0.000000296 J
Dioxins/Furans											
Total CDD TEQ (ND = 1/2 RDL)	CDD-TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF-TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons											
1-Methylnaphthalene	90-12-0	mg/kg	34.5	SL-1	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	mg/kg	0.67	SL-8	--	--	--	--	--	--	--
Acenaphthene	83-32-9	mg/kg	0.5	SL-8	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8	--	--	--	--	--	--	--
Anthracene	120-12-7	mg/kg	0.96	SL-8	--	--	--	--	--	--	--
Benzo(a,h)perylene	191-24-2	mg/kg	0.67	SL-8	--	--	--	--	--	--	--
Fluoranthene	206-44-0	mg/kg	1.7	SL-8	--	--	--	--	--	--	--
Fluorene	86-73-7	mg/kg	0.54	SL-8	--	--	--	--	--	--	--
Naphthalene	91-20-3	mg/kg	0.0389	SL-3	--	--	--	--	--	--	--
Phenanthrene	85-01-8	mg/kg	1.5	SL-8	--	--	--	--	--	--	--
Pyrene	129-00-0	mg/kg	2.6	SL-8	--	--	--	--	--	--	--
Benzo(a)anthracene	56-55-3	mg/kg	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	50-35-9	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--
Benzo(b)fluoranthene	205-99-2	mg/kg	--	--	--	--	--	--	--	--	--
Benzo(i)fluoranthene	205-82-3	mg/kg	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	mg/kg	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	mg/kg	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	53-70-3	mg/kg	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	--	--	--	--	--	--	--	--	--
Total Benzofluoranthenes	TOTBFA	mg/kg	3.2	SL-8	--	--	--	--	--	--	--
Total HPAHs	T-HPAHs	mg/kg	12	SL-8	--	--	--	--	--	--	--
Total LPAHs	T-LPAHs	mg/kg	5.2	SL-8	--	--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18
					Date Sample Depth	02/10/2016 SPM-SS-13-02102016 0 - 1.6 ft	02/10/2016 SPM-SS-14-02102016 0 - 1.6 ft	02/09/2016 SPM-SS-15-02102016 0 - 1.6 ft	02/09/2016 SPM-SS-16-02092016 0 - 1.6 ft	02/10/2016 SPM-SS-17-02102016 0 - 1.6 ft	02/10/2016 SPM-SS-18-02102016 0 - 1.6 ft
Metals											
Arsenic	7440-38-2	mg/kg	7.3	SL-10	--	--	--	--	--	--	--
Cadmium	7440-43-9	mg/kg	0.77	SL-10	--	--	--	--	--	--	--
Chromium	7440-47-3	mg/kg	48.2	SL-10	--	--	--	--	--	--	--
Copper	7440-50-8	mg/kg	36.4	SL-10	--	--	--	--	--	--	--
Lead	7439-92-1	mg/kg	50	SL-9	--	--	--	--	--	--	--
Mercury	7439-97-6	mg/kg	0.07	SL-10	--	--	--	--	--	--	--
Nickel	7440-02-0	mg/kg	48	SL-10	--	--	--	--	--	--	--
Silver	7440-22-4	mg/kg	0.323	SL-3	--	--	--	--	--	--	--
Zinc	7440-66-6	mg/kg	86	SL-9	--	--	--	--	--	--	--
Butyl Tin Ions											
Dibutyltin Ion	14488-53-0	mg/kg	--	--	--	--	--	--	--	--	--
Monobutyltin	78763-54-9	mg/kg	--	--	--	--	--	--	--	--	--
Tetrabutyltin	1461-25-2	mg/kg	--	--	--	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	mg/kg	0.0021	SL-8	--	--	--	--	--	--	--
Polychlorinated Biphenyl Aroclors											
Aroclor 1016	12674-11-2	mg/kg	--	--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1221	11104-28-2	mg/kg	--	--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1232	11141-16-5	mg/kg	--	--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1242	53469-21-9	mg/kg	--	--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1248	12672-29-6	mg/kg	--	--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1254	11097-69-1	mg/kg	--	--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1260	11096-82-5	mg/kg	0.061	--	0.027	0.052	0.036	0.036	0.036	0.036	0.25
Aroclor 1262	37324-23-5	mg/kg	--	--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1268	11100-14-4	mg/kg	--	--	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	1.1E-05	SL-3	0.0770	0.0430	0.0680	0.376	0.376	0.376	0.266
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	1.1E-05	SL-3	0.061	0.027	0.052	0.36	0.36	0.36	0.25
Aroclor 1016 (OC normalized)	12674-11-2-OC	mg/kg-OC	< 1.834862385 U	--	< 3.738317757 U	< 3.738317757 U	< 5.70613409 U	< 0.778210117 U	< 0.778210117 U	< 0.778210117 U	< 0.778210117 U
Aroclor 1221 (OC normalized)	11104-28-2-OC	mg/kg-OC	< 1.834862385 U	--	< 3.738317757 U	< 3.738317757 U	< 5.70613409 U	< 0.778210117 U	< 0.778210117 U	< 0.778210117 U	< 0.778210117 U
Aroclor 1232 (OC normalized)	11141-16-5-OC	mg/kg-OC	< 1.834862385 U	--	< 3.738317757 U	< 3.738317757 U	< 5.70613409 U	< 0.778210117 U	< 0.778210117 U	< 0.778210117 U	< 0.778210117 U
Aroclor 1242 (OC normalized)	53469-21-9-OC	mg/kg-OC	< 1.834862385 U	--	< 3.738317757 U	< 3.738317757 U	< 5.70613409 U	< 0.778210117 U	< 0.778210117 U	< 0.778210117 U	< 0.778210117 U
Aroclor 1248 (OC normalized)	12672-29-6-OC	mg/kg-OC	< 1.834862385 U	--	< 3.738317757 U	< 3.738317757 U	< 5.70613409 U	< 0.778210117 U	< 0.778210117 U	< 0.778210117 U	< 0.778210117 U
Aroclor 1254 (OC normalized)	11097-69-1-OC	mg/kg-OC	< 1.834862385 U	--	< 3.738317757 U	< 3.738317757 U	< 5.70613409 U	< 0.778210117 U	< 0.778210117 U	< 0.778210117 U	< 0.778210117 U
Aroclor 1260 (OC normalized)	11096-82-5-OC	mg/kg-OC	28.109072375	--	25.23364486	7.417974322	70.038910506	7.751937984 U	7.751937984 U	7.751937984 U	17.24137931
Aroclor 1262 (OC normalized)	37324-23-5-OC	mg/kg-OC	< 1.834862385 U	--	< 3.738317757 U	< 3.738317757 U	< 5.70613409 U	< 0.778210117 U	< 0.778210117 U	< 0.778210117 U	< 0.778210117 U
Aroclor 1268 (OC normalized)	11100-14-4-OC	mg/kg-OC	< 1.834862385 U	--	< 3.738317757 U	< 3.738317757 U	< 5.70613409 U	< 0.778210117 U	< 0.778210117 U	< 0.778210117 U	< 0.778210117 U
Total PCBs (Sum of Aroclors) OC normalized	T-PCBs-OC	mg/kg-OC	28.109072375	--	25.23364486	7.417974322	70.038910506	< 7.751937984 U	< 7.751937984 U	< 7.751937984 U	17.24137931
Polychlorinated Biphenyl Congeners											
Total PCB Congeners	T-PCBcong	mg/kg	1.1E-05	SL-3	0.0164	0.0275	0.0736	0.107	0.107	0.107	0.369
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	6.93E-09	SL-3	0.000000470	0.00000125 J	0.00000356 J	0.00000321 J	0.00000321 J	0.000000190 J	0.0000102 J
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	6.93E-09	SL-3	0.000000470	0.00000127 J	0.00000356 J	0.00000321 J	0.00000321 J	0.000000116 J	0.0000102 J
Dioxins/Furans											
Total CDD TEQ (ND = 1/2 RDL)	CDD-TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF-TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons											
1-Methylnaphthalene	90-12-0	mg/kg	34.5	SL-1	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	mg/kg	0.67	SL-8	--	--	--	--	--	--	--
Acenaphthene	83-32-9	mg/kg	0.5	SL-8	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8	--	--	--	--	--	--	--
Anthracene	120-12-7	mg/kg	0.96	SL-8	--	--	--	--	--	--	--
Benzo(a,h)perylene	191-24-2	mg/kg	0.67	SL-8	--	--	--	--	--	--	--
Fluoranthene	206-44-0	mg/kg	1.7	SL-8	--	--	--	--	--	--	--
Fluorene	86-73-7	mg/kg	0.54	SL-8	--	--	--	--	--	--	--
Naphthalene	91-20-3	mg/kg	0.0389	SL-3	--	--	--	--	--	--	--
Phenanthrene	85-01-8	mg/kg	1.5	SL-8	--	--	--	--	--	--	--
Pyrene	129-00-0	mg/kg	2.6	SL-8	--	--	--	--	--	--	--
Benzo(a)anthracene	56-55-3	mg/kg	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	50-32-9	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--
Benzo(b)fluoranthene	205-99-2	mg/kg	--	--	--	--	--	--	--	--	--
Benzo(i)fluoranthene	205-82-3	mg/kg	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	mg/kg	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	mg/kg	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	53-70-3	mg/kg	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	--	--	--	--	--	--	--	--	--
Total Benzofluoranthenes	TOTBFA	mg/kg	3.2	SL-8	--	--	--	--	--	--	--
Total HPAHs	T-HPAHs	mg/kg	12	SL-8	--	--	--	--	--	--	--
Total LPAHs	T-LPAHs	mg/kg	5.2	SL-8	--	--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-19	SS-20	SS-21	SS-22	SS-23	SS-24
					Date Sample Depth	02/10/2016 SPM-SS-19-02102016 0 - 1.6 ft	02/10/2016 SPM-SS-20-02102016 0 - 1.6 ft	02/08/2016 SPM-SS-21-02082016 0 - 1.6 ft	02/08/2016 SPM-SS-22-02082016 0 - 1.6 ft	02/08/2016 SPM-SS-23-02082016 0 - 1.6 ft	02/10/2016 SPM-SS-24-02102016 0 - 1.6 ft
Metals											
Arsenic	7440-38-2	mg/kg	7.3	SL-10	--	--	--	--	--	--	--
Cadmium	7440-43-9	mg/kg	0.77	SL-10	--	--	--	--	--	--	--
Chromium	7440-47-3	mg/kg	48.2	SL-10	--	--	--	--	--	--	--
Copper	7440-50-8	mg/kg	36.4	SL-10	--	--	--	--	--	--	--
Lead	7439-92-1	mg/kg	50	SL-9	--	--	--	--	--	--	--
Mercury	7439-97-6	mg/kg	0.07	SL-10	--	--	--	--	--	--	--
Nickel	7440-02-0	mg/kg	48	SL-10	--	--	--	--	--	--	--
Silver	7440-22-4	mg/kg	0.323	SL-3	--	--	--	--	--	--	--
Zinc	7440-66-6	mg/kg	86	SL-9	--	--	--	--	--	--	--
Butyl Tin Ions											
Dibutyltin Ion	14488-53-0	mg/kg	--	--	--	--	--	--	--	--	--
Monobutyltin	78763-54-9	mg/kg	--	--	--	--	--	--	--	--	--
Tetrabutyltin	1461-25-2	mg/kg	--	--	--	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	mg/kg	0.0021	SL-8	--	--	--	--	--	--	--
Polychlorinated Biphenyl Aroclors											
Aroclor 1016	12674-11-2	mg/kg	--	--	< 0.08 U	< 0.08 U	< 0.04 UJ	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1221	11104-28-2	mg/kg	--	--	< 0.08 U	< 0.08 U	< 0.04 UJ	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1232	11141-16-5	mg/kg	--	--	< 0.08 U	< 0.08 U	< 0.04 UJ	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1242	53469-21-9	mg/kg	--	--	< 0.08 U	< 0.08 U	< 0.04 UJ	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1248	12672-29-6	mg/kg	--	--	< 0.08 U	< 0.08 U	< 0.04 UJ	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1254	11097-69-1	mg/kg	--	--	< 0.08 U	< 0.08 U	< 0.04 UJ	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1260	11096-82-5	mg/kg	0.77	--	< 0.08 U	< 0.08 U	16 J	0.22	0.083	0.074	--
Aroclor 1262	37324-23-5	mg/kg	--	--	< 0.08 U	< 0.08 U	< 0.04 UJ	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1268	11100-14-4	mg/kg	--	--	< 0.08 U	< 0.08 U	< 0.04 UJ	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	1.1E-05	SL-3	1.09	< 0.08 U	16.2 J	0.236	0.0990	0.0900	0.0900
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	1.1E-05	SL-3	0.77	< 0.08 U	16	0.22	0.083	0.074	--
Aroclor 1016 (OC normalized)	12674-11-2-OC	mg/kg-OC	--	--	< 32.520325203 U	< 62.5 U	< 3.50877193 UJ	< 0.788954635 U	< 0.869565217 U	< 0.896860987 U	< 0.896860987 U
Aroclor 1221 (OC normalized)	11104-28-2-OC	mg/kg-OC	--	--	< 32.520325203 U	< 62.5 U	< 3.50877193 UJ	< 0.788954635 U	< 0.869565217 U	< 0.896860987 U	< 0.896860987 U
Aroclor 1232 (OC normalized)	11141-16-5-OC	mg/kg-OC	--	--	< 32.520325203 U	< 62.5 U	< 3.50877193 UJ	< 0.788954635 U	< 0.869565217 U	< 0.896860987 U	< 0.896860987 U
Aroclor 1242 (OC normalized)	53469-21-9-OC	mg/kg-OC	--	--	< 32.520325203 U	< 62.5 U	< 3.50877193 UJ	< 0.788954635 U	< 0.869565217 U	< 0.896860987 U	< 0.896860987 U
Aroclor 1248 (OC normalized)	12672-29-6-OC	mg/kg-OC	--	--	< 32.520325203 U	< 62.5 U	< 3.50877193 UJ	< 0.788954635 U	< 0.869565217 U	< 0.896860987 U	< 0.896860987 U
Aroclor 1254 (OC normalized)	11097-69-1-OC	mg/kg-OC	--	--	< 32.520325203 U	< 62.5 U	< 3.50877193 UJ	< 0.788954635 U	< 0.869565217 U	< 0.896860987 U	< 0.896860987 U
Aroclor 1260 (OC normalized)	11096-82-5-OC	mg/kg-OC	313.008130081	--	< 32.520325203 U	< 62.5 U	1403.50877193 J	43.392504931	18.043478261	16.591928251	--
Aroclor 1262 (OC normalized)	37324-23-5-OC	mg/kg-OC	--	--	< 32.520325203 U	< 62.5 U	< 3.50877193 UJ	< 0.788954635 U	< 0.869565217 U	< 0.896860987 U	< 0.896860987 U
Aroclor 1268 (OC normalized)	11100-14-4-OC	mg/kg-OC	--	--	< 32.520325203 U	< 62.5 U	< 3.50877193 UJ	< 0.788954635 U	< 0.869565217 U	< 0.896860987 U	< 0.896860987 U
Total PCBs (Sum of Aroclors) OC normalized	T-PCBs-OC	mg/kg-OC	313.008130081	--	< 32.520325203 U	< 62.5 U	1403.50877193 J	43.392504931	18.043478261	16.591928251	--
Polychlorinated Biphenyl Congeners											
Total PCB Congeners	T-PCBCong	mg/kg	1.1E-05	SL-3	0.93	0.101	22.1	0.416	0.186	0.105	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	6.93E-09	SL-3	0.0000266	0.00000309 J	0.000351 J	0.0000122	0.00000696 J	0.00000399 J	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	6.93E-09	SL-3	0.0000266	0.00000309 J	0.000351 J	0.0000122	0.00000696 J	0.00000399 J	--
Dioxins/Furans											
Total CDD TEQ (ND = 1/2 RDL)	CDD-TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF-TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons											
1-Methylnaphthalene	90-12-0	mg/kg	34.5	SL-1	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	mg/kg	0.67	SL-8	--	--	--	--	--	--	--
Acenaphthene	83-32-9	mg/kg	0.5	SL-8	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8	--	--	--	--	--	--	--
Anthracene	120-12-7	mg/kg	0.96	SL-8	--	--	--	--	--	--	--
Benzo(a,h)perylene	191-24-2	mg/kg	0.67	SL-8	--	--	--	--	--	--	--
Fluoranthene	206-44-0	mg/kg	1.7	SL-8	--	--	--	--	--	--	--
Fluorene	86-73-7	mg/kg	0.54	SL-8	--	--	--	--	--	--	--
Naphthalene	91-20-3	mg/kg	0.0389	SL-3	--	--	--	--	--	--	--
Phenanthrene	85-01-8	mg/kg	1.5	SL-8	--	--	--	--	--	--	--
Pyrene	129-00-0	mg/kg	2.6	SL-8	--	--	--	--	--	--	--
Benzo(a)anthracene	56-55-3	mg/kg	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	50-35-9	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--
Benzo(b)fluoranthene	205-99-2	mg/kg	--	--	--	--	--	--	--	--	--
Benzo(i)fluoranthene	205-82-3	mg/kg	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	mg/kg	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	mg/kg	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	53-70-3	mg/kg	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	--	--	--	--	--	--	--	--	--
Total Benzofluoranthenes	TOTBFA	mg/kg	3.2	SL-8	--	--	--	--	--	--	--
Total HPAHs	T-HPAHs	mg/kg	12	SL-8	--	--	--	--	--	--	--
Total LPAHs	T-LPAHs	mg/kg	5.2	SL-8	--	--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-25	SS-26	SS-27	SS-28	SS-29	SS-30	SS-31
					Date Sample Depth	02/08/2016 SPM-SS-25-02082016 0 - 1.6 ft	02/08/2016 SPM-SS-26-02082016 0 - 1.6 ft	02/08/2016 SPM-SS-27-02082016 0 - 1.6 ft	02/11/2016 SPM-SS-28-02112016 0 - 1.6 ft	02/11/2016 SPM-SS-29-02112016 0 - 1.6 ft	02/11/2016 SPM-SS-30-02112016 0 - 1.6 ft	11/17/2017 SS-31-0-1.5 0 - 1.5 ft
Metals												
Arsenic	7440-38-2	mg/kg	7.3	SL-10	--	--	--	--	--	--	--	--
Cadmium	7440-43-9	mg/kg	0.77	SL-10	--	--	--	--	--	--	--	--
Chromium	7440-47-3	mg/kg	48.2	SL-10	--	--	--	--	--	--	--	--
Copper	7440-50-8	mg/kg	36.4	SL-10	--	--	--	--	--	--	--	--
Lead	7439-92-1	mg/kg	50	SL-9	--	--	--	--	--	--	--	--
Mercury	7439-97-6	mg/kg	0.07	SL-10	--	--	--	--	--	--	--	--
Nickel	7440-02-0	mg/kg	48	SL-10	--	--	--	--	--	--	--	--
Silver	7440-22-4	mg/kg	0.323	SL-3	--	--	--	--	--	--	--	--
Zinc	7440-66-6	mg/kg	86	SL-9	--	--	--	--	--	--	--	--
Butyl Tin Ions												
Dibutyltin Ion	14488-53-0	mg/kg	--	--	--	--	--	--	--	--	--	--
Monobutyltin	78763-54-9	mg/kg	--	--	--	--	--	--	--	--	--	--
Tetrabutyltin	1461-25-2	mg/kg	--	--	--	--	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	mg/kg	0.0021	SL-8	--	--	--	--	--	--	--	--
Polychlorinated Biphenyl Aroclors												
Aroclor 1016	12674-11-2	mg/kg	--	--	< 0.004 U	< 0.04 U	< 0.004 U	< 0.04 U	< 0.04 U	< 0.04 U	< 0.08 U	< 0.054 U
Aroclor 1221	11104-28-2	mg/kg	--	--	< 0.004 U	< 0.04 U	< 0.004 U	< 0.04 U	< 0.04 U	< 0.04 U	< 0.08 U	< 0.054 U
Aroclor 1232	11141-16-5	mg/kg	--	--	< 0.004 U	< 0.04 U	< 0.004 U	< 0.04 U	< 0.04 U	< 0.04 U	< 0.08 U	< 0.054 U
Aroclor 1242	53469-21-9	mg/kg	--	--	< 0.004 U	< 0.04 U	< 0.004 U	< 0.04 U	< 0.04 U	< 0.04 U	< 0.08 U	< 0.054 U
Aroclor 1248	12672-29-6	mg/kg	--	--	< 0.004 U	< 0.04 U	< 0.004 U	< 0.04 U	< 0.04 U	< 0.04 U	< 0.08 U	< 0.054 U
Aroclor 1254	11097-69-1	mg/kg	--	--	< 0.004 U	0.11	< 0.004 U	< 0.04 U	< 0.04 U	< 0.04 U	< 0.08 U	< 0.054 U
Aroclor 1260	11096-82-5	mg/kg	--	--	0.6	0.5	0.041	0.28	0.16	1.9	0.064	--
Aroclor 1262	37324-23-5	mg/kg	--	--	< 0.004 U	< 0.04 U	< 0.004 U	< 0.04 U	< 0.04 U	< 0.04 U	< 0.08 U	--
Aroclor 1268	11100-14-4	mg/kg	--	--	< 0.004 U	< 0.04 U	< 0.004 U	< 0.04 U	< 0.04 U	< 0.04 U	< 0.08 U	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	1.1E-05	SL-3	0.616	0.750	0.0570	0.440	0.176	2.22	0.22	0.226
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	1.1E-05	SL-3	0.6	0.61	0.041	0.28	0.16	1.9	0.064	--
Aroclor 1016 (OC normalized)	12674-11-2-OC	mg/kg-OC	--	--	< 0.698080279 U	< 30.769230769 U	< 1.587301587 U	< 6.472491909 U	< 0.338983051 U	< 8.629989213 U	--	--
Aroclor 1221 (OC normalized)	11104-28-2-OC	mg/kg-OC	--	--	< 0.698080279 U	< 30.769230769 U	< 1.587301587 U	< 6.472491909 U	< 0.338983051 U	< 8.629989213 U	--	--
Aroclor 1232 (OC normalized)	11141-16-5-OC	mg/kg-OC	--	--	< 0.698080279 U	< 30.769230769 U	< 1.587301587 U	< 6.472491909 U	< 0.338983051 U	< 8.629989213 U	--	--
Aroclor 1242 (OC normalized)	53469-21-9-OC	mg/kg-OC	--	--	< 0.698080279 U	< 30.769230769 U	< 1.587301587 U	< 6.472491909 U	< 0.338983051 U	< 8.629989213 U	--	--
Aroclor 1248 (OC normalized)	12672-29-6-OC	mg/kg-OC	--	--	< 0.698080279 U	< 30.769230769 U	< 1.587301587 U	< 6.472491909 U	< 0.338983051 U	< 8.629989213 U	--	--
Aroclor 1254 (OC normalized)	11097-69-1-OC	mg/kg-OC	--	--	< 0.698080279 U	84.615384615	< 1.587301587 U	< 6.472491909 U	< 0.338983051 U	< 8.629989213 U	--	--
Aroclor 1260 (OC normalized)	11096-82-5-OC	mg/kg-OC	--	--	104.712041885	384.615384615	16.26984127	45.307443366	13.559322034	204.962243797	--	--
Aroclor 1262 (OC normalized)	37324-23-5-OC	mg/kg-OC	--	--	< 0.698080279 U	< 30.769230769 U	< 1.587301587 U	< 6.472491909 U	< 0.338983051 U	< 8.629989213 U	--	--
Aroclor 1268 (OC normalized)	11100-14-4-OC	mg/kg-OC	--	--	< 0.698080279 U	< 30.769230769 U	< 1.587301587 U	< 6.472491909 U	< 0.338983051 U	< 8.629989213 U	--	--
Total PCBs (Sum of Aroclors) OC normalized	T-PCBs-OC	mg/kg-OC	104.712041885	--	469.230769231	16.26984127	45.307443366	13.559322034	204.962243797	--	--	--
Polychlorinated Biphenyl Congeners												
Total PCB Congeners	T-PCBCong	mg/kg	1.1E-05	SL-3	0.611	0.287	0.0835	0.538	0.18	2.6	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	6.93E-09	SL-3	0.0000176	0.00000861 J	0.00000474 J	0.00000662	0.00000514	0.0000277 J	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	6.93E-09	SL-3	0.0000176	0.00000868 J	0.00000474 J	0.00000662	0.00000514	0.0000277 J	--	--
Dioxins/Furans												
Total CDD TEQ (ND = 1/2 RDL)	CDD-TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF-TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons												
1-Methylnaphthalene	90-12-0	mg/kg	34.5	SL-1	--	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	mg/kg	0.67	SL-8	--	--	--	--	--	--	--	--
Acenaphthene	83-32-9	mg/kg	0.5	SL-8	--	--	--	--	--	--	--	--
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8	--	--	--	--	--	--	--	--
Anthracene	120-12-7	mg/kg	0.96	SL-8	--	--	--	--	--	--	--	--
Benzo(a,h)perylene	191-24-2	mg/kg	0.67	SL-8	--	--	--	--	--	--	--	--
Fluoranthene	206-44-0	mg/kg	1.7	SL-8	--	--	--	--	--	--	--	--
Fluorene	86-73-7	mg/kg	0.54	SL-8	--	--	--	--	--	--	--	--
Naphthalene	91-20-3	mg/kg	0.0389	SL-3	--	--	--	--	--	--	--	--
Phenanthrene	85-01-8	mg/kg	1.5	SL-8	--	--	--	--	--	--	--	--
Pyrene	129-00-0	mg/kg	2.6	SL-8	--	--	--	--	--	--	--	--
Benz(a)anthracene	56-55-3	mg/kg	--	--	--	--	--	--	--	--	--	--
Benzo(a)pyrene	50-32-9	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--	--
Benzo(b)fluoranthene	205-99-2	mg/kg	--	--	--	--	--	--	--	--	--	--
Benzo(i)fluoranthene	205-82-3	mg/kg	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	mg/kg	--	--	--	--	--	--	--	--	--	--
Chrysene	218-01-9	mg/kg	--	--	--	--	--	--	--	--	--	--
Dibenzo(a,h)anthracene	53-70-3	mg/kg	--	--	--	--	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	--	--	--	--	--	--	--	--	--	--
Total Benzofluoranthenes	TOTBFA	mg/kg	3.2	SL-8	--	--	--	--	--	--	--	--
Total HPAHs	T-HPAHs	mg/kg	12	SL-8	--	--	--	--	--	--	--	--
Total LPAHs	T-LPAHs	mg/kg	5.2	SL-8	--	--	--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	T117 A12	T117 A12
					Date	01/24/2006	01/24/2006
					Sample	T117-A12-SB-0.0-0.5	T117-A12-SB-0.5-1.5
					Depth	0 - 0.5 ft	0.5 - 1.5 ft
Metals							
Arsenic	7440-38-2	mg/kg	7.3	SL-10		--	--
Cadmium	7440-43-9	mg/kg	0.77	SL-10		--	--
Chromium	7440-47-3	mg/kg	48.2	SL-10		--	--
Copper	7440-50-8	mg/kg	36.4	SL-10		--	--
Lead	7439-92-1	mg/kg	50	SL-9		--	--
Mercury	7439-97-6	mg/kg	0.07	SL-10		--	--
Nickel	7440-02-0	mg/kg	48	SL-10		--	--
Silver	7440-22-4	mg/kg	0.323	SL-3		--	--
Zinc	7440-66-6	mg/kg	86	SL-9		--	--
Butyl Tin Ions							
Dibutyltin Ion	14488-53-0	mg/kg				--	--
Monobutyltin	78763-54-9	mg/kg				--	--
Tetrabutyltin	1461-25-2	mg/kg				--	--
Tributyltin Ion	36643-28-4	mg/kg	0.0021	SL-8		--	--
Polychlorinated Biphenyl Aroclors							
Aroclor 1016	12674-11-2	mg/kg				< 0.23 U	< 0.076 U
Aroclor 1221	11104-28-2	mg/kg				< 0.23 U	< 0.076 U
Aroclor 1232	11141-16-5	mg/kg				< 0.23 U	< 0.076 U
Aroclor 1242	53469-21-9	mg/kg				< 0.23 U	< 0.076 U
Aroclor 1248	12672-29-6	mg/kg				< 0.23 U	< 0.076 U
Aroclor 1254	11097-69-1	mg/kg				2.1	0.25
Aroclor 1260	11096-82-5	mg/kg				1.1 J	0.34
Aroclor 1262	37324-23-5	mg/kg				--	--
Aroclor 1268	11100-14-4	mg/kg				--	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	1.1E-05	SL-3		3.78 J	0.780
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	1.1E-05	SL-3		3.2 J	0.59
Aroclor 1016 (OC normalized)	12674-11-2-OC	mg/kg-OC				--	--
Aroclor 1221 (OC normalized)	11104-28-2-OC	mg/kg-OC				--	--
Aroclor 1232 (OC normalized)	11141-16-5-OC	mg/kg-OC				--	--
Aroclor 1242 (OC normalized)	53469-21-9-OC	mg/kg-OC				--	--
Aroclor 1248 (OC normalized)	12672-29-6-OC	mg/kg-OC				--	--
Aroclor 1254 (OC normalized)	11097-69-1-OC	mg/kg-OC				--	--
Aroclor 1260 (OC normalized)	11096-82-5-OC	mg/kg-OC				--	--
Aroclor 1262 (OC normalized)	37324-23-5-OC	mg/kg-OC				--	--
Aroclor 1268 (OC normalized)	11100-14-4-OC	mg/kg-OC				--	--
Total PCBs (Sum of Aroclors) OC normalized	T-PCBs-OC	mg/kg-OC				--	--
Polychlorinated Biphenyl Congeners							
Total PCB Congeners	T-PCBCong	mg/kg	1.1E-05	SL-3		--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	6.93E-09	SL-3		--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	6.93E-09	SL-3		--	--
Dioxins/Furans							
Total CDD TEQ (ND = 1/2 RDL)	CDD-TEQ-1/2U	mg/kg	2E-06	SL-9		--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF-TEQ-1/2U	mg/kg	2E-06	SL-9		--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10		--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10		--	--
Polycyclic Aromatic Hydrocarbons							
1-Methylnaphthalene	90-12-0	mg/kg	34.5	SL-1		--	--
2-Methylnaphthalene	91-57-6	mg/kg	0.67	SL-8		--	--
Acenaphthene	83-32-9	mg/kg	0.5	SL-8		--	--
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8		--	--
Anthracene	120-12-7	mg/kg	0.96	SL-8		--	--
Benzo(a,h,i)perylene	191-24-2	mg/kg	0.67	SL-8		--	--
Fluoranthene	206-44-0	mg/kg	1.7	SL-8		--	--
Fluorene	86-73-7	mg/kg	0.54	SL-8		--	--
Naphthalene	91-20-3	mg/kg	0.0389	SL-3		--	--
Phenanthrene	85-01-8	mg/kg	1.5	SL-8		--	--
Pyrene	129-00-0	mg/kg	2.6	SL-8		--	--
Benzo(a)anthracene	56-55-3	mg/kg				--	--
Benzo(a)pyrene	50-32-9	mg/kg	0.00031	SL-3		--	--
Benzo(b)fluoranthene	205-99-2	mg/kg				--	--
Benzo(i)fluoranthene	205-82-3	mg/kg				--	--
Benzo(k)fluoranthene	207-08-9	mg/kg				--	--
Chrysene	218-01-9	mg/kg				--	--
Dibenzo(a,h)anthracene	53-70-3	mg/kg				--	--
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg				--	--
Total Benzofluoranthenes	TOTBFA	mg/kg	3.2	SL-8		--	--
Total HPAHs	T-HPAHs	mg/kg	12	SL-8		--	--
Total LPAHs	T-LPAHs	mg/kg	5.2	SL-8		--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06
					Date	02/09/2016	02/09/2016	02/09/2016	02/10/2016	02/10/2016	
Sample	SB-34	SB-34R-3-4	SPM-SS-01-02092016	SPM-SS-02-02092016	SPM-SS-03-02092016	SPM-SS-04-02102016	SPM-SS-05-02102016	SPM-SS-06-02102016			
Depth	3 - 4 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft			
Total PAHs (ND=0)	T-PAH	mg/kg	--	--	--	--	--	--	--	--	--
Total cPAHs TEQ (ND = 0)	T-cPAH-OU	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--
Total cPAHs TEQ (ND multiplier Unknown)	T-cPAH-UnkU	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--
Semivolatile Organic Compounds											
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.00133	SL-3	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	mg/kg	6.97	SL-3	--	--	--	--	--	--	--
2,4-Dichlorophenol	120-83-2	mg/kg	0.0694	SL-3	--	--	--	--	--	--	--
2,4-Dimethylphenol	105-67-9	mg/kg	0.029	SL-8	--	--	--	--	--	--	--
2,4-Dinitrophenol	51-28-5	mg/kg	0.4	SL-3	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	mg/kg	0.00279	SL-3	--	--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	mg/kg	0.667	SL-1	--	--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	mg/kg	5.36	SL-3	--	--	--	--	--	--	--
2-Chlorophenol	95-57-8	mg/kg	0.2	SL-3	--	--	--	--	--	--	--
2-Methylphenol	95-48-7	mg/kg	0.069	SL-8	--	--	--	--	--	--	--
2-Nitroaniline	88-74-4	mg/kg	800	SL-1	--	--	--	--	--	--	--
2-Nitrophenol	88-75-5	mg/kg	--	--	--	--	--	--	--	--	--
3,3-Dichlorobenzidine	91-94-1	mg/kg	3.43E-05	SL-3	--	--	--	--	--	--	--
3-Nitroaniline	99-09-2	mg/kg	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.134	SL-3	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	101-55-3	mg/kg	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.498	SL-3	--	--	--	--	--	--	--
4-Chloroaniline	106-47-8	mg/kg	5	SL-1	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	--	--	--	--	--	--	--	--	--
4-Methylphenol	106-44-5	mg/kg	0.67	SL-8	--	--	--	--	--	--	--
4-Nitroaniline	100-01-6	mg/kg	50	SL-1	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	mg/kg	7	SL-9	--	--	--	--	--	--	--
Benzoic acid	65-85-0	mg/kg	0.65	SL-8	--	--	--	--	--	--	--
Benzyl alcohol	100-51-6	mg/kg	0.057	SL-8	--	--	--	--	--	--	--
Benzyl butyl phthalate	85-68-7	mg/kg	0.00361	SL-3	--	--	--	--	--	--	--
Bis(2-chloro-1-methyl) ether	108-60-1	mg/kg	5.09	SL-3	--	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	--	--	--	--	--	--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	mg/kg	0.000331	SL-3	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	0.102	SL-3	--	--	--	--	--	--	--
Carbazole	86-74-8	mg/kg	--	--	--	--	--	--	--	--	--
Dibenzofuran	132-64-9	mg/kg	0.54	SL-8	--	--	--	--	--	--	--
Diethyl phthalate	84-66-2	mg/kg	0.2	SL-8	--	--	--	--	--	--	--
Dimethyl phthalate	131-11-3	mg/kg	0.071	SL-8	--	--	--	--	--	--	--
Di-n-butyl phthalate	84-74-2	mg/kg	0.283	SL-3	--	--	--	--	--	--	--
Di-n-octyl phthalate	117-84-0	mg/kg	6.2	SL-8	--	--	--	--	--	--	--
Hexachlorobenzene	118-74-1	mg/kg	8.02E-06	SL-3	--	--	--	--	--	--	--
Hexachlorobutadiene	87-68-3	mg/kg	0.000212	SL-3	< 0.00522 U	--	--	--	--	--	--
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.032	SL-3	--	--	--	--	--	--	--
Hexachloroethane	67-72-1	mg/kg	0.000161	SL-3	--	--	--	--	--	--	--
Isophorone	78-59-1	mg/kg	0.583	SL-3	--	--	--	--	--	--	--
Nitrobenzene	98-95-3	mg/kg	0.638	SL-3	--	--	--	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.000551	SL-3	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.028	SL-8	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	mg/kg	3.17E-05	SL-3	--	--	--	--	--	--	--
Phenol	108-95-2	mg/kg	0.42	SL-8	--	--	--	--	--	--	--
Pesticides and Herbicides											
2,4'-DDD	53-19-0	mg/kg	--	--	--	--	--	--	--	--	--
2,4'-DDE	3424-82-6	mg/kg	--	--	--	--	--	--	--	--	--
2,4'-DDT	789-02-6	mg/kg	--	--	--	--	--	--	--	--	--
4,4'-DDD	72-54-8	mg/kg	7.27E-06	SL-3	--	--	--	--	--	--	--
4,4'-DDE	72-55-9	mg/kg	1.52E-06	SL-3	--	--	--	--	--	--	--
4,4'-DDT	50-29-3	mg/kg	1.83E-05	SL-3	--	--	--	--	--	--	--
Aldrin	309-00-2	mg/kg	4.01E-08	SL-3	--	--	--	--	--	--	--
Alpha-BHC	319-84-6	mg/kg	1.88E-06	SL-3	--	--	--	--	--	--	--
Beta-BHC	319-85-7	mg/kg	6.55E-05	SL-3	--	--	--	--	--	--	--
cis-Chlordane	5103-71-9	mg/kg	0.0001	SL-8	--	--	--	--	--	--	--
cis-Nonachlor	5103-73-1	mg/kg	--	--	--	--	--	--	--	--	--
Delta-BHC	319-86-8	mg/kg	6	SL-9	--	--	--	--	--	--	--
Dieldrin	60-57-1	mg/kg	6.17E-07	SL-3	--	--	--	--	--	--	--
Endosulfan I	959-98-8	mg/kg	0.00121	SL-3	--	--	--	--	--	--	--
Endosulfan II	33213-65-9	mg/kg	0.00121	SL-3	--	--	--	--	--	--	--
Endosulfan Sulfate	1031-07-8	mg/kg	2.01	SL-3	--	--	--	--	--	--	--
Endrin	72-20-8	mg/kg	0.00044	SL-3	--	--	--	--	--	--	--
Endrin Aldehyde	7421-93-4	mg/kg	0.00243	SL-3	--	--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-07	SS-08	SS-09	SS-10	SS-11	SS-12
					Date	02/09/2016	02/09/2016	02/10/2016	02/10/2016	02/10/2016	02/09/2016
					Sample	SPM-SS-07-02092016	SPM-SS-08-02092016	SPM-SS-09-02102016	SPM-SS-10-02102016	SPM-SS-11-02102016	SPM-SS-12-02092016
					Depth	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft
Total PAHs (ND=0)						--	--	--	--	--	--
Total cPAHs TEQ (ND = 0)	T-cPAH-OU	mg/kg	0.00031	SL-3		--	--	--	--	--	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg	0.00031	SL-3		--	--	--	--	--	--
Total cPAHs TEQ (ND multiplier Unknown)	T-cPAH-UnkU	mg/kg	0.00031	SL-3		--	--	--	--	--	--
Semivolatile Organic Compounds											
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.00133	SL-3		--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	mg/kg	6.97	SL-3		--	--	--	--	--	--
2,4-Dichlorophenol	120-83-2	mg/kg	0.0694	SL-3		--	--	--	--	--	--
2,4-Dimethylphenol	105-67-9	mg/kg	0.029	SL-8		--	--	--	--	--	--
2,4-Dinitrophenol	51-28-5	mg/kg	0.4	SL-3		--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	mg/kg	0.00279	SL-3		--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	mg/kg	0.667	SL-1		--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	mg/kg	5.36	SL-3		--	--	--	--	--	--
2-Chlorophenol	95-57-8	mg/kg	0.2	SL-3		--	--	--	--	--	--
2-Methylphenol	95-48-7	mg/kg	0.069	SL-8		--	--	--	--	--	--
2-Nitroaniline	88-74-4	mg/kg	800	SL-1		--	--	--	--	--	--
2-Nitrophenol	88-75-5	mg/kg				--	--	--	--	--	--
3,3-Dichlorobenzidine	91-94-1	mg/kg	3.43E-05	SL-3		--	--	--	--	--	--
3-Nitroaniline	99-09-2	mg/kg				--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.134	SL-3		--	--	--	--	--	--
4-Bromophenyl phenyl ether	101-55-3	mg/kg				--	--	--	--	--	--
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.498	SL-3		--	--	--	--	--	--
4-Chloroaniline	106-47-8	mg/kg	5	SL-1		--	--	--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg				--	--	--	--	--	--
4-Methylphenol	106-44-5	mg/kg	0.67	SL-8		--	--	--	--	--	--
4-Nitroaniline	100-01-6	mg/kg	50	SL-1		--	--	--	--	--	--
4-Nitrophenol	100-02-7	mg/kg	7	SL-9		--	--	--	--	--	--
Benzoic acid	65-85-0	mg/kg	0.65	SL-8		--	--	--	--	--	--
Benzyl alcohol	100-51-6	mg/kg	0.057	SL-8		--	--	--	--	--	--
Benzyl butyl phthalate	85-68-7	mg/kg	0.00361	SL-3		--	--	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg	5.09	SL-3		--	--	--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	mg/kg				--	--	--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	mg/kg	0.000331	SL-3		--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	0.102	SL-3		--	--	--	--	--	--
Carbazole	86-74-8	mg/kg				--	--	--	--	--	--
Dibenzofuran	132-64-9	mg/kg	0.54	SL-8		--	--	--	--	--	--
Diethyl phthalate	84-66-2	mg/kg	0.2	SL-8		--	--	--	--	--	--
Dimethyl phthalate	131-11-3	mg/kg	0.071	SL-8		--	--	--	--	--	--
Di-n-butyl phthalate	84-74-2	mg/kg	0.283	SL-3		--	--	--	--	--	--
Di-n-octyl phthalate	117-84-0	mg/kg	6.2	SL-8		--	--	--	--	--	--
Hexachlorobenzene	118-74-1	mg/kg	8.02E-06	SL-3		--	--	--	--	--	--
Hexachlorobutadiene	87-68-3	mg/kg	0.000212	SL-3		--	--	--	--	--	--
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.032	SL-3		--	--	--	--	--	--
Hexachloroethane	67-72-1	mg/kg	0.000161	SL-3		--	--	--	--	--	--
Isophorone	78-59-1	mg/kg	0.583	SL-3		--	--	--	--	--	--
Nitrobenzene	98-95-3	mg/kg	0.638	SL-3		--	--	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.000551	SL-3		--	--	--	--	--	--
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.028	SL-8		--	--	--	--	--	--
Pentachlorophenol	87-86-5	mg/kg	3.17E-05	SL-3		--	--	--	--	--	--
Phenol	108-95-2	mg/kg	0.42	SL-8		--	--	--	--	--	--
Pesticides and Herbicides											
2,4'-DDD	53-19-0	mg/kg				--	--	--	--	--	--
2,4'-DDE	3424-82-6	mg/kg				--	--	--	--	--	--
2,4'-DDT	789-02-6	mg/kg				--	--	--	--	--	--
4,4'-DDD	72-54-8	mg/kg	7.27E-06	SL-3		--	--	--	--	--	--
4,4'-DDE	72-55-9	mg/kg	1.52E-06	SL-3		--	--	--	--	--	--
4,4'-DDT	50-29-3	mg/kg	1.83E-05	SL-3		--	--	--	--	--	--
Aldrin	309-00-2	mg/kg	4.01E-08	SL-3		--	--	--	--	--	--
Alpha-BHC	319-84-6	mg/kg	1.88E-06	SL-3		--	--	--	--	--	--
Beta-BHC	319-85-7	mg/kg	6.55E-05	SL-3		--	--	--	--	--	--
cis-Chlordane	5103-71-9	mg/kg	0.0001	SL-8		--	--	--	--	--	--
cis-Nonachlor	5103-73-1	mg/kg				--	--	--	--	--	--
Delta-BHC	319-86-8	mg/kg	6	SL-9		--	--	--	--	--	--
Dieldrin	60-57-1	mg/kg	6.17E-07	SL-3		--	--	--	--	--	--
Endosulfan I	959-98-8	mg/kg	0.00121	SL-3		--	--	--	--	--	--
Endosulfan II	33213-65-9	mg/kg	0.00121	SL-3		--	--	--	--	--	--
Endosulfan Sulfate	1031-07-8	mg/kg	2.01	SL-3		--	--	--	--	--	--
Endrin	72-20-8	mg/kg	0.00044	SL-3		--	--	--	--	--	--
Endrin Aldehyde	7421-93-4	mg/kg	0.00243	SL-3		--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18
					Date	02/10/2016	02/10/2016	02/09/2016	02/09/2016	02/10/2016	02/10/2016
					Sample	SPM-SS-13-02102016	SPM-SS-14-02102016	SPM-SS-15-02102016	SPM-SS-16-02092016	SPM-SS-17-02102016	SPM-SS-18-02102016
					Depth	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft
Total PAHs (ND=0)						--	--	--	--	--	--
Total cPAHs TEQ (ND = 0)	T-cPAH-OU	mg/kg	0.00031	SL-3		--	--	--	--	--	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg	0.00031	SL-3		--	--	--	--	--	--
Total cPAHs TEQ (ND multiplier Unknown)	T-cPAH-UnkU	mg/kg	0.00031	SL-3		--	--	--	--	--	--
Semivolatile Organic Compounds											
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.00133	SL-3		--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	mg/kg	6.97	SL-3		--	--	--	--	--	--
2,4-Dichlorophenol	120-83-2	mg/kg	0.0694	SL-3		--	--	--	--	--	--
2,4-Dimethylphenol	105-67-9	mg/kg	0.029	SL-8		--	--	--	--	--	--
2,4-Dinitrophenol	51-28-5	mg/kg	0.4	SL-3		--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	mg/kg	0.00279	SL-3		--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	mg/kg	0.667	SL-1		--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	mg/kg	5.36	SL-3		--	--	--	--	--	--
2-Chlorophenol	95-57-8	mg/kg	0.2	SL-3		--	--	--	--	--	--
2-Methylphenol	95-48-7	mg/kg	0.069	SL-8		--	--	--	--	--	--
2-Nitroaniline	88-74-4	mg/kg	800	SL-1		--	--	--	--	--	--
2-Nitrophenol	88-75-5	mg/kg				--	--	--	--	--	--
3,3-Dichlorobenzidine	91-94-1	mg/kg	3.43E-05	SL-3		--	--	--	--	--	--
3-Nitroaniline	99-09-2	mg/kg				--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.134	SL-3		--	--	--	--	--	--
4-Bromophenyl phenyl ether	101-55-3	mg/kg				--	--	--	--	--	--
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.498	SL-3		--	--	--	--	--	--
4-Chloroaniline	106-47-8	mg/kg	5	SL-1		--	--	--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg				--	--	--	--	--	--
4-Methylphenol	106-44-5	mg/kg	0.67	SL-8		--	--	--	--	--	--
4-Nitroaniline	100-01-6	mg/kg	50	SL-1		--	--	--	--	--	--
4-Nitrophenol	100-02-7	mg/kg	7	SL-9		--	--	--	--	--	--
Benzoic acid	65-85-0	mg/kg	0.65	SL-8		--	--	--	--	--	--
Benzyl alcohol	100-51-6	mg/kg	0.057	SL-8		--	--	--	--	--	--
Benzyl butyl phthalate	85-68-7	mg/kg	0.00361	SL-3		--	--	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg	5.09	SL-3		--	--	--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	mg/kg				--	--	--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	mg/kg	0.000331	SL-3		--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	0.102	SL-3		--	--	--	--	--	--
Carbazole	86-74-8	mg/kg				--	--	--	--	--	--
Dibenzofuran	132-64-9	mg/kg	0.54	SL-8		--	--	--	--	--	--
Diethyl phthalate	84-66-2	mg/kg	0.2	SL-8		--	--	--	--	--	--
Dimethyl phthalate	131-11-3	mg/kg	0.071	SL-8		--	--	--	--	--	--
Di-n-butyl phthalate	84-74-2	mg/kg	0.283	SL-3		--	--	--	--	--	--
Di-n-octyl phthalate	117-84-0	mg/kg	6.2	SL-8		--	--	--	--	--	--
Hexachlorobenzene	118-74-1	mg/kg	8.02E-06	SL-3		--	--	--	--	--	--
Hexachlorobutadiene	87-68-3	mg/kg	0.000212	SL-3		--	--	--	--	--	--
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.032	SL-3		--	--	--	--	--	--
Hexachloroethane	67-72-1	mg/kg	0.000161	SL-3		--	--	--	--	--	--
Isophorone	78-59-1	mg/kg	0.583	SL-3		--	--	--	--	--	--
Nitrobenzene	98-95-3	mg/kg	0.638	SL-3		--	--	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.000551	SL-3		--	--	--	--	--	--
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.028	SL-8		--	--	--	--	--	--
Pentachlorophenol	87-86-5	mg/kg	3.17E-05	SL-3		--	--	--	--	--	--
Phenol	108-95-2	mg/kg	0.42	SL-8		--	--	--	--	--	--
Pesticides and Herbicides											
2,4'-DDD	53-19-0	mg/kg				--	--	--	--	--	--
2,4'-DDE	3424-82-6	mg/kg				--	--	--	--	--	--
2,4'-DDT	789-02-6	mg/kg				--	--	--	--	--	--
4,4'-DDD	72-54-8	mg/kg	7.27E-06	SL-3		--	--	--	--	--	--
4,4'-DDE	72-55-9	mg/kg	1.52E-06	SL-3		--	--	--	--	--	--
4,4'-DDT	50-29-3	mg/kg	1.83E-05	SL-3		--	--	--	--	--	--
Aldrin	309-00-2	mg/kg	4.01E-08	SL-3		--	--	--	--	--	--
Alpha-BHC	319-84-6	mg/kg	1.88E-06	SL-3		--	--	--	--	--	--
Beta-BHC	319-85-7	mg/kg	6.55E-05	SL-3		--	--	--	--	--	--
cis-Chlordane	5103-71-9	mg/kg	0.0001	SL-8		--	--	--	--	--	--
cis-Nonachlor	5103-73-1	mg/kg				--	--	--	--	--	--
Delta-BHC	319-86-8	mg/kg	6	SL-9		--	--	--	--	--	--
Dieldrin	60-57-1	mg/kg	6.17E-07	SL-3		--	--	--	--	--	--
Endosulfan I	959-98-8	mg/kg	0.00121	SL-3		--	--	--	--	--	--
Endosulfan II	33213-65-9	mg/kg	0.00121	SL-3		--	--	--	--	--	--
Endosulfan Sulfate	1031-07-8	mg/kg	2.01	SL-3		--	--	--	--	--	--
Endrin	72-20-8	mg/kg	0.00044	SL-3		--	--	--	--	--	--
Endrin Aldehyde	7421-93-4	mg/kg	0.00243	SL-3		--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-19	SS-20	SS-21	SS-22	SS-23	SS-24
					Date Sample Depth	02/10/2016 SPM-SS-19-02102016 0 - 1.6 ft	02/10/2016 SPM-SS-20-02102016 0 - 1.6 ft	02/08/2016 SPM-SS-21-02082016 0 - 1.6 ft	02/08/2016 SPM-SS-22-02082016 0 - 1.6 ft	02/08/2016 SPM-SS-23-02082016 0 - 1.6 ft	02/10/2016 SPM-SS-24-02102016 0 - 1.6 ft
Total PAHs (ND=0)	T-PAH	mg/kg	--	--	--	--	--	--	--	--	--
Total cPAHs TEQ (ND = 0)	T-cPAH-OU	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--
Total cPAHs TEQ (ND multiplier Unknown)	T-cPAH-UnkU	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--
Semivolatile Organic Compounds											
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.00133	SL-3	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	mg/kg	6.97	SL-3	--	--	--	--	--	--	--
2,4-Dichlorophenol	120-83-2	mg/kg	0.0694	SL-3	--	--	--	--	--	--	--
2,4-Dimethylphenol	105-67-9	mg/kg	0.029	SL-8	--	--	--	--	--	--	--
2,4-Dinitrophenol	51-28-5	mg/kg	0.4	SL-3	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	mg/kg	0.00279	SL-3	--	--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	mg/kg	0.667	SL-1	--	--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	mg/kg	5.36	SL-3	--	--	--	--	--	--	--
2-Chlorophenol	95-57-8	mg/kg	0.2	SL-3	--	--	--	--	--	--	--
2-Methylphenol	95-48-7	mg/kg	0.069	SL-8	--	--	--	--	--	--	--
2-Nitroaniline	88-74-4	mg/kg	800	SL-1	--	--	--	--	--	--	--
2-Nitrophenol	88-75-5	mg/kg	--	--	--	--	--	--	--	--	--
3,3-Dichlorobenzidine	91-94-1	mg/kg	3.43E-05	SL-3	--	--	--	--	--	--	--
3-Nitroaniline	99-09-2	mg/kg	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.134	SL-3	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	101-55-3	mg/kg	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.498	SL-3	--	--	--	--	--	--	--
4-Chloroaniline	106-47-8	mg/kg	5	SL-1	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	--	--	--	--	--	--	--	--	--
4-Methylphenol	106-44-5	mg/kg	0.67	SL-8	--	--	--	--	--	--	--
4-Nitroaniline	100-01-6	mg/kg	50	SL-1	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	mg/kg	7	SL-9	--	--	--	--	--	--	--
Benzoic acid	65-85-0	mg/kg	0.65	SL-8	--	--	--	--	--	--	--
Benzyl alcohol	100-51-6	mg/kg	0.057	SL-8	--	--	--	--	--	--	--
Benzyl butyl phthalate	85-68-7	mg/kg	0.00361	SL-3	--	--	--	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg	5.09	SL-3	--	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	--	--	--	--	--	--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	mg/kg	0.000331	SL-3	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	0.102	SL-3	--	--	--	--	--	--	--
Carbazole	86-74-8	mg/kg	--	--	--	--	--	--	--	--	--
Dibenzofuran	132-64-9	mg/kg	0.54	SL-8	--	--	--	--	--	--	--
Diethyl phthalate	84-66-2	mg/kg	0.2	SL-8	--	--	--	--	--	--	--
Dimethyl phthalate	131-11-3	mg/kg	0.071	SL-8	--	--	--	--	--	--	--
Di-n-butyl phthalate	84-74-2	mg/kg	0.283	SL-3	--	--	--	--	--	--	--
Di-n-octyl phthalate	117-84-0	mg/kg	6.2	SL-8	--	--	--	--	--	--	--
Hexachlorobenzene	118-74-1	mg/kg	8.02E-06	SL-3	--	--	--	--	--	--	--
Hexachlorobutadiene	87-68-3	mg/kg	0.000212	SL-3	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.032	SL-3	--	--	--	--	--	--	--
Hexachloroethane	67-72-1	mg/kg	0.000161	SL-3	--	--	--	--	--	--	--
Isophorone	78-59-1	mg/kg	0.583	SL-3	--	--	--	--	--	--	--
Nitrobenzene	98-95-3	mg/kg	0.638	SL-3	--	--	--	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.000551	SL-3	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.028	SL-8	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	mg/kg	3.17E-05	SL-3	--	--	--	--	--	--	--
Phenol	108-95-2	mg/kg	0.42	SL-8	--	--	--	--	--	--	--
Pesticides and Herbicides											
2,4'-DDD	53-19-0	mg/kg	--	--	--	--	--	--	--	--	--
2,4'-DDE	3424-82-6	mg/kg	--	--	--	--	--	--	--	--	--
2,4'-DDT	789-02-6	mg/kg	--	--	--	--	--	--	--	--	--
4,4'-DDD	72-54-8	mg/kg	7.27E-06	SL-3	--	--	--	--	--	--	--
4,4'-DDE	72-55-9	mg/kg	1.52E-06	SL-3	--	--	--	--	--	--	--
4,4'-DDT	50-29-3	mg/kg	1.83E-05	SL-3	--	--	--	--	--	--	--
Aldrin	309-00-2	mg/kg	4.01E-08	SL-3	--	--	--	--	--	--	--
Alpha-BHC	319-84-6	mg/kg	1.88E-06	SL-3	--	--	--	--	--	--	--
Beta-BHC	319-85-7	mg/kg	6.55E-05	SL-3	--	--	--	--	--	--	--
cis-Chlordane	5103-71-9	mg/kg	0.0001	SL-8	--	--	--	--	--	--	--
cis-Nonachlor	5103-73-1	mg/kg	--	--	--	--	--	--	--	--	--
Delta-BHC	319-86-8	mg/kg	6	SL-9	--	--	--	--	--	--	--
Dieldrin	60-57-1	mg/kg	6.17E-07	SL-3	--	--	--	--	--	--	--
Endosulfan I	959-98-8	mg/kg	0.00121	SL-3	--	--	--	--	--	--	--
Endosulfan II	33213-65-9	mg/kg	0.00121	SL-3	--	--	--	--	--	--	--
Endosulfan Sulfate	1031-07-8	mg/kg	2.01	SL-3	--	--	--	--	--	--	--
Endrin	72-20-8	mg/kg	0.00044	SL-3	--	--	--	--	--	--	--
Endrin Aldehyde	7421-93-4	mg/kg	0.00243	SL-3	--	--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-25	SS-26	SS-27	SS-28	SS-29	SS-30	SS-31
					Date	02/08/2016	02/08/2016	02/08/2016	02/11/2016	02/11/2016	02/11/2016	11/17/2017
					Sample	SPM-SS-25-02082016	SPM-SS-26-02082016	SPM-SS-27-02082016	SPM-SS-28-02112016	SPM-SS-29-02112016	SPM-SS-30-02112016	SS-31-0-1.5
					Depth	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.5 ft
Semivolatile Organic Compounds												
Total PAHs (ND=0)	T-PAH	mg/kg	--	--	--	--	--	--	--	--	--	--
Total cPAHs TEQ (ND = 0)	T-cPAH-OU	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--	--
Total cPAHs TEQ (ND multiplier Unknown)	T-cPAH-UnkU	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--	--
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.00133	SL-3	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	mg/kg	6.97	SL-3	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	120-83-2	mg/kg	0.0694	SL-3	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	105-67-9	mg/kg	0.029	SL-8	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	51-28-5	mg/kg	0.4	SL-3	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	mg/kg	0.00279	SL-3	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	mg/kg	0.667	SL-1	--	--	--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	mg/kg	5.36	SL-3	--	--	--	--	--	--	--	--
2-Chlorophenol	95-57-8	mg/kg	0.2	SL-3	--	--	--	--	--	--	--	--
2-Methylphenol	95-48-7	mg/kg	0.069	SL-8	--	--	--	--	--	--	--	--
2-Nitroaniline	88-74-4	mg/kg	800	SL-1	--	--	--	--	--	--	--	--
2-Nitrophenol	88-75-5	mg/kg	--	--	--	--	--	--	--	--	--	--
3,3-Dichlorobenzidine	91-94-1	mg/kg	3.43E-05	SL-3	--	--	--	--	--	--	--	--
3-Nitroaniline	99-09-2	mg/kg	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.134	SL-3	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	101-55-3	mg/kg	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.498	SL-3	--	--	--	--	--	--	--	--
4-Chloroaniline	106-47-8	mg/kg	5	SL-1	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	106-44-5	mg/kg	0.67	SL-8	--	--	--	--	--	--	--	--
4-Nitroaniline	100-01-6	mg/kg	50	SL-1	--	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	mg/kg	7	SL-9	--	--	--	--	--	--	--	--
Benzoic acid	65-85-0	mg/kg	0.65	SL-8	--	--	--	--	--	--	--	--
Benzyl alcohol	100-51-6	mg/kg	0.057	SL-8	--	--	--	--	--	--	--	--
Benzyl butyl phthalate	85-68-7	mg/kg	0.00361	SL-3	--	--	--	--	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg	5.09	SL-3	--	--	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	--	--	--	--	--	--	--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	mg/kg	0.000331	SL-3	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	0.102	SL-3	--	--	--	--	--	--	--	--
Carbazole	86-74-8	mg/kg	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	132-64-9	mg/kg	0.54	SL-8	--	--	--	--	--	--	--	--
Diethyl phthalate	84-66-2	mg/kg	0.2	SL-8	--	--	--	--	--	--	--	--
Dimethyl phthalate	131-11-3	mg/kg	0.071	SL-8	--	--	--	--	--	--	--	--
Di-n-butyl phthalate	84-74-2	mg/kg	0.283	SL-3	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	117-84-0	mg/kg	6.2	SL-8	--	--	--	--	--	--	--	--
Hexachlorobenzene	118-74-1	mg/kg	8.02E-06	SL-3	--	--	--	--	--	--	--	--
Hexachlorobutadiene	87-68-3	mg/kg	0.000212	SL-3	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.032	SL-3	--	--	--	--	--	--	--	--
Hexachloroethane	67-72-1	mg/kg	0.000161	SL-3	--	--	--	--	--	--	--	--
Isophorone	78-59-1	mg/kg	0.583	SL-3	--	--	--	--	--	--	--	--
Nitrobenzene	98-95-3	mg/kg	0.638	SL-3	--	--	--	--	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.000551	SL-3	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.028	SL-8	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	mg/kg	3.17E-05	SL-3	--	--	--	--	--	--	--	--
Phenol	108-95-2	mg/kg	0.42	SL-8	--	--	--	--	--	--	--	--
Pesticides and Herbicides												
2,4'-DDD	53-19-0	mg/kg	--	--	--	--	--	--	--	--	--	--
2,4'-DDE	3424-82-6	mg/kg	--	--	--	--	--	--	--	--	--	--
2,4'-DDT	789-02-6	mg/kg	--	--	--	--	--	--	--	--	--	--
4,4'-DDD	72-54-8	mg/kg	7.27E-06	SL-3	--	--	--	--	--	--	--	--
4,4'-DDE	72-55-9	mg/kg	1.52E-06	SL-3	--	--	--	--	--	--	--	--
4,4'-DDT	50-29-3	mg/kg	1.83E-05	SL-3	--	--	--	--	--	--	--	--
Aldrin	309-00-2	mg/kg	4.01E-08	SL-3	--	--	--	--	--	--	--	--
Alpha-BHC	319-84-6	mg/kg	1.88E-06	SL-3	--	--	--	--	--	--	--	--
Beta-BHC	319-85-7	mg/kg	6.55E-05	SL-3	--	--	--	--	--	--	--	--
cis-Chlordane	5103-71-9	mg/kg	0.0001	SL-8	--	--	--	--	--	--	--	--
cis-Nonachlor	5103-73-1	mg/kg	--	--	--	--	--	--	--	--	--	--
Delta-BHC	319-86-8	mg/kg	6	SL-9	--	--	--	--	--	--	--	--
Dieldrin	60-57-1	mg/kg	6.17E-07	SL-3	--	--	--	--	--	--	--	--
Endosulfan I	959-98-8	mg/kg	0.00121	SL-3	--	--	--	--	--	--	--	--
Endosulfan II	33213-65-9	mg/kg	0.00121	SL-3	--	--	--	--	--	--	--	--
Endosulfan Sulfate	1031-07-8	mg/kg	2.01	SL-3	--	--	--	--	--	--	--	--
Endrin	72-20-8	mg/kg	0.00044	SL-3	--	--	--	--	--	--	--	--
Endrin Aldehyde	7421-93-4	mg/kg	0.00243	SL-3	--	--	--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-32	SS-33	SS-34	SS-35	SS-36	SS-37	SS-38	SS-39	T117 A10	T117 A11
					Date	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	01/17/2006	01/24/2006	
Depth	Sample	Depth	Sample	Sample	0 - 1.5 ft	0 - 1.5 ft	0 - 1.5 ft	0 - 1.5 ft	0 - 1.5 ft	0 - 1.5 ft	0 - 1.5 ft	0 - 1 ft	0 - 1.25 ft	T117-A10-SB-01	T117-A11-SB-0-0-0.5
Total PAHs (ND=0)	T-PAH	mg/kg	--	--	--	--	--	--	--	--	--	--	--	< 0.066 U	--
Total cPAHs TEQ (ND = 0)	T-cPAH-OU	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--	--	--	< 0 U	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--	--	--	< 0.04983 U	--
Total cPAHs TEQ (ND multiplier Unknown)	T-cPAH-UnkU	mg/kg	0.00031	SL-3	--	--	--	--	--	--	--	--	--	< 0.06 U	--
Semivolatile Organic Compounds															
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.00133	SL-3	--	--	--	--	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	mg/kg	6.97	SL-3	--	--	--	--	--	--	--	--	--	--	--
2,4-Dichlorophenol	120-83-2	mg/kg	0.0694	SL-3	--	--	--	--	--	--	--	--	--	--	--
2,4-Dimethylphenol	105-67-9	mg/kg	0.029	SL-8	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrophenol	51-28-5	mg/kg	0.4	SL-3	--	--	--	--	--	--	--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	mg/kg	0.00279	SL-3	--	--	--	--	--	--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	mg/kg	0.667	SL-1	--	--	--	--	--	--	--	--	--	--	--
2-Chloronaphthalene	91-58-7	mg/kg	5.36	SL-3	--	--	--	--	--	--	--	--	--	--	--
2-Chlorophenol	95-57-8	mg/kg	0.2	SL-3	--	--	--	--	--	--	--	--	--	--	--
2-Methylphenol	95-48-7	mg/kg	0.069	SL-8	--	--	--	--	--	--	--	--	--	--	--
2-Nitroaniline	88-74-4	mg/kg	800	SL-1	--	--	--	--	--	--	--	--	--	--	--
2-Nitrophenol	88-75-5	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--
3,3-Dichlorobenzidine	91-94-1	mg/kg	3.43E-05	SL-3	--	--	--	--	--	--	--	--	--	--	--
3-Nitroaniline	99-09-2	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.134	SL-3	--	--	--	--	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	101-55-3	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.498	SL-3	--	--	--	--	--	--	--	--	--	--	--
4-Chloroaniline	106-47-8	mg/kg	5	SL-1	--	--	--	--	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Methylphenol	106-44-5	mg/kg	0.67	SL-8	--	--	--	--	--	--	--	--	--	--	--
4-Nitroaniline	100-01-6	mg/kg	50	SL-1	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	mg/kg	7	SL-9	--	--	--	--	--	--	--	--	--	--	--
Benzoic acid	65-85-0	mg/kg	0.65	SL-8	--	--	--	--	--	--	--	--	--	--	--
Benzyl alcohol	100-51-6	mg/kg	0.057	SL-8	--	--	--	--	--	--	--	--	--	--	--
Benzyl butyl phthalate	85-68-7	mg/kg	0.00361	SL-3	--	--	--	--	--	--	--	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg	5.09	SL-3	--	--	--	--	--	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	mg/kg	0.000331	SL-3	--	--	--	--	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	0.102	SL-3	--	--	--	--	--	--	--	--	--	--	--
Carbazole	86-74-8	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--
Dibenzofuran	132-64-9	mg/kg	0.54	SL-8	--	--	--	--	--	--	--	--	--	< 0.066 U	--
Diethyl phthalate	84-66-2	mg/kg	0.2	SL-8	--	--	--	--	--	--	--	--	--	--	--
Dimethyl phthalate	131-11-3	mg/kg	0.071	SL-8	--	--	--	--	--	--	--	--	--	--	--
Di-n-butyl phthalate	84-74-2	mg/kg	0.283	SL-3	--	--	--	--	--	--	--	--	--	--	--
Di-n-octyl phthalate	117-84-0	mg/kg	6.2	SL-8	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobenzene	118-74-1	mg/kg	8.02E-06	SL-3	--	--	--	--	--	--	--	--	--	--	--
Hexachlorobutadiene	87-68-3	mg/kg	0.000212	SL-3	--	--	--	--	--	--	--	--	--	--	--
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.032	SL-3	--	--	--	--	--	--	--	--	--	--	--
Hexachloroethane	67-72-1	mg/kg	0.000161	SL-3	--	--	--	--	--	--	--	--	--	--	--
Isophorone	78-59-1	mg/kg	0.583	SL-3	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	98-95-3	mg/kg	0.638	SL-3	--	--	--	--	--	--	--	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.000551	SL-3	--	--	--	--	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.028	SL-8	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	87-86-5	mg/kg	3.17E-05	SL-3	--	--	--	--	--	--	--	--	--	--	--
Phenol	108-95-2	mg/kg	0.42	SL-8	--	--	--	--	--	--	--	--	--	--	--
Pesticides and Herbicides															
2,4'-DDD	53-19-0	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4'-DDE	3424-82-6	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--
2,4'-DDT	789-02-6	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDD	72-54-8	mg/kg	7.27E-06	SL-3	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDE	72-55-9	mg/kg	1.52E-06	SL-3	--	--	--	--	--	--	--	--	--	--	--
4,4'-DDT	50-29-3	mg/kg	1.83E-05	SL-3	--	--	--	--	--	--	--	--	--	--	--
Aldrin	309-00-2	mg/kg	4.01E-08	SL-3	--	--	--	--	--	--	--	--	--	--	--
Alpha-BHC	319-84-6	mg/kg	1.88E-06	SL-3	--	--	--	--	--	--	--	--	--	--	--
Beta-BHC	319-85-7	mg/kg	6.55E-05	SL-3	--	--	--	--	--	--	--	--	--	--	--
cis-Chlordane	5103-71-9	mg/kg	0.0001	SL-8	--	--	--	--	--	--	--	--	--	--	--
cis-Nonachlor	5103-73-1	mg/kg	--	--	--	--	--	--	--	--	--	--	--	--	--
Delta-BHC	319-86-8	mg/kg	6	SL-9	--	--	--	--	--	--	--	--	--	--	--
Dieldrin	60-57-1	mg/kg	6.17E-07	SL-3	--	--	--	--	--	--	--	--	--	--	--
Endosulfan I	959-98-8	mg/kg	0.00121	SL-3	--	--	--	--	--	--	--	--	--	--	--
Endosulfan II	33213-65-9	mg/kg	0.00121	SL-3	--	--	--	--	--	--	--	--	--	--	--
Endosulfan Sulfate	1031-07-8	mg/kg	2.01	SL-3	--	--	--	--	--	--	--	--	--	--	--
Endrin	72-20-8	mg/kg	0.00044	SL-3	--	--	--	--	--	--	--	--	--	--	--
Endrin Aldehyde	7421-93-4	mg/kg	0.00243	SL-3	--	--	--	--	--	--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293 , South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location Date Sample Depth	T117 A12 01/24/2006 T117-A12-SB-0.0-0.5 0 - 0.5 ft	T117 A12 01/24/2006 T117-A12-SB-0.5-1.5 0.5 - 1.5 ft
Total PAHs (ND=0)	T-PAH	mg/kg			--	--	--
Total cPAHs TEQ (ND = 0)	T-cPAH-OU	mg/kg	0.00031	SL-3	--	--	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg	0.00031	SL-3	--	--	--
Total cPAHs TEQ (ND multiplier Unknown)	T-cPAH-UnkU	mg/kg	0.00031	SL-3	--	--	--
Semivolatile Organic Compounds							
2,4,5-Trichlorophenol	95-95-4	mg/kg	0.00133	SL-3	--	--	--
2,4,6-Trichlorophenol	88-06-2	mg/kg	6.97	SL-3	--	--	--
2,4-Dichlorophenol	120-83-2	mg/kg	0.0694	SL-3	--	--	--
2,4-Dimethylphenol	105-67-9	mg/kg	0.029	SL-8	--	--	--
2,4-Dinitrophenol	51-28-5	mg/kg	0.4	SL-3	--	--	--
2,4-Dinitrotoluene	121-14-2	mg/kg	0.00279	SL-3	--	--	--
2,6-Dinitrotoluene	606-20-2	mg/kg	0.667	SL-1	--	--	--
2-Chloronaphthalene	91-58-7	mg/kg	5.36	SL-3	--	--	--
2-Chlorophenol	95-57-8	mg/kg	0.2	SL-3	--	--	--
2-Methylphenol	95-48-7	mg/kg	0.069	SL-8	--	--	--
2-Nitroaniline	88-74-4	mg/kg	800	SL-1	--	--	--
2-Nitrophenol	88-75-5	mg/kg			--	--	--
3,3-Dichlorobenzidine	91-94-1	mg/kg	3.43E-05	SL-3	--	--	--
3-Nitroaniline	99-09-2	mg/kg			--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.134	SL-3	--	--	--
4-Bromophenyl phenyl ether	101-55-3	mg/kg			--	--	--
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.498	SL-3	--	--	--
4-Chloroaniline	106-47-8	mg/kg	5	SL-1	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg			--	--	--
4-Methylphenol	106-44-5	mg/kg	0.67	SL-8	--	--	--
4-Nitroaniline	100-01-6	mg/kg	50	SL-1	--	--	--
4-Nitrophenol	100-02-7	mg/kg	7	SL-9	--	--	--
Benzoic acid	65-85-0	mg/kg	0.65	SL-8	--	--	--
Benzyl alcohol	100-51-6	mg/kg	0.057	SL-8	--	--	--
Benzyl butyl phthalate	85-68-7	mg/kg	0.00361	SL-3	--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg	5.09	SL-3	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	mg/kg			--	--	--
Bis(2-chloroethyl) ether	111-44-4	mg/kg	0.000331	SL-3	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	0.102	SL-3	--	--	--
Carbazole	86-74-8	mg/kg			--	--	--
Dibenzofuran	132-64-9	mg/kg	0.54	SL-8	--	--	--
Diethyl phthalate	84-66-2	mg/kg	0.2	SL-8	--	--	--
Dimethyl phthalate	131-11-3	mg/kg	0.071	SL-8	--	--	--
Di-n-butyl phthalate	84-74-2	mg/kg	0.283	SL-3	--	--	--
Di-n-octyl phthalate	117-84-0	mg/kg	6.2	SL-8	--	--	--
Hexachlorobenzene	118-74-1	mg/kg	8.02E-06	SL-3	--	--	--
Hexachlorobutadiene	87-68-3	mg/kg	0.000212	SL-3	--	--	--
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.032	SL-3	--	--	--
Hexachloroethane	67-72-1	mg/kg	0.000161	SL-3	--	--	--
Isophorone	78-59-1	mg/kg	0.583	SL-3	--	--	--
Nitrobenzene	98-95-3	mg/kg	0.638	SL-3	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	0.000551	SL-3	--	--	--
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.028	SL-8	--	--	--
Pentachlorophenol	87-86-5	mg/kg	3.17E-05	SL-3	--	--	--
Phenol	108-95-2	mg/kg	0.42	SL-8	--	--	--
Pesticides and Herbicides							
2,4'-DDD	53-19-0	mg/kg			--	--	--
2,4'-DDE	3424-82-6	mg/kg			--	--	--
2,4'-DDT	789-02-6	mg/kg			--	--	--
4,4'-DDD	72-54-8	mg/kg	7.27E-06	SL-3	--	--	--
4,4'-DDE	72-55-9	mg/kg	1.52E-06	SL-3	--	--	--
4,4'-DDT	50-29-3	mg/kg	1.83E-05	SL-3	--	--	--
Aldrin	309-00-2	mg/kg	4.01E-08	SL-3	--	--	--
Alpha-BHC	319-84-6	mg/kg	1.88E-06	SL-3	--	--	--
Beta-BHC	319-85-7	mg/kg	6.55E-05	SL-3	--	--	--
cis-Chlordane	5103-71-9	mg/kg	0.0001	SL-8	--	--	--
cis-Nonachlor	5103-73-1	mg/kg			--	--	--
Delta-BHC	319-86-8	mg/kg	6	SL-9	--	--	--
Dieldrin	60-57-1	mg/kg	6.17E-07	SL-3	--	--	--
Endosulfan I	959-98-8	mg/kg	0.00121	SL-3	--	--	--
Endosulfan II	33213-65-9	mg/kg	0.00121	SL-3	--	--	--
Endosulfan Sulfate	1031-07-8	mg/kg	2.01	SL-3	--	--	--
Endrin	72-20-8	mg/kg	0.00044	SL-3	--	--	--
Endrin Aldehyde	7421-93-4	mg/kg	0.00243	SL-3	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SB-34	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06
					Date	03/23/2021	02/09/2016	02/09/2016	02/09/2016	02/10/2016	02/10/2016	02/10/2016
					Sample	SB-34R-3-4	SPM-SS-01-02092016	SPM-SS-02-02092016	SPM-SS-03-02092016	SPM-SS-04-02102016	SPM-SS-05-02102016	SPM-SS-06-02102016
					Depth	3 - 4 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft
Endrin ketone	53494-70-5	mg/kg			--	--	--	--	--	--	--	--
Heptachlor	76-44-8	mg/kg	6.62E-08	SL-3	--	--	--	--	--	--	--	--
Heptachlor Epoxide	1024-67-3	mg/kg	4.94E-07	SL-3	--	--	--	--	--	--	--	--
Lindane	58-89-9	mg/kg	0.00389	SL-3	--	--	--	--	--	--	--	--
Methoxychlor	72-43-5	mg/kg	0.0321	SL-3	--	--	--	--	--	--	--	--
Mirex	2385-85-5	mg/kg	0.00714	SL-3	--	--	--	--	--	--	--	--
Oxychlorodane	27304-13-8	mg/kg			--	--	--	--	--	--	--	--
Total Chlordane	57-74-9	mg/kg	2.27E-05	SL-3	--	--	--	--	--	--	--	--
trans-Chlordane	5103-74-2	mg/kg	0.0001	SL-8	--	--	--	--	--	--	--	--
trans-Nonachlor	39765-80-5	mg/kg			--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons												
Gasoline Range Organics	TPH-GRO	mg/kg	30	SL-3	--	--	--	--	--	--	--	--
Diesel Range Organics	TPH-DRO	mg/kg	260	SL-9	--	--	--	--	--	--	--	--
Motor Oil Range Organics	TPH-ORO	mg/kg	260	SL-9	--	--	--	--	--	--	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg	260	SL-9	--	--	--	--	--	--	--	--
Total TPHs	T-TPH	mg/kg			--	--	--	--	--	--	--	--
Volatile Organic Compounds												
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	38.5	SL-1	< 0.00104 U	--	--	--	--	--	--	--
1,1,1-Trichloroethane	71-55-6	mg/kg	371	SL-3	< 0.00104 U	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00168	SL-3	< 0.00104 U	--	--	--	--	--	--	--
1,1,2-Trichloroethane	79-00-5	mg/kg	0.00498	SL-3	< 0.00104 U	--	--	--	--	--	--	--
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg	2400000	SL-1	< 0.00209 U	--	--	--	--	--	--	--
1,1-Dichloroethane	75-34-3	mg/kg	175	SL-1	< 0.00104 U	--	--	--	--	--	--	--
1,1-Dichloroethene	75-35-4	mg/kg	26.1	SL-3	< 0.00104 U	--	--	--	--	--	--	--
1,1-Dichloropropene	563-58-6	mg/kg			< 0.00104 U	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	87-61-6	mg/kg	20	SL-9	< 0.00522 U	--	--	--	--	--	--	--
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0063	SL-1	< 0.00209 U	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.031	SL-8	< 0.00522 U	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	95-63-6	mg/kg	800	SL-1	< 0.00104 U	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.23	SL-1	< 0.00522 U	--	--	--	--	--	--	--
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	0.5	SL-1	< 0.00104 U	--	--	--	--	--	--	--
1,2-Dichlorobenzene	95-50-1	mg/kg	0.035	SL-8	< 0.00104 U	--	--	--	--	--	--	--
1,2-Dichloroethane (EDC)	107-06-2	mg/kg	0.351	SL-3	< 0.00104 U	--	--	--	--	--	--	--
1,2-Dichloropropane	78-87-5	mg/kg	0.0157	SL-3	< 0.00104 U	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	108-67-8	mg/kg	800	SL-1	< 0.00104 U	--	--	--	--	--	--	--
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0232	SL-3	< 0.00104 U	--	--	--	--	--	--	--
1,3-Dichloropropane	142-28-9	mg/kg	1600	SL-1	< 0.00104 U	--	--	--	--	--	--	--
1,4-Dichloro-2-Butene	110-57-6	mg/kg			< 0.00522 U	--	--	--	--	--	--	--
1,4-Dichlorobenzene	106-46-7	mg/kg	0.11	SL-8	< 0.00104 U	--	--	--	--	--	--	--
2,2-Dichloropropane	594-20-7	mg/kg			< 0.00104 U	--	--	--	--	--	--	--
2-Butanone	78-93-3	mg/kg	48000	SL-1	< 0.00522 U	--	--	--	--	--	--	--
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg			< 0.00522 U	--	--	--	--	--	--	--
2-Chlorotoluene	95-49-8	mg/kg	1600	SL-1	< 0.00104 U	--	--	--	--	--	--	--
2-Hexanone	591-78-6	mg/kg	400	SL-1	< 0.00522 U	--	--	--	--	--	--	--
2-Pentanone	107-87-9	mg/kg			< 0.00522 U	--	--	--	--	--	--	--
4-Chlorotoluene	106-43-4	mg/kg			< 0.00104 U	--	--	--	--	--	--	--
4-Methyl-2-pentanone	108-10-1	mg/kg	6400	SL-1	< 0.00522 U	--	--	--	--	--	--	--
Acetone	67-64-1	mg/kg	72000	SL-1	0.0512	--	--	--	--	--	--	--
Acrolein	107-02-8	mg/kg	0.00443	SL-3	< 0.00522 U	--	--	--	--	--	--	--
Acrylonitrile	107-13-1	mg/kg	0.000117	SL-3	< 0.00522 U	--	--	--	--	--	--	--
Benzene	71-43-2	mg/kg	0.00876	SL-3	< 0.00104 U	--	--	--	--	--	--	--
Bromobenzene	108-86-1	mg/kg	640	SL-1	< 0.00104 U	--	--	--	--	--	--	--
Bromochloromethane	74-97-5	mg/kg			< 0.00104 U	--	--	--	--	--	--	--
Bromodichloromethane	75-27-4	mg/kg	0.0132	SL-3	< 0.00104 U	--	--	--	--	--	--	--
Bromoform	75-25-2	mg/kg	0.0785	SL-3	< 0.00104 U	--	--	--	--	--	--	--
Bromomethane	74-83-9	mg/kg	1.22	SL-3	< 0.00104 U	--	--	--	--	--	--	--
Carbon Disulfide	75-15-0	mg/kg	8000	SL-1	< 0.00104 U	--	--	--	--	--	--	--
Carbon Tetrachloride	56-23-5	mg/kg	0.00267	SL-3	< 0.00104 U	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	mg/kg	1.72	SL-3	< 0.00104 U	--	--	--	--	--	--	--
Chloroethane	75-00-3	mg/kg			< 0.00209 U	--	--	--	--	--	--	--
Chloroform	67-66-3	mg/kg	0.806	SL-3	< 0.00104 U	--	--	--	--	--	--	--
Chloromethane	74-87-3	mg/kg			< 0.00104 U	--	--	--	--	--	--	--
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg	160	SL-1	< 0.00104 U	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00627	SL-3	< 0.00104 U	--	--	--	--	--	--	--
Dibromochloromethane	124-48-1	mg/kg	0.0103	SL-3	< 0.00104 U	--	--	--	--	--	--	--
Dibromomethane	74-95-3	mg/kg	800	SL-1	< 0.00104 U	--	--	--	--	--	--	--
Dichlorodifluoromethane	75-71-8	mg/kg	16000	SL-1	< 0.00104 U	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	mg/kg	0.176	SL-3	< 0.00104 U	--	--	--	--	--	--	--
Isopropylbenzene	98-82-8	mg/kg	8000	SL-1	< 0.00104 U	--	--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-07	SS-08	SS-09	SS-10	SS-11	SS-12
					Date	02/09/2016	02/09/2016	02/10/2016	02/10/2016	02/10/2016	02/09/2016
					Sample	SPM-SS-07-02092016	SPM-SS-08-02092016	SPM-SS-09-02102016	SPM-SS-10-02102016	SPM-SS-11-02102016	SPM-SS-12-02092016
					Depth	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft
Endrin ketone	53494-70-5	mg/kg	6.32E-08	SL-3	--	--	--	--	--	--	--
Heptachlor	76-44-8	mg/kg	6.62E-08	SL-3	--	--	--	--	--	--	--
Heptachlor Epoxide	1024-67-3	mg/kg	4.94E-07	SL-3	--	--	--	--	--	--	--
Lindane	58-89-9	mg/kg	0.00389	SL-3	--	--	--	--	--	--	--
Methoxychlor	72-43-5	mg/kg	0.0321	SL-3	--	--	--	--	--	--	--
Mirex	2385-85-5	mg/kg	0.00714	SL-3	--	--	--	--	--	--	--
Oxychlorane	27304-13-8	mg/kg	--	--	--	--	--	--	--	--	--
Total Chlordane	57-74-9	mg/kg	2.27E-05	SL-3	--	--	--	--	--	--	--
trans-Chlordane	5103-74-2	mg/kg	0.0001	SL-8	--	--	--	--	--	--	--
trans-Nonachlor	39765-80-5	mg/kg	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons											
Gasoline Range Organics	TPH-GRO	mg/kg	30	SL-3	--	--	--	--	--	--	--
Diesel Range Organics	TPH-DRO	mg/kg	260	SL-9	--	--	--	--	--	--	--
Motor Oil Range Organics	TPH-ORO	mg/kg	260	SL-9	--	--	--	--	--	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg	260	SL-9	--	--	--	--	--	--	--
Total TPHs	T-TPH	mg/kg	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds											
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	38.5	SL-1	--	--	--	--	--	--	--
1,1,1-Trichloroethane	71-55-6	mg/kg	371	SL-3	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00168	SL-3	--	--	--	--	--	--	--
1,1,2-Trichloroethane	79-00-5	mg/kg	0.00498	SL-3	--	--	--	--	--	--	--
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg	2400000	SL-1	--	--	--	--	--	--	--
1,1-Dichloroethane	75-34-3	mg/kg	175	SL-1	--	--	--	--	--	--	--
1,1-Dichloroethene	75-35-4	mg/kg	26.1	SL-3	--	--	--	--	--	--	--
1,1-Dichloropropene	563-58-6	mg/kg	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	87-61-6	mg/kg	20	SL-9	--	--	--	--	--	--	--
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0063	SL-1	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.031	SL-8	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	95-63-6	mg/kg	800	SL-1	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.23	SL-1	--	--	--	--	--	--	--
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	0.5	SL-1	--	--	--	--	--	--	--
1,2-Dichlorobenzene	95-50-1	mg/kg	0.035	SL-8	--	--	--	--	--	--	--
1,2-Dichloroethane (EDC)	107-06-2	mg/kg	0.351	SL-3	--	--	--	--	--	--	--
1,2-Dichloropropane	78-87-5	mg/kg	0.0157	SL-3	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	108-67-8	mg/kg	800	SL-1	--	--	--	--	--	--	--
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0232	SL-3	--	--	--	--	--	--	--
1,3-Dichloropropane	142-28-9	mg/kg	1600	SL-1	--	--	--	--	--	--	--
1,4-Dichloro-2-Butene	110-57-6	mg/kg	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	106-46-7	mg/kg	0.11	SL-8	--	--	--	--	--	--	--
2,2-Dichloropropane	594-20-7	mg/kg	--	--	--	--	--	--	--	--	--
2-Butanone	78-93-3	mg/kg	48000	SL-1	--	--	--	--	--	--	--
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	95-49-8	mg/kg	1600	SL-1	--	--	--	--	--	--	--
2-Hexanone	591-78-6	mg/kg	400	SL-1	--	--	--	--	--	--	--
2-Pentanone	107-87-9	mg/kg	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	106-43-4	mg/kg	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	108-10-1	mg/kg	6400	SL-1	--	--	--	--	--	--	--
Acetone	67-64-1	mg/kg	72000	SL-1	--	--	--	--	--	--	--
Acrolein	107-02-8	mg/kg	0.00443	SL-3	--	--	--	--	--	--	--
Acrylonitrile	107-13-1	mg/kg	0.000117	SL-3	--	--	--	--	--	--	--
Benzene	71-43-2	mg/kg	0.00876	SL-3	--	--	--	--	--	--	--
Bromobenzene	108-86-1	mg/kg	640	SL-1	--	--	--	--	--	--	--
Bromochloromethane	74-97-5	mg/kg	--	--	--	--	--	--	--	--	--
Bromodichloromethane	75-27-4	mg/kg	0.0132	SL-3	--	--	--	--	--	--	--
Bromoform	75-25-2	mg/kg	0.0785	SL-3	--	--	--	--	--	--	--
Bromomethane	74-83-9	mg/kg	1.22	SL-3	--	--	--	--	--	--	--
Carbon Disulfide	75-15-0	mg/kg	8000	SL-1	--	--	--	--	--	--	--
Carbon Tetrachloride	56-23-5	mg/kg	0.00287	SL-3	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	mg/kg	1.72	SL-3	--	--	--	--	--	--	--
Chloroethane	75-00-3	mg/kg	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	mg/kg	0.806	SL-3	--	--	--	--	--	--	--
Chloromethane	74-87-3	mg/kg	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg	160	SL-1	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00627	SL-3	--	--	--	--	--	--	--
Dibromochloromethane	124-48-1	mg/kg	0.0103	SL-3	--	--	--	--	--	--	--
Dibromomethane	74-95-3	mg/kg	800	SL-1	--	--	--	--	--	--	--
Dichlorodifluoromethane	75-71-8	mg/kg	16000	SL-1	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	mg/kg	0.176	SL-3	--	--	--	--	--	--	--
Isopropylbenzene	98-82-8	mg/kg	8000	SL-1	--	--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18
					Date	02/10/2016	02/10/2016	02/09/2016	02/09/2016	02/10/2016	02/10/2016
					Sample	SPM-SS-13-02102016	SPM-SS-14-02102016	SPM-SS-15-02102016	SPM-SS-16-02092016	SPM-SS-17-02102016	SPM-SS-18-02102016
					Depth	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft
Endrin ketone	53494-70-5	mg/kg	--	--	--	--	--	--	--	--	--
Heptachlor	76-44-8	mg/kg	6.62E-08	SL-3	--	--	--	--	--	--	--
Heptachlor Epoxide	1024-67-3	mg/kg	4.94E-07	SL-3	--	--	--	--	--	--	--
Lindane	58-89-9	mg/kg	0.00389	SL-3	--	--	--	--	--	--	--
Methoxychlor	72-43-5	mg/kg	0.0321	SL-3	--	--	--	--	--	--	--
Mirex	2385-85-5	mg/kg	0.00714	SL-3	--	--	--	--	--	--	--
Oxychlorane	27304-13-8	mg/kg	--	--	--	--	--	--	--	--	--
Total Chlordane	57-74-9	mg/kg	2.27E-05	SL-3	--	--	--	--	--	--	--
trans-Chlordane	5103-74-2	mg/kg	0.0001	SL-8	--	--	--	--	--	--	--
trans-Nonachlor	39765-80-5	mg/kg	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons											
Gasoline Range Organics	TPH-GRO	mg/kg	30	SL-3	--	--	--	--	--	--	--
Diesel Range Organics	TPH-DRO	mg/kg	260	SL-9	--	--	--	--	--	--	--
Motor Oil Range Organics	TPH-ORO	mg/kg	260	SL-9	--	--	--	--	--	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg	260	SL-9	--	--	--	--	--	--	--
Total TPHs	T-TPH	mg/kg	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds											
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	38.5	SL-1	--	--	--	--	--	--	--
1,1,1-Trichloroethane	71-55-6	mg/kg	371	SL-3	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00168	SL-3	--	--	--	--	--	--	--
1,1,2-Trichloroethane	79-00-5	mg/kg	0.00498	SL-3	--	--	--	--	--	--	--
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg	2400000	SL-1	--	--	--	--	--	--	--
1,1-Dichloroethane	75-34-3	mg/kg	175	SL-1	--	--	--	--	--	--	--
1,1-Dichloroethene	75-35-4	mg/kg	26.1	SL-3	--	--	--	--	--	--	--
1,1-Dichloropropene	563-58-6	mg/kg	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	87-61-6	mg/kg	20	SL-9	--	--	--	--	--	--	--
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0063	SL-1	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.031	SL-8	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	95-63-6	mg/kg	800	SL-1	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.23	SL-1	--	--	--	--	--	--	--
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	0.5	SL-1	--	--	--	--	--	--	--
1,2-Dichlorobenzene	95-50-1	mg/kg	0.035	SL-8	--	--	--	--	--	--	--
1,2-Dichloroethane (EDC)	107-06-2	mg/kg	0.351	SL-3	--	--	--	--	--	--	--
1,2-Dichloropropane	78-87-5	mg/kg	0.0157	SL-3	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	108-67-8	mg/kg	800	SL-1	--	--	--	--	--	--	--
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0232	SL-3	--	--	--	--	--	--	--
1,3-Dichloropropane	142-28-9	mg/kg	1600	SL-1	--	--	--	--	--	--	--
1,4-Dichloro-2-Butene	110-57-6	mg/kg	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	106-46-7	mg/kg	0.11	SL-8	--	--	--	--	--	--	--
2,2-Dichloropropane	594-20-7	mg/kg	--	--	--	--	--	--	--	--	--
2-Butanone	78-93-3	mg/kg	48000	SL-1	--	--	--	--	--	--	--
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	95-49-8	mg/kg	1600	SL-1	--	--	--	--	--	--	--
2-Hexanone	591-78-6	mg/kg	400	SL-1	--	--	--	--	--	--	--
2-Pentanone	107-87-9	mg/kg	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	106-43-4	mg/kg	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	108-10-1	mg/kg	6400	SL-1	--	--	--	--	--	--	--
Acetone	67-64-1	mg/kg	72000	SL-1	--	--	--	--	--	--	--
Acrolein	107-02-8	mg/kg	0.00443	SL-3	--	--	--	--	--	--	--
Acrylonitrile	107-13-1	mg/kg	0.000117	SL-3	--	--	--	--	--	--	--
Benzene	71-43-2	mg/kg	0.00876	SL-3	--	--	--	--	--	--	--
Bromobenzene	108-86-1	mg/kg	640	SL-1	--	--	--	--	--	--	--
Bromochloromethane	74-97-5	mg/kg	--	--	--	--	--	--	--	--	--
Bromodichloromethane	75-27-4	mg/kg	0.0132	SL-3	--	--	--	--	--	--	--
Bromoform	75-25-2	mg/kg	0.0785	SL-3	--	--	--	--	--	--	--
Bromomethane	74-83-9	mg/kg	1.22	SL-3	--	--	--	--	--	--	--
Carbon Disulfide	75-15-0	mg/kg	8000	SL-1	--	--	--	--	--	--	--
Carbon Tetrachloride	56-23-5	mg/kg	0.00287	SL-3	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	mg/kg	1.72	SL-3	--	--	--	--	--	--	--
Chloroethane	75-00-3	mg/kg	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	mg/kg	0.806	SL-3	--	--	--	--	--	--	--
Chloromethane	74-87-3	mg/kg	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg	160	SL-1	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00627	SL-3	--	--	--	--	--	--	--
Dibromochloromethane	124-48-1	mg/kg	0.0103	SL-3	--	--	--	--	--	--	--
Dibromomethane	74-95-3	mg/kg	800	SL-1	--	--	--	--	--	--	--
Dichlorodifluoromethane	75-71-8	mg/kg	16000	SL-1	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	mg/kg	0.176	SL-3	--	--	--	--	--	--	--
Isopropylbenzene	98-82-8	mg/kg	8000	SL-1	--	--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-19	SS-20	SS-21	SS-22	SS-23	SS-24
					Date Sample Depth	02/10/2016 SPM-SS-19-02102016 0 - 1.6 ft	02/10/2016 SPM-SS-20-02102016 0 - 1.6 ft	02/08/2016 SPM-SS-21-02082016 0 - 1.6 ft	02/08/2016 SPM-SS-22-02082016 0 - 1.6 ft	02/08/2016 SPM-SS-23-02082016 0 - 1.6 ft	02/10/2016 SPM-SS-24-02102016 0 - 1.6 ft
Endrin ketone	53494-70-5	mg/kg	--	--	--	--	--	--	--	--	--
Heptachlor	76-44-8	mg/kg	6.62E-08	SL-3	--	--	--	--	--	--	--
Heptachlor Epoxide	1024-67-3	mg/kg	4.94E-07	SL-3	--	--	--	--	--	--	--
Lindane	58-89-9	mg/kg	0.00389	SL-3	--	--	--	--	--	--	--
Methoxychlor	72-43-5	mg/kg	0.0321	SL-3	--	--	--	--	--	--	--
Mirex	2385-85-5	mg/kg	0.00714	SL-3	--	--	--	--	--	--	--
Oxychloridane	27304-13-8	mg/kg	--	--	--	--	--	--	--	--	--
Total Chlordane	57-74-9	mg/kg	2.27E-05	SL-3	--	--	--	--	--	--	--
trans-Chlordane	5103-74-2	mg/kg	0.0001	SL-8	--	--	--	--	--	--	--
trans-Nonachlor	39765-80-5	mg/kg	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons											
Gasoline Range Organics	TPH-GRO	mg/kg	30	SL-3	--	--	--	--	--	--	--
Diesel Range Organics	TPH-DRO	mg/kg	260	SL-9	--	--	--	--	--	--	--
Motor Oil Range Organics	TPH-ORO	mg/kg	260	SL-9	--	--	--	--	--	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg	260	SL-9	--	--	--	--	--	--	--
Total TPHs	T-TPH	mg/kg	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds											
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	38.5	SL-1	--	--	--	--	--	--	--
1,1,1-Trichloroethane	71-55-6	mg/kg	371	SL-3	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00168	SL-3	--	--	--	--	--	--	--
1,1,2-Trichloroethane	79-00-5	mg/kg	0.00498	SL-3	--	--	--	--	--	--	--
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg	2400000	SL-1	--	--	--	--	--	--	--
1,1-Dichloroethane	75-34-3	mg/kg	175	SL-1	--	--	--	--	--	--	--
1,1-Dichloroethene	75-35-4	mg/kg	26.1	SL-3	--	--	--	--	--	--	--
1,1-Dichloropropene	563-58-6	mg/kg	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	87-61-6	mg/kg	20	SL-9	--	--	--	--	--	--	--
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0063	SL-1	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.031	SL-8	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	95-63-6	mg/kg	800	SL-1	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.23	SL-1	--	--	--	--	--	--	--
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	0.5	SL-1	--	--	--	--	--	--	--
1,2-Dichlorobenzene	95-50-1	mg/kg	0.035	SL-8	--	--	--	--	--	--	--
1,2-Dichloroethane (EDC)	107-06-2	mg/kg	0.351	SL-3	--	--	--	--	--	--	--
1,2-Dichloropropane	78-87-5	mg/kg	0.0157	SL-3	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	108-67-8	mg/kg	800	SL-1	--	--	--	--	--	--	--
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0232	SL-3	--	--	--	--	--	--	--
1,3-Dichloropropane	142-28-9	mg/kg	1600	SL-1	--	--	--	--	--	--	--
1,4-Dichloro-2-Butene	110-57-6	mg/kg	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	106-46-7	mg/kg	0.11	SL-8	--	--	--	--	--	--	--
2,2-Dichloropropane	594-20-7	mg/kg	--	--	--	--	--	--	--	--	--
2-Butanone	78-93-3	mg/kg	48000	SL-1	--	--	--	--	--	--	--
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	95-49-8	mg/kg	1600	SL-1	--	--	--	--	--	--	--
2-Hexanone	591-78-6	mg/kg	400	SL-1	--	--	--	--	--	--	--
2-Pentanone	107-87-9	mg/kg	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	106-43-4	mg/kg	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	108-10-1	mg/kg	6400	SL-1	--	--	--	--	--	--	--
Acetone	67-64-1	mg/kg	72000	SL-1	--	--	--	--	--	--	--
Acrolein	107-02-8	mg/kg	0.00443	SL-3	--	--	--	--	--	--	--
Acrylonitrile	107-13-1	mg/kg	0.000117	SL-3	--	--	--	--	--	--	--
Benzene	71-43-2	mg/kg	0.00876	SL-3	--	--	--	--	--	--	--
Bromobenzene	108-86-1	mg/kg	640	SL-1	--	--	--	--	--	--	--
Bromochloromethane	74-97-5	mg/kg	--	--	--	--	--	--	--	--	--
Bromodichloromethane	75-27-4	mg/kg	0.0132	SL-3	--	--	--	--	--	--	--
Bromoform	75-25-2	mg/kg	0.0785	SL-3	--	--	--	--	--	--	--
Bromomethane	74-83-9	mg/kg	1.22	SL-3	--	--	--	--	--	--	--
Carbon Disulfide	75-15-0	mg/kg	8000	SL-1	--	--	--	--	--	--	--
Carbon Tetrachloride	56-23-5	mg/kg	0.00287	SL-3	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	mg/kg	1.72	SL-3	--	--	--	--	--	--	--
Chloroethane	75-00-3	mg/kg	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	mg/kg	0.806	SL-3	--	--	--	--	--	--	--
Chloromethane	74-87-3	mg/kg	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg	160	SL-1	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00627	SL-3	--	--	--	--	--	--	--
Dibromochloromethane	124-48-1	mg/kg	0.0103	SL-3	--	--	--	--	--	--	--
Dibromomethane	74-95-3	mg/kg	800	SL-1	--	--	--	--	--	--	--
Dichlorodifluoromethane	75-71-8	mg/kg	16000	SL-1	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	mg/kg	0.176	SL-3	--	--	--	--	--	--	--
Isopropylbenzene	98-82-8	mg/kg	8000	SL-1	--	--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-25	SS-26	SS-27	SS-28	SS-29	SS-30	SS-31
					Date	02/08/2016	02/08/2016	02/08/2016	02/11/2016	02/11/2016	02/11/2016	11/17/2017
					Sample	SPM-SS-25-02082016	SPM-SS-26-02082016	SPM-SS-27-02082016	SPM-SS-28-02112016	SPM-SS-29-02112016	SPM-SS-30-02112016	SS-31-0-1.5
					Depth	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.5 ft
Endrin ketone	53494-70-5	mg/kg	--	--	--	--	--	--	--	--	--	--
Heptachlor	76-44-8	mg/kg	6.62E-08	SL-3	--	--	--	--	--	--	--	--
Heptachlor Epoxide	1024-67-3	mg/kg	4.94E-07	SL-3	--	--	--	--	--	--	--	--
Lindane	58-89-9	mg/kg	0.00389	SL-3	--	--	--	--	--	--	--	--
Methoxychlor	72-43-5	mg/kg	0.0321	SL-3	--	--	--	--	--	--	--	--
Mirex	2385-85-5	mg/kg	0.00714	SL-3	--	--	--	--	--	--	--	--
Oxychlorodane	27304-13-8	mg/kg	--	--	--	--	--	--	--	--	--	--
Total Chlordane	57-74-9	mg/kg	2.27E-05	SL-3	--	--	--	--	--	--	--	--
trans-Chlordane	5103-74-2	mg/kg	0.0001	SL-8	--	--	--	--	--	--	--	--
trans-Nonachlor	39765-80-5	mg/kg	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons												
Gasoline Range Organics	TPH-GRO	mg/kg	30	SL-3	--	--	--	--	--	--	--	--
Diesel Range Organics	TPH-DRO	mg/kg	260	SL-9	--	--	--	--	--	--	--	--
Motor Oil Range Organics	TPH-ORO	mg/kg	260	SL-9	--	--	--	--	--	--	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg	260	SL-9	--	--	--	--	--	--	--	--
Total TPHs	T-TPH	mg/kg	--	--	--	--	--	--	--	--	--	--
Volatile Organic Compounds												
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	38.5	SL-1	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	71-55-6	mg/kg	371	SL-3	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00168	SL-3	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	79-00-5	mg/kg	0.00498	SL-3	--	--	--	--	--	--	--	--
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg	2400000	SL-1	--	--	--	--	--	--	--	--
1,1-Dichloroethane	75-34-3	mg/kg	175	SL-1	--	--	--	--	--	--	--	--
1,1-Dichloroethene	75-35-4	mg/kg	26.1	SL-3	--	--	--	--	--	--	--	--
1,1-Dichloropropene	563-58-6	mg/kg	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	87-61-6	mg/kg	20	SL-9	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0063	SL-1	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.031	SL-8	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	95-63-6	mg/kg	800	SL-1	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.23	SL-1	--	--	--	--	--	--	--	--
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	0.5	SL-1	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	95-50-1	mg/kg	0.035	SL-8	--	--	--	--	--	--	--	--
1,2-Dichloroethane (EDC)	107-06-2	mg/kg	0.351	SL-3	--	--	--	--	--	--	--	--
1,2-Dichloropropane	78-87-5	mg/kg	0.0157	SL-3	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	108-67-8	mg/kg	800	SL-1	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0232	SL-3	--	--	--	--	--	--	--	--
1,3-Dichloropropane	142-28-9	mg/kg	1600	SL-1	--	--	--	--	--	--	--	--
1,4-Dichloro-2-Butene	110-57-6	mg/kg	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	106-46-7	mg/kg	0.11	SL-8	--	--	--	--	--	--	--	--
2,2-Dichloropropane	594-20-7	mg/kg	--	--	--	--	--	--	--	--	--	--
2-Butanone	78-93-3	mg/kg	48000	SL-1	--	--	--	--	--	--	--	--
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg	--	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	95-49-8	mg/kg	1600	SL-1	--	--	--	--	--	--	--	--
2-Hexanone	591-78-6	mg/kg	400	SL-1	--	--	--	--	--	--	--	--
2-Pentanone	107-87-9	mg/kg	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	106-43-4	mg/kg	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	108-10-1	mg/kg	6400	SL-1	--	--	--	--	--	--	--	--
Acetone	67-64-1	mg/kg	72000	SL-1	--	--	--	--	--	--	--	--
Acrolein	107-02-8	mg/kg	0.00443	SL-3	--	--	--	--	--	--	--	--
Acrylonitrile	107-13-1	mg/kg	0.000117	SL-3	--	--	--	--	--	--	--	--
Benzene	71-43-2	mg/kg	0.00876	SL-3	--	--	--	--	--	--	--	--
Bromobenzene	108-86-1	mg/kg	640	SL-1	--	--	--	--	--	--	--	--
Bromochloromethane	74-97-5	mg/kg	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	75-27-4	mg/kg	0.0132	SL-3	--	--	--	--	--	--	--	--
Bromoform	75-25-2	mg/kg	0.0785	SL-3	--	--	--	--	--	--	--	--
Bromomethane	74-83-9	mg/kg	1.22	SL-3	--	--	--	--	--	--	--	--
Carbon Disulfide	75-15-0	mg/kg	8000	SL-1	--	--	--	--	--	--	--	--
Carbon Tetrachloride	56-23-5	mg/kg	0.00287	SL-3	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	mg/kg	1.72	SL-3	--	--	--	--	--	--	--	--
Chloroethane	75-00-3	mg/kg	--	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	mg/kg	0.806	SL-3	--	--	--	--	--	--	--	--
Chloromethane	74-87-3	mg/kg	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg	160	SL-1	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00627	SL-3	--	--	--	--	--	--	--	--
Dibromochloromethane	124-48-1	mg/kg	0.0103	SL-3	--	--	--	--	--	--	--	--
Dibromomethane	74-95-3	mg/kg	800	SL-1	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	75-71-8	mg/kg	16000	SL-1	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	mg/kg	0.176	SL-3	--	--	--	--	--	--	--	--
Isopropylbenzene	98-62-8	mg/kg	8000	SL-1	--	--	--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293 , South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-32	SS-33	SS-34	SS-35	SS-36	SS-37	SS-38	SS-39	T117 A10	T117 A11
					Date Sample	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	01/17/2006	01/24/2006
Depth	SS-32-0-1.5	SS-33-0-1.5	SS-34-0-1.5	SS-35-0-1.5	SS-36-0-1.5	SS-37-0-1.5	SS-38-0-1	SS-39-0-1.25	T117-A10-SB-01	T117-A11-SB-0-0-0.5					
Endrin ketone	53494-70-5	mg/kg			--	--	--	--	--	--	--	--	--	--	--
Heptachlor	76-44-8	mg/kg	6.62E-08	SL-3	--	--	--	--	--	--	--	--	--	--	--
Heptachlor Epoxide	1024-67-3	mg/kg	4.94E-07	SL-3	--	--	--	--	--	--	--	--	--	--	--
Lindane	58-89-9	mg/kg	0.00389	SL-3	--	--	--	--	--	--	--	--	--	--	--
Methoxychlor	72-43-5	mg/kg	0.0321	SL-3	--	--	--	--	--	--	--	--	--	--	--
Mirex	2385-85-5	mg/kg	0.00714	SL-3	--	--	--	--	--	--	--	--	--	--	--
Oxychlorodane	27304-13-8	mg/kg			--	--	--	--	--	--	--	--	--	--	--
Total Chlordane	57-74-9	mg/kg	2.27E-05	SL-3	--	--	--	--	--	--	--	--	--	--	--
trans-Chlordane	5103-74-2	mg/kg	0.0001	SL-8	--	--	--	--	--	--	--	--	--	--	--
trans-Nonachlor	39765-80-5	mg/kg			--	--	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons															
Gasoline Range Organics	TPH-GRO	mg/kg	30	SL-3	--	--	--	--	--	--	--	--	--	--	--
Diesel Range Organics	TPH-DRO	mg/kg	260	SL-9	--	--	--	--	--	--	--	--	--	94	--
Motor Oil Range Organics	TPH-ORO	mg/kg	260	SL-9	--	--	--	--	--	--	--	--	--	100	--
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg	260	SL-9	--	--	--	--	--	--	--	--	--	194	--
Total TPHs	T-TPH	mg/kg			--	--	--	--	--	--	--	--	--	190	--
Volatile Organic Compounds															
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	38.5	SL-1	--	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	71-55-6	mg/kg	371	SL-3	--	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00168	SL-3	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	79-00-5	mg/kg	0.00498	SL-3	--	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg	2400000	SL-1	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	75-34-3	mg/kg	175	SL-1	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethene	75-35-4	mg/kg	26.1	SL-3	--	--	--	--	--	--	--	--	--	--	--
1,1-Dichloropropene	563-58-6	mg/kg			--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	87-61-6	mg/kg	20	SL-9	--	--	--	--	--	--	--	--	--	--	--
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0063	SL-1	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.031	SL-8	--	--	--	--	--	--	--	--	--	--	--
1,2,4-Trimethylbenzene	95-63-6	mg/kg	800	SL-1	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.23	SL-1	--	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	0.5	SL-1	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	95-50-1	mg/kg	0.035	SL-8	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane (EDC)	107-06-2	mg/kg	0.351	SL-3	--	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	78-87-5	mg/kg	0.0157	SL-3	--	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	108-67-8	mg/kg	800	SL-1	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0232	SL-3	--	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropane	142-28-9	mg/kg	1600	SL-1	--	--	--	--	--	--	--	--	--	--	--
1,4-Dichloro-2-Butene	110-57-6	mg/kg			--	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	106-46-7	mg/kg	0.11	SL-8	--	--	--	--	--	--	--	--	--	--	--
2,2-Dichloropropane	594-20-7	mg/kg			--	--	--	--	--	--	--	--	--	--	--
2-Butanone	78-93-3	mg/kg	48000	SL-1	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg			--	--	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	95-49-8	mg/kg	1600	SL-1	--	--	--	--	--	--	--	--	--	--	--
2-Hexanone	591-78-6	mg/kg	400	SL-1	--	--	--	--	--	--	--	--	--	--	--
2-Pentanone	107-87-9	mg/kg			--	--	--	--	--	--	--	--	--	--	--
4-Chlorotoluene	106-43-4	mg/kg			--	--	--	--	--	--	--	--	--	--	--
4-Methyl-2-pentanone	108-10-1	mg/kg	6400	SL-1	--	--	--	--	--	--	--	--	--	--	--
Acetone	67-64-1	mg/kg	72000	SL-1	--	--	--	--	--	--	--	--	--	--	--
Acrolein	107-02-8	mg/kg	0.00443	SL-3	--	--	--	--	--	--	--	--	--	--	--
Acrylonitrile	107-13-1	mg/kg	0.000117	SL-3	--	--	--	--	--	--	--	--	--	--	--
Benzene	71-43-2	mg/kg	0.00876	SL-3	--	--	--	--	--	--	--	--	--	--	--
Bromobenzene	108-86-1	mg/kg	640	SL-1	--	--	--	--	--	--	--	--	--	--	--
Bromochloromethane	74-97-5	mg/kg			--	--	--	--	--	--	--	--	--	--	--
Bromodichloromethane	75-27-4	mg/kg	0.0132	SL-3	--	--	--	--	--	--	--	--	--	--	--
Bromoform	75-25-2	mg/kg	0.0785	SL-3	--	--	--	--	--	--	--	--	--	--	--
Bromomethane	74-83-9	mg/kg	1.22	SL-3	--	--	--	--	--	--	--	--	--	--	--
Carbon Disulfide	75-15-0	mg/kg	8000	SL-1	--	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	56-23-5	mg/kg	0.00267	SL-3	--	--	--	--	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	mg/kg	1.72	SL-3	--	--	--	--	--	--	--	--	--	--	--
Chloroethane	75-00-3	mg/kg			--	--	--	--	--	--	--	--	--	--	--
Chloroform	67-66-3	mg/kg	0.806	SL-3	--	--	--	--	--	--	--	--	--	--	--
Chloromethane	74-87-3	mg/kg			--	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg	160	SL-1	--	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00627	SL-3	--	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	124-48-1	mg/kg	0.0103	SL-3	--	--	--	--	--	--	--	--	--	--	--
Dibromomethane	74-95-3	mg/kg	800	SL-1	--	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	75-71-8	mg/kg	16000	SL-1	--	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	mg/kg	0.176	SL-3	--	--	--	--	--	--	--	--	--	--	--
Isopropylbenzene	98-82-8	mg/kg	8000	SL-1	--	--	--	--	--	--	--	--	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293 , South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location Date Sample Depth	T117 A12 01/24/2006 T117-A12-SB-0.0-0.5 0 - 0.5 ft	T117 A12 01/24/2006 T117-A12-SB-0.5-1.5 0.5 - 1.5 ft
Endrin ketone	53494-70-5	mg/kg			--	--	--
Heptachlor	76-44-8	mg/kg	6.62E-08	SL-3	--	--	--
Heptachlor Epoxide	1024-67-3	mg/kg	4.94E-07	SL-3	--	--	--
Lindane	58-89-9	mg/kg	0.00389	SL-3	--	--	--
Methoxychlor	72-43-5	mg/kg	0.0321	SL-3	--	--	--
Mirex	2385-85-5	mg/kg	0.00714	SL-3	--	--	--
Oxychlorodane	27304-13-8	mg/kg			--	--	--
Total Chlordane	57-74-9	mg/kg	2.27E-05	SL-3	--	--	--
trans-Chlordane	5103-74-2	mg/kg	0.0001	SL-8	--	--	--
trans-Nonachlor	39765-80-5	mg/kg			--	--	--
Total Petroleum Hydrocarbons							
Gasoline Range Organics	TPH-GRO	mg/kg	30	SL-3	--	--	--
Diesel Range Organics	TPH-DRO	mg/kg	260	SL-9	--	--	--
Motor Oil Range Organics	TPH-ORO	mg/kg	260	SL-9	--	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg	260	SL-9	--	--	--
Total TPHs	T-TPH	mg/kg			--	--	--
Volatile Organic Compounds							
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	38.5	SL-1	--	--	--
1,1,1-Trichloroethane	71-55-6	mg/kg	371	SL-3	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00168	SL-3	--	--	--
1,1,2-Trichloroethane	79-00-5	mg/kg	0.00498	SL-3	--	--	--
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg	2400000	SL-1	--	--	--
1,1-Dichloroethane	75-34-3	mg/kg	175	SL-1	--	--	--
1,1-Dichloroethene	75-35-4	mg/kg	26.1	SL-3	--	--	--
1,1-Dichloropropene	563-58-6	mg/kg			--	--	--
1,2,3-Trichlorobenzene	87-61-6	mg/kg	20	SL-9	--	--	--
1,2,3-Trichloropropane	96-18-4	mg/kg	0.0063	SL-1	--	--	--
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.031	SL-8	--	--	--
1,2,4-Trimethylbenzene	95-63-6	mg/kg	800	SL-1	--	--	--
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.23	SL-1	--	--	--
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	0.5	SL-1	--	--	--
1,2-Dichlorobenzene	95-50-1	mg/kg	0.035	SL-8	--	--	--
1,2-Dichloroethane (EDC)	107-06-2	mg/kg	0.351	SL-3	--	--	--
1,2-Dichloropropane	78-87-5	mg/kg	0.0157	SL-3	--	--	--
1,3,5-Trimethylbenzene	108-67-8	mg/kg	800	SL-1	--	--	--
1,3-Dichlorobenzene	541-73-1	mg/kg	0.0232	SL-3	--	--	--
1,3-Dichloropropane	142-28-9	mg/kg	1600	SL-1	--	--	--
1,4-Dichloro-2-Butene	110-57-6	mg/kg			--	--	--
1,4-Dichlorobenzene	106-46-7	mg/kg	0.11	SL-8	--	--	--
2,2-Dichloropropane	594-20-7	mg/kg			--	--	--
2-Butanone	78-93-3	mg/kg	48000	SL-1	--	--	--
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg			--	--	--
2-Chlorotoluene	95-49-8	mg/kg	1600	SL-1	--	--	--
2-Hexanone	591-78-6	mg/kg	400	SL-1	--	--	--
2-Pentanone	107-87-9	mg/kg			--	--	--
4-Chlorotoluene	106-43-4	mg/kg			--	--	--
4-Methyl-2-pentanone	108-10-1	mg/kg	6400	SL-1	--	--	--
Acetone	67-64-1	mg/kg	72000	SL-1	--	--	--
Acrolein	107-02-8	mg/kg	0.00443	SL-3	--	--	--
Acrylonitrile	107-13-1	mg/kg	0.000117	SL-3	--	--	--
Benzene	71-43-2	mg/kg	0.00876	SL-3	--	--	--
Bromobenzene	108-86-1	mg/kg	640	SL-1	--	--	--
Bromochloromethane	74-97-5	mg/kg			--	--	--
Bromodichloromethane	75-27-4	mg/kg	0.0132	SL-3	--	--	--
Bromoform	75-25-2	mg/kg	0.0785	SL-3	--	--	--
Bromomethane	74-83-9	mg/kg	1.22	SL-3	--	--	--
Carbon Disulfide	75-15-0	mg/kg	8000	SL-1	--	--	--
Carbon Tetrachloride	56-23-5	mg/kg	0.00287	SL-3	--	--	--
Chlorobenzene	108-90-7	mg/kg	1.72	SL-3	--	--	--
Chloroethane	75-00-3	mg/kg			--	--	--
Chloroform	67-66-3	mg/kg	0.806	SL-3	--	--	--
Chloromethane	74-87-3	mg/kg			--	--	--
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg	160	SL-1	--	--	--
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.00627	SL-3	--	--	--
Dibromochloromethane	124-48-1	mg/kg	0.0103	SL-3	--	--	--
Dibromomethane	74-95-3	mg/kg	800	SL-1	--	--	--
Dichlorodifluoromethane	75-71-8	mg/kg	16000	SL-1	--	--	--
Ethylbenzene	100-41-4	mg/kg	0.176	SL-3	--	--	--
Isopropylbenzene	98-62-8	mg/kg	8000	SL-1	--	--	--

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	B-01	B-01	B-02	B-03	B-03	B-03	B-04	B-04	B-04	HA-01	HA-01	HA-02
					Date	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	03/11/2021	03/11/2021	03/11/2021	
Sample	B-01-2-3	B-01-3.5-4.5	B-02-2.5-3	B-03-0-1	B-03-2-3	B-03-5-6	B-04-0-1	B-04-2-2.5	B-04-5-6	HA-1-0-1	HA-1-2-3	HA-2-0-1					
Depth	2 - 3 ft	3.5 - 4.5 ft	2.5 - 3 ft	0 - 1 ft	2 - 3 ft	5 - 6 ft	0 - 1 ft	2 - 2.5 ft	5 - 6 ft	0 - 1 ft	2 - 3 ft	0 - 1 ft					
m,p-Xylenes	179601-23-1	mg/kg	--	--	--	--	--	--	--	--	--	--	--	0.00605	< 0.00249 U	0.00163 J	
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1	--	--	--	--	--	--	--	--	--	< 0.00107 U	< 0.00125 U	< 0.00166 U	
Methylene Chloride	75-09-2	mg/kg	0.435	SL-3	--	--	--	--	--	--	--	--	--	< 0.00533 U	< 0.00623 U	< 0.00828 U	
Methyliodide	74-88-4	mg/kg	--	--	--	--	--	--	--	--	--	--	--	< 0.00107 U	< 0.00125 U	< 0.00166 U	
n-Butylbenzene	104-51-8	mg/kg	4000	SL-1	--	--	--	--	--	--	--	--	--	< 0.00107 U	< 0.00125 U	< 0.00166 U	
n-Propylbenzene	103-65-1	mg/kg	8000	SL-1	--	--	--	--	--	--	--	--	--	< 0.00107 U	< 0.00125 U	< 0.00166 U	
o-Xylene	95-47-6	mg/kg	--	--	--	--	--	--	--	--	--	--	--	0.00242	< 0.00125 U	< 0.00166 U	
p-Isopropyltoluene	99-87-6	mg/kg	--	--	--	--	--	--	--	--	--	--	--	< 0.00107 U	< 0.00125 U	< 0.00166 U	
sec-Butylbenzene	135-98-8	mg/kg	8000	SL-1	--	--	--	--	--	--	--	--	--	< 0.00107 U	< 0.00125 U	< 0.00166 U	
Styrene	100-42-5	mg/kg	300	SL-9	--	--	--	--	--	--	--	--	--	< 0.00107 U	< 0.00125 U	< 0.00166 U	
tert-Butylbenzene	98-06-6	mg/kg	8000	SL-1	--	--	--	--	--	--	--	--	--	< 0.00107 U	< 0.00125 U	< 0.00166 U	
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0289	SL-3	--	--	--	--	--	--	--	--	--	0.00956	0.0142	0.0325	
Toluene	106-98-3	mg/kg	0.72	SL-3	--	--	--	--	--	--	--	--	--	0.00678	0.00122 J	0.00442	
Total Xylenes	1330-20-7	mg/kg	0.944	SL-3	--	--	--	--	--	--	--	--	--	0.00847	< 0.00249 U	0.00163 J	
trans-1,2-Dichloroethene	156-60-5	mg/kg	5.17	SL-3	--	--	--	--	--	--	--	--	--	< 0.00107 U	< 0.00125 U	< 0.00166 U	
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00627	SL-3	--	--	--	--	--	--	--	--	--	< 0.00107 U	< 0.00125 U	< 0.00166 U	
Trichloroethene (TCE)	79-01-6	mg/kg	0.0044	SL-3	--	--	--	--	--	--	--	--	--	0.00285	< 0.00125 U	0.00186	
Trichlorofluoromethane	75-69-4	mg/kg	24000	SL-1	--	--	--	--	--	--	--	--	--	< 0.00213 U	< 0.00249 U	< 0.00331 U	
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1	--	--	--	--	--	--	--	--	--	< 0.00533 UJ	< 0.00623 UJ	< 0.00828 UJ	
Vinyl Chloride	75-01-4	mg/kg	0.00106	SL-3	--	--	--	--	--	--	--	--	--	< 0.00107 U	< 0.00125 U	< 0.00166 U	
Conventionals																	
Total Organic Carbon	TOC	%	--	--	--	--	--	--	--	--	--	--	--	1.76	2.02	2.75	
Total Solids	TS	%	--	--	--	--	--	--	--	--	--	--	--	90.99	89.8	81.68	

Vadose zone is considered from ground surface to 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

TEQ = Toxic Equivalency

"--" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

SL-1	Direct Contact Unrestricted
SL-3	Protect Surface Water via Ground Water Vadose Zone
SL-8	Protect Sediment via Erosion
SL-9	Site-Specific TEE Unrestricted
SL-10	Natural Background

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	HA-02	MW-04	MW-04	MW-05	MW-06	MW-06	MW-07	MW-07	MW-07	MW-08	MW-08
					Date	03/11/2021	03/04/2021	03/04/2021	03/05/2021	03/05/2021	03/05/2021	03/09/2021	03/09/2021	03/09/2021	03/09/2021	03/09/2021
					Sample	HA-2-2-3	MW-4-0-1	MW-4-4-5	MW-5-0-1	MW-6-0-1	MW-6-4-5	MW-7-0-1	MW-7-3-5	MW-7-5-6	MW-8-0-1	MW-8-3-5
					Depth	2 - 3 ft	0 - 1 ft	4 - 5 ft	0 - 1 ft	0 - 1 ft	4 - 5 ft	0 - 1 ft	3 - 5 ft	5 - 6 ft	0 - 1 ft	3 - 5 ft
m,p-Xylenes	179601-23-1	mg/kg				< 0.00234 U	< 0.00253 U	--	< 0.00322 U	< 0.00239 U	< 0.00249 U	< 0.00262 U	--	< 0.00349 U	< 0.00316 U	--
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1		< 0.00117 U	< 0.00127 U	--	< 0.00161 U	< 0.0012 U	< 0.00124 U	< 0.00131 U	--	< 0.00174 U	< 0.00158 U	--
Methylene Chloride	75-09-2	mg/kg	0.435	SL-3		< 0.00584 U	< 0.00633 U	--	< 0.00804 U	< 0.00598 U	< 0.00621 U	< 0.00654 U	--	< 0.00872 U	< 0.00789 U	--
Methyiodide	74-88-4	mg/kg				< 0.00117 U	< 0.00127 U	--	< 0.00161 U	< 0.0012 U	< 0.00124 U	< 0.00131 U	--	< 0.00174 U	< 0.00158 U	--
n-Butylbenzene	104-51-8	mg/kg	4000	SL-1		< 0.00117 U	< 0.00127 U	--	< 0.00161 U	< 0.0012 U	< 0.00124 U	< 0.00131 U	--	< 0.00174 U	< 0.00158 U	--
n-Propylbenzene	103-65-1	mg/kg	8000	SL-1		< 0.00117 U	< 0.00127 U	--	< 0.00161 U	< 0.0012 U	< 0.00124 U	< 0.00131 U	--	< 0.00174 U	< 0.00158 U	--
o-Xylene	95-47-6	mg/kg				< 0.00117 U	< 0.00127 U	--	< 0.00161 U	< 0.0012 U	< 0.00124 U	< 0.00131 U	--	< 0.00174 U	< 0.00158 U	--
p-Isopropyltoluene	99-87-6	mg/kg				< 0.00117 U	< 0.00127 U	--	< 0.00161 U	< 0.0012 U	< 0.00124 U	< 0.00131 U	--	< 0.00174 U	< 0.00158 U	--
sec-Butylbenzene	135-98-8	mg/kg	8000	SL-1		< 0.00117 U	< 0.00127 U	--	< 0.00161 U	< 0.0012 U	< 0.00124 U	< 0.00131 U	--	< 0.00174 U	< 0.00158 U	--
Styrene	100-42-5	mg/kg	300	SL-9		< 0.00117 U	< 0.00127 U	--	< 0.00161 U	< 0.0012 U	< 0.00124 U	< 0.00131 U	--	< 0.00174 U	< 0.00158 U	--
tert-Butylbenzene	98-06-6	mg/kg	8000	SL-1		< 0.00117 U	< 0.00127 U	--	< 0.00161 U	< 0.0012 U	< 0.00124 U	< 0.00131 U	--	< 0.00174 U	< 0.00158 U	--
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0289	SL-3		0.00485	0.00517	--	< 0.00161 U	0.00122	0.0006 J	< 0.00131 U	--	< 0.00174 U	< 0.00158 U	--
Toluene	106-98-3	mg/kg	0.72	SL-3		< 0.00117 U	0.00061 J	--	0.00206	0.00063 J	< 0.00124 U	< 0.00131 U	--	0.00136 J	< 0.00158 U	--
Total Xylenes	1330-20-7	mg/kg	0.944	SL-3		< 0.00234 U	< 0.00253 U	--	< 0.00322 U	< 0.00239 U	< 0.00249 U	< 0.00262 U	--	< 0.00349 U	< 0.00316 U	--
trans-1,2-Dichloroethene	156-60-5	mg/kg	5.17	SL-3		< 0.00117 U	< 0.00127 U	--	< 0.00161 U	< 0.0012 U	< 0.00124 U	< 0.00131 U	--	< 0.00174 U	< 0.00158 U	--
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00627	SL-3		< 0.00117 U	< 0.00127 U	--	< 0.00161 U	< 0.0012 U	< 0.00124 U	< 0.00131 U	--	< 0.00174 U	< 0.00158 U	--
Trichloroethene (TCE)	79-01-6	mg/kg	0.0044	SL-3		< 0.00117 U	0.00071 J	--	< 0.00161 U	< 0.0012 U	< 0.00124 U	< 0.00131 U	--	< 0.00174 U	< 0.00158 U	--
Trichlorofluoromethane	75-69-4	mg/kg	24000	SL-1		< 0.00234 U	< 0.00253 U	--	< 0.00322 U	< 0.00239 U	< 0.00249 U	< 0.00262 U	--	< 0.00349 U	< 0.00316 U	--
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1		< 0.00584 U	< 0.00633 U	--	< 0.00804 U	< 0.00598 U	< 0.00621 U	< 0.00654 U	--	< 0.00872 U	< 0.00789 U	--
Vinyl Chloride	75-01-4	mg/kg	0.00106	SL-3		< 0.00117 U	< 0.00127 U	--	< 0.00161 U	< 0.0012 U	< 0.00124 U	< 0.00131 U	--	< 0.00174 U	< 0.00158 U	--
Conventionals																
Total Organic Carbon	TOC	%				1.3	0.95	--	0.74	0.56	0.1	0.21	--	< 0.02 U	0.22	--
Total Solids	TS	%				91	91.51	--	90.41	88.92	85.5	90.25	--	79.38	90.93	--

Vadose zone is considered from ground surface to 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

TEQ = Toxic Equivalency

"--" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

- SL-1 Direct Contact Unrestricted
- SL-3 Protect Surface Water via Ground Water Vadose Zone
- SL-8 Protect Sediment via Erosion
- SL-9 Site-Specific TEE Unrestricted
- SL-10 Natural Background

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RL_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	MW-09	MW-09	MW-10	MW-11	MW-11	MW-12	MW-12	MW-13	MW-13	MW-14	MW-14
					Date Sample	03/09/2021	03/09/2021	03/08/2021	03/08/2021	03/03/2021	03/03/2021	03/01/2021	03/01/2021	03/10/2021	03/01/2021	
					Depth	MW-9-0-1	MW-9-5-6	MW-10-0-1	MW-11-0-1	MW-11-3-5	MW-12-0-1	MW-12-3-5	MW-13-0-1	MW-13-3-5	MW-14A-0-1	MW-14-4.5-5
m,p-Xylenes	179601-23-1	mg/kg				< 0.00235 U	< 0.00218 U	< 0.00207 U	< 0.00221 U	--	< 0.0019 U	< 0.00186 U	< 0.00261 U	< 0.0027 U	< 0.00186 U	< 0.00293 U
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1		< 0.00117 U	< 0.00109 U	< 0.00103 U	< 0.0011 U	--	< 0.00095 U	< 0.00093 U	< 0.0013 U	< 0.00135 U	< 0.00093 U	< 0.00146 U
Methylene Chloride	75-09-2	mg/kg	0.435	SL-3		< 0.00587 U	< 0.00544 U	< 0.00517 U	< 0.00552 U	--	< 0.00474 U	< 0.00466 U	0.00789	0.14 J	< 0.00465 U	< 0.00732 U
Methyliodide	74-88-4	mg/kg				< 0.00117 U	< 0.00109 U	< 0.00103 U	< 0.0011 U	--	< 0.00095 U	< 0.00093 U	< 0.0013 U	< 0.00135 U	< 0.00093 U	< 0.00146 U
n-Butylbenzene	104-51-8	mg/kg	4000	SL-1		< 0.00117 U	< 0.00109 U	< 0.00103 U	< 0.0011 U	--	< 0.00095 U	< 0.00093 U	< 0.0013 U	< 0.00135 U	< 0.00093 U	< 0.00146 U
n-Propylbenzene	103-65-1	mg/kg	8000	SL-1		< 0.00117 U	< 0.00109 U	< 0.00103 U	< 0.0011 U	--	< 0.00095 U	< 0.00093 U	< 0.0013 U	< 0.00135 U	< 0.00093 U	< 0.00146 U
o-Xylene	95-47-6	mg/kg				< 0.00117 U	< 0.00109 U	< 0.00103 U	< 0.0011 U	--	< 0.00095 U	< 0.00093 U	< 0.0013 U	< 0.00135 U	< 0.00093 U	< 0.00146 U
p-Isopropyltoluene	99-87-6	mg/kg				< 0.00117 U	< 0.00109 U	< 0.00103 U	< 0.0011 U	--	< 0.00095 U	< 0.00093 U	< 0.0013 U	< 0.00135 U	< 0.00093 U	< 0.00146 U
sec-Butylbenzene	135-98-8	mg/kg	8000	SL-1		< 0.00117 U	< 0.00109 U	< 0.00103 U	< 0.0011 U	--	< 0.00095 U	< 0.00093 U	< 0.0013 U	< 0.00135 U	< 0.00093 U	< 0.00146 U
Styrene	100-42-5	mg/kg	300	SL-9		< 0.00117 U	< 0.00109 U	< 0.00103 U	< 0.0011 U	--	< 0.00095 U	< 0.00093 U	< 0.0013 U	< 0.00135 U	< 0.00093 U	< 0.00146 U
tert-Butylbenzene	98-06-6	mg/kg	8000	SL-1		< 0.00117 U	< 0.00109 U	< 0.00103 U	< 0.0011 U	--	< 0.00095 U	< 0.00093 U	< 0.0013 U	< 0.00135 U	< 0.00093 U	< 0.00146 U
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0289	SL-3		0.00111 J	0.0163	< 0.00103 U	< 0.0011 U	--	< 0.00095 U	< 0.00093 U	0.878	0.252 J	< 0.00093 U	< 0.00146 U
Toluene	106-98-3	mg/kg	0.72	SL-3		< 0.00117 U	< 0.00109 U	< 0.00103 U	< 0.0011 U	--	0.00034 J	0.00062 J	< 0.0013 U	0.0048 J	< 0.00093 U	< 0.00146 U
Total Xylenes	1330-20-7	mg/kg	0.944	SL-3		< 0.00235 U	< 0.00218 U	< 0.00207 U	< 0.00221 U	--	< 0.0019 U	< 0.00186 U	< 0.00261 U	< 0.0027 U	< 0.00186 U	< 0.00293 U
trans-1,2-Dichloroethene	156-60-5	mg/kg	5.17	SL-3		< 0.00117 U	< 0.00109 U	< 0.00103 U	< 0.0011 U	--	< 0.00095 U	< 0.00093 U	< 0.0013 U	< 0.00135 U	< 0.00093 U	< 0.00146 U
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00627	SL-3		< 0.00117 U	< 0.00109 U	< 0.00103 U	< 0.0011 U	--	< 0.00095 U	< 0.00093 U	< 0.0013 U	< 0.00135 U	< 0.00093 U	< 0.00146 U
Trichloroethene (TCE)	79-01-6	mg/kg	0.0044	SL-3		< 0.00117 U	0.00209	< 0.00103 U	< 0.0011 U	--	< 0.00095 U	< 0.00093 U	0.00471	0.00273	< 0.00093 U	< 0.00146 U
Trichlorofluoromethane	75-69-4	mg/kg	24000	SL-1		< 0.00235 U	< 0.00218 U	< 0.00207 U	< 0.00221 U	--	< 0.0019 U	< 0.00186 U	< 0.00261 U	< 0.0027 U	< 0.00186 U	< 0.00293 U
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1		< 0.00587 U	< 0.00544 U	< 0.00517 U	< 0.00552 U	--	< 0.00474 U	< 0.00466 U	< 0.00652 U	< 0.00675 U	< 0.00465 U	< 0.00732 U
Vinyl Chloride	75-01-4	mg/kg	0.00106	SL-3		< 0.00117 U	< 0.00109 U	< 0.00103 U	< 0.0011 U	--	< 0.00095 U	< 0.00093 U	< 0.0013 U	< 0.00135 U	< 0.00093 U	< 0.00146 U
Conventionals																
Total Organic Carbon	TOC	%				< 0.02 U	0.22	0.24	1.23	--	0.19	0.71	< 0.02 U	< 0.02 U	0.26	< 0.07 U
Total Solids	TS	%				94.68	76.43	87.69	92.3	--	91.32	80.08	92.13	92.88	86.25	92.01

Vadose zone is considered from ground surface to 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

TEQ = Toxic Equivalency

"--" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

- SL-1 Direct Contact Unrestricted
- SL-3 Protect Surface Water via Ground Water Vadose Zone
- SL-8 Protect Sediment via Erosion
- SL-9 Site-Specific TEE Unrestricted
- SL-10 Natural Background

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	MW-15	MW-15	SB-02	SB-11	SB-12	SB-13	SB-13	SB-14	SB-15	SB-16	SB-18
					Date Sample Depth	03/03/2021 MW-15-0-1	03/03/2021 MW-15-3-5	10/01/2007 SB-02-1 1 - 3 ft	09/28/2007 SB-11-2.5 2 - 4 ft	09/28/2007 SB-12-1.5 2 - 4 ft	10/01/2007 SB-13-1 1 - 3 ft	10/01/2007 SB-13-3.5 4 - 6 ft	10/01/2007 SB-14-3 3 - 5 ft	10/01/2007 SB-15-3.5 4 - 6 ft	10/01/2007 SB-16-3.5 4 - 6 ft	07/27/2011 SB18-5.0-072711 5 - 5 ft
m,p-Xylenes	179601-23-1	mg/kg				< 0.00308 U	< 0.00441 U	--	21	0.0013	--	--	--	0.0046 J	44	--
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1		< 0.00154 U	< 0.0022 U	--	--	--	--	--	--	--	--	--
Methylene Chloride	75-09-2	mg/kg	0.435	SL-3		< 0.00769 U	0.00962 J	--	0.034	< 0.00044 U	--	--	--	< 0.00097 UJ	< 0.27 U	--
Methyliodide	74-88-4	mg/kg				< 0.00154 U	< 0.0022 U	--	--	--	--	--	--	--	--	--
n-Butylbenzene	104-51-8	mg/kg	4000	SL-1		< 0.00154 U	< 0.0022 U	--	0.96	< 0.017 U	--	--	--	< 0.03 U	2	--
n-Propylbenzene	103-65-1	mg/kg	8000	SL-1		< 0.00154 U	< 0.0022 U	--	0.67	< 0.017 U	--	--	--	< 0.03 U	1.8	--
o-Xylene	95-47-6	mg/kg				< 0.00154 U	< 0.0022 U	--	14	0.00049	--	--	--	0.0013 J	24	--
p-Isopropyltoluene	99-87-6	mg/kg				< 0.00154 U	< 0.0022 U	--	1.2	< 0.017 U	--	--	--	0.039 J	2.6	--
sec-Butylbenzene	135-98-8	mg/kg	8000	SL-1		< 0.00154 U	< 0.0022 U	--	0.54	< 0.017 U	--	--	--	< 0.03 U	1.2	--
Styrene	100-42-5	mg/kg	300	SL-9		< 0.00154 U	< 0.0022 U	--	0.037	< 0.0041 U	--	--	--	< 0.0075 U	< 0.068 U	--
tert-Butylbenzene	98-06-6	mg/kg	8000	SL-1		< 0.00154 U	< 0.0022 U	--	0.042	< 0.017 U	--	--	--	< 0.03 U	0.087	--
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0289	SL-3		< 0.00154 U	< 0.0022 U	--	0.16	0.0015	--	--	--	0.00073 J	0.17	--
Toluene	106-98-3	mg/kg	0.72	SL-3		< 0.00154 U	0.00071 J	--	4.1	0.0017	--	--	--	0.0023 J	7.2	--
Total Xylenes	1330-20-7	mg/kg	0.944	SL-3		< 0.00308 U	< 0.00441 U	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	156-60-5	mg/kg	5.17	SL-3		< 0.00154 U	< 0.0022 U	--	0.21	< 0.0041 U	--	--	--	< 0.0075 U	0.098	--
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00627	SL-3		< 0.00154 U	< 0.0022 U	--	< 0.071 U	< 0.0041 U	--	--	--	< 0.0075 U	< 0.068 U	--
Trichloroethene (TCE)	79-01-6	mg/kg	0.0044	SL-3		< 0.00154 U	< 0.0022 U	--	0.17	0.0005	--	--	--	< 0.0075 U	0.15	--
Trichlorofluoromethane	75-69-4	mg/kg	24000	SL-1		< 0.00308 U	< 0.00441 U	--	< 0.071 U	< 0.0041 U	--	--	--	< 0.0075 U	< 0.068 U	--
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1		< 0.00769 U	< 0.011 U	--	--	--	--	--	--	--	--	--
Vinyl Chloride	75-01-4	mg/kg	0.00106	SL-3		< 0.00154 U	< 0.0022 U	--	0.09	0.0014	--	--	--	0.0027 J	0.87	--
Conventionals																
Total Organic Carbon	TOC	%				0.15	< 0.02 U	--	--	--	--	--	--	--	--	--
Total Solids	TS	%				91.68	92.42	94.8	84	89.3	95.5	94.9	90.5	75.1	82.2	--

Vadose zone is considered from ground surface to 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

TEQ = Toxic Equivalency

"--" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

- SL-1 Direct Contact Unrestricted
- SL-3 Protect Surface Water via Ground Water Vadose Zone
- SL-8 Protect Sediment via Erosion
- SL-9 Site-Specific TEE Unrestricted
- SL-10 Natural Background

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SB-20	SB-23	SB-26	SB-26	SB-27	SB-27	SB-28	SB-28	SB-29	SB-29
					Date	07/27/2011	07/28/2011	03/04/2021	03/03/2021	03/09/2021	03/09/2021	03/01/2021	03/01/2021	03/01/2021	03/01/2021
					Sample	SB20-4.0-072711	SB23-1.0-072811	SB-26-0-1	SB-26-4-5	SB-27-0-1	SB-27-3-5	SB-28-0-1	SB-28-3-5	SB-29-0-1	SB-29A-3-5
					Depth	4 - 4 ft	1 - 1 ft	0 - 1 ft	4 - 5 ft	0 - 1 ft	3 - 5 ft	0 - 1 ft	3 - 5 ft	0 - 1 ft	3 - 5 ft
m,p-Xylenes	179601-23-1	mg/kg			--	--	< 0.00209 UJ	--	< 0.00266 U	--	< 0.00199 UJ	--	< 0.00232 U	< 0.00243 U	
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1	--	--	< 0.00105 UJ	--	< 0.00133 U	--	< 0.001 UJ	--	< 0.00116 U	< 0.00122 U	
Methylene Chloride	75-09-2	mg/kg	0.435	SL-3	--	--	< 0.00524 UJ	--	< 0.00665 U	--	< 0.00499 UJ	--	0.0153	0.0264	
Methyliodide	74-88-4	mg/kg			--	--	< 0.00105 UJ	--	< 0.00133 U	--	< 0.001 UJ	--	< 0.00116 U	< 0.00122 U	
n-Butylbenzene	104-51-8	mg/kg	4000	SL-1	--	--	< 0.00105 UJ	--	< 0.00133 U	--	< 0.001 UJ	--	< 0.00116 U	< 0.00122 U	
n-Propylbenzene	103-65-1	mg/kg	8000	SL-1	--	--	< 0.00105 UJ	--	< 0.00133 U	--	< 0.001 UJ	--	< 0.00116 U	< 0.00122 U	
o-Xylene	95-47-6	mg/kg			--	--	< 0.00105 UJ	--	< 0.00133 U	--	< 0.001 UJ	--	< 0.00116 U	< 0.00122 U	
p-Isopropyltoluene	99-87-6	mg/kg			--	--	< 0.00105 UJ	--	< 0.00133 U	--	< 0.001 UJ	--	< 0.00116 U	< 0.00122 U	
sec-Butylbenzene	135-98-8	mg/kg	8000	SL-1	--	--	< 0.00105 UJ	--	< 0.00133 U	--	< 0.001 UJ	--	< 0.00116 U	< 0.00122 U	
Styrene	100-42-5	mg/kg	300	SL-9	--	--	< 0.00105 UJ	--	< 0.00133 U	--	< 0.001 UJ	--	< 0.00116 U	< 0.00122 U	
tert-Butylbenzene	98-06-6	mg/kg	8000	SL-1	--	--	< 0.00105 UJ	--	< 0.00133 U	--	< 0.001 UJ	--	< 0.00116 U	< 0.00122 U	
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0289	SL-3	--	--	0.0213 J	--	< 0.00133 U	--	0.00085 J	--	0.00049 J	< 0.00122 U	
Toluene	106-98-3	mg/kg	0.72	SL-3	--	--	< 0.00105 UJ	--	< 0.00133 U	--	< 0.001 UJ	--	0.00035 J	< 0.00122 U	
Total Xylenes	1330-20-7	mg/kg	0.944	SL-3	--	--	< 0.00209 UJ	--	< 0.00266 U	--	< 0.00199 UJ	--	< 0.00232 U	< 0.00243 U	
trans-1,2-Dichloroethene	156-60-5	mg/kg	5.17	SL-3	--	--	< 0.00105 UJ	--	< 0.00133 U	--	< 0.001 UJ	--	< 0.00116 U	< 0.00122 U	
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00627	SL-3	--	--	< 0.00105 UJ	--	< 0.00133 U	--	< 0.001 UJ	--	< 0.00116 U	< 0.00122 U	
Trichloroethene (TCE)	79-01-6	mg/kg	0.0044	SL-3	--	--	0.0005 J	--	< 0.00133 U	--	< 0.001 UJ	--	< 0.00116 U	< 0.00122 U	
Trichlorofluoromethane	75-69-4	mg/kg	24000	SL-1	--	--	< 0.00209 UJ	--	< 0.00266 U	--	< 0.00199 UJ	--	< 0.00232 U	< 0.00243 U	
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1	--	--	< 0.00524 UJ	--	< 0.00665 U	--	< 0.00499 UJ	--	< 0.0058 U	< 0.00609 U	
Vinyl Chloride	75-01-4	mg/kg	0.00106	SL-3	--	--	< 0.00105 UJ	--	< 0.00133 U	--	< 0.001 UJ	--	< 0.00116 U	< 0.00122 U	
Conventionals															
Total Organic Carbon	TOC	%			--	--	2.98	--	0.34	--	0.75	--	0.25	0.43	
Total Solids	TS	%			--	--	87.43	--	93.81	--	89.79	--	93.03	76.22	

Vadose zone is considered from ground surface to 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

TEQ = Toxic Equivalency

"-" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

- SL-1 Direct Contact Unrestricted
- SL-3 Protect Surface Water via Ground Water Vadose Zone
- SL-8 Protect Sediment via Erosion
- SL-9 Site-Specific TEE Unrestricted
- SL-10 Natural Background

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SB-30	SB-30	SB-31	SB-31	SB-32	SB-32	SB-33	SB-33	SB-34	SB-34	
					Date	03/01/2021	03/01/2021	03/01/2021	03/01/2021	03/08/2021	03/08/2021	03/03/2021	03/03/2021	03/01/2021	03/23/2021	03/01/2021
					Sample	SB-30-0-1	SB-30A-3-5	SB-31-0-1	SB-31A-3-5	SB-32-0-1	SB-32-4-5	SB-33-0-1	SB-33-3-5	SB-34-0-1	SB-34R-0-1	
					Depth	0 - 1 ft	3 - 5 ft	0 - 1 ft	3 - 5 ft	0 - 1 ft	4 - 5 ft	0 - 1 ft	3 - 5 ft	0 - 1 ft	3 - 4 ft	
m,p-Xylenes	179601-23-1	mg/kg				< 0.00204 U	< 0.00222 U	< 0.00263 U	< 0.00294 U	< 0.00343 U	< 0.00285 U	< 0.002 U	< 0.00305 U	0.00088 J	0.00105 J	< 0.00217 UJ
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1		< 0.00102 U	< 0.00111 U	< 0.00132 U	< 0.00147 U	< 0.00172 U	< 0.00143 U	< 0.001 U	< 0.00152 U	< 0.00136 UJ	< 0.001 U	< 0.00108 UJ
Methylene Chloride	75-09-2	mg/kg	0.435	SL-3		< 0.00511 U	< 0.00556 U	< 0.00658 U	0.00682 J	< 0.00858 U	< 0.00714 U	< 0.005 U	< 0.00762 U	< 0.0068 UJ	< 0.005 U	< 0.00542 UJ
Methyliodide	74-88-4	mg/kg				< 0.00102 U	< 0.00111 U	< 0.00132 U	< 0.00147 U	< 0.00172 U	< 0.00143 U	0.00165	< 0.00152 U	< 0.00136 UJ	< 0.001 U	< 0.00108 UJ
n-Butylbenzene	104-51-8	mg/kg	4000	SL-1		< 0.00102 U	< 0.00111 U	< 0.00132 U	< 0.00147 U	< 0.00172 U	< 0.00143 U	< 0.001 U	< 0.00152 U	< 0.00136 UJ	< 0.001 U	< 0.00108 UJ
n-Propylbenzene	103-65-1	mg/kg	8000	SL-1		< 0.00102 U	< 0.00111 U	< 0.00132 U	< 0.00147 U	< 0.00172 U	< 0.00143 U	< 0.001 U	< 0.00152 U	< 0.00136 UJ	< 0.001 U	< 0.00108 UJ
o-Xylene	95-47-6	mg/kg				< 0.00102 U	< 0.00111 U	< 0.00132 U	< 0.00147 U	< 0.00172 U	< 0.00143 U	< 0.001 U	< 0.00152 U	< 0.00136 UJ	< 0.001 U	< 0.00108 UJ
p-Isopropyltoluene	99-87-6	mg/kg				< 0.00102 U	< 0.00111 U	< 0.00132 U	< 0.00147 U	< 0.00172 U	< 0.00143 U	< 0.001 U	< 0.00152 U	< 0.00136 UJ	< 0.001 U	< 0.00108 UJ
sec-Butylbenzene	135-98-8	mg/kg	8000	SL-1		< 0.00102 U	< 0.00111 U	< 0.00132 U	< 0.00147 U	< 0.00172 U	< 0.00143 U	< 0.001 U	< 0.00152 U	< 0.00136 UJ	< 0.001 U	< 0.00108 UJ
Styrene	100-42-5	mg/kg	300	SL-9		< 0.00102 U	< 0.00111 U	< 0.00132 U	< 0.00147 U	< 0.00172 U	< 0.00143 U	< 0.001 U	< 0.00152 U	< 0.00136 UJ	< 0.001 U	< 0.00108 UJ
tert-Butylbenzene	98-06-6	mg/kg	8000	SL-1		< 0.00102 U	< 0.00111 U	< 0.00132 U	< 0.00147 U	< 0.00172 U	< 0.00143 U	< 0.001 U	< 0.00152 U	< 0.00136 UJ	< 0.001 U	< 0.00108 UJ
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0289	SL-3		0.0181	0.187	0.0547	0.0415	< 0.00172 U	< 0.00143 U	0.00257	0.00208	0.00085 J	0.0015	< 0.00108 UJ
Toluene	106-98-3	mg/kg	0.72	SL-3		< 0.00102 U	< 0.00111 U	0.0004 J	< 0.00147 U	0.0007 J	< 0.00143 U	0.00049 J	< 0.00152 U	0.00274 J	0.00272	< 0.00108 UJ
Total Xylenes	1330-20-7	mg/kg	0.944	SL-3		< 0.00204 U	< 0.00222 U	< 0.00263 U	< 0.00294 U	< 0.00343 U	< 0.00285 U	< 0.002 U	< 0.00305 U	< 0.00272 UJ	0.00105 J	< 0.00217 UJ
trans-1,2-Dichloroethene	156-60-5	mg/kg	5.17	SL-3		< 0.00102 U	< 0.00111 U	< 0.00132 U	< 0.00147 U	< 0.00172 U	< 0.00143 U	< 0.001 U	< 0.00152 U	< 0.00136 UJ	< 0.001 U	< 0.00108 UJ
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00627	SL-3		< 0.00102 U	< 0.00111 U	< 0.00132 U	< 0.00147 U	< 0.00172 U	< 0.00143 U	< 0.001 U	< 0.00152 U	< 0.00136 UJ	< 0.001 U	< 0.00108 UJ
Trichloroethene (TCE)	79-01-6	mg/kg	0.0044	SL-3		< 0.00102 U	0.00069 J	< 0.00132 U	< 0.00147 U	< 0.00172 U	< 0.00143 U	0.00125	0.00135 J	< 0.00136 UJ	< 0.001 U	< 0.00108 UJ
Trichlorofluoromethane	75-69-4	mg/kg	24000	SL-1		< 0.00204 U	< 0.00222 U	< 0.00263 U	< 0.00294 U	< 0.00343 U	< 0.00285 U	< 0.002 U	< 0.00305 U	< 0.00272 UJ	< 0.002 U	< 0.00217 UJ
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1		< 0.00511 U	< 0.00556 U	< 0.00658 U	< 0.00736 U	< 0.00858 U	< 0.00714 U	< 0.005 U	< 0.00762 U	< 0.0068 UJ	< 0.005 U	< 0.00542 UJ
Vinyl Chloride	75-01-4	mg/kg	0.00106	SL-3		< 0.00102 U	< 0.00111 U	< 0.00132 U	< 0.00147 U	< 0.00172 U	< 0.00143 U	< 0.001 U	< 0.00152 U	< 0.00136 UJ	< 0.001 U	< 0.00108 UJ
Conventionals																
Total Organic Carbon	TOC	%				0.26	0.58	0.1	0.19	1.08 J	0.22	0.09	0.07	0.14	--	< 0.04 U
Total Solids	TS	%				81.8	89.13	93.65	86.58	86.47	82.29	91.97	79.58	90.06	--	90.26

Vadose zone is considered from ground surface to 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

TEQ = Toxic Equivalency

"--" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

- SL-1 Direct Contact Unrestricted
- SL-3 Protect Surface Water via Ground Water Vadose Zone
- SL-8 Protect Sediment via Erosion
- SL-9 Site-Specific TEE Unrestricted
- SL-10 Natural Background

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293 , South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location Date Sample Depth	SB-34	SS-01	SS-02	SS-03	SS-04	SS-05	SS-06
					03/23/2021 SB-34R-3-4 3 - 4 ft	02/09/2016 SPM-SS-01-02092016 0 - 1.6 ft	02/09/2016 SPM-SS-02-02092016 0 - 1.6 ft	02/09/2016 SPM-SS-03-02092016 0 - 1.6 ft	02/10/2016 SPM-SS-04-02102016 0 - 1.6 ft	02/10/2016 SPM-SS-05-02102016 0 - 1.6 ft	02/10/2016 SPM-SS-06-02102016 0 - 1.6 ft	
m,p-Xylenes	179601-23-1	mg/kg				< 0.00209 U	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1		< 0.00104 U	--	--	--	--	--	--
Methylene Chloride	75-09-2	mg/kg	0.435	SL-3		< 0.00522 U	--	--	--	--	--	--
Methyliodide	74-88-4	mg/kg				< 0.00104 U	--	--	--	--	--	--
n-Butylbenzene	104-51-8	mg/kg	4000	SL-1		< 0.00104 U	--	--	--	--	--	--
n-Propylbenzene	103-65-1	mg/kg	8000	SL-1		< 0.00104 U	--	--	--	--	--	--
o-Xylene	95-47-6	mg/kg				< 0.00104 U	--	--	--	--	--	--
p-Isopropyltoluene	99-87-6	mg/kg				< 0.00104 U	--	--	--	--	--	--
sec-Butylbenzene	135-98-8	mg/kg	8000	SL-1		< 0.00104 U	--	--	--	--	--	--
Styrene	100-42-5	mg/kg	300	SL-9		< 0.00104 U	--	--	--	--	--	--
tert-Butylbenzene	98-06-6	mg/kg	8000	SL-1		< 0.00104 U	--	--	--	--	--	--
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0289	SL-3		< 0.00104 U	--	--	--	--	--	--
Toluene	108-88-3	mg/kg	0.72	SL-3		< 0.00104 U	--	--	--	--	--	--
Total Xylenes	1330-20-7	mg/kg	0.944	SL-3		< 0.00209 U	--	--	--	--	--	--
trans-1,2-Dichloroethene	156-60-5	mg/kg	5.17	SL-3		< 0.00104 U	--	--	--	--	--	--
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00627	SL-3		< 0.00104 U	--	--	--	--	--	--
Trichloroethene (TCE)	79-01-6	mg/kg	0.0044	SL-3		< 0.00104 U	--	--	--	--	--	--
Trichlorofluoromethane	75-69-4	mg/kg	24000	SL-1		< 0.00209 U	--	--	--	--	--	--
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1		< 0.00522 U	--	--	--	--	--	--
Vinyl Chloride	75-01-4	mg/kg	0.00106	SL-3		< 0.00104 U	--	--	--	--	--	--
Conventionals												
Total Organic Carbon	TOC	%				--	0.205	0.349	0.526	0.56	0.496	0.276
Total Solids	TS	%				--	--	--	--	--	--	--

Vadose zone is considered from ground surface to 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

TEQ = Toxic Equivalency

"-" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

- SL-1 Direct Contact Unrestricted
- SL-3 Protect Surface Water via Ground Water Vadose Zone
- SL-8 Protect Sediment via Erosion
- SL-9 Site-Specific TEE Unrestricted
- SL-10 Natural Background

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293 , South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-07	SS-08	SS-09	SS-10	SS-11	SS-12
					Date Sample	02/09/2016	02/09/2016	02/10/2016	02/10/2016	02/10/2016	02/09/2016
					Depth	SPM-SS-07-02092016	SPM-SS-08-02092016	SPM-SS-09-02102016	SPM-SS-10-02102016	SPM-SS-11-02102016	SPM-SS-12-02092016
						0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft
m,p-Xylenes	179601-23-1	mg/kg	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1	--	--	--	--	--	--	--
Methylene Chloride	75-09-2	mg/kg	0.435	SL-3	--	--	--	--	--	--	--
Methyliodide	74-88-4	mg/kg	--	--	--	--	--	--	--	--	--
n-Butylbenzene	104-51-8	mg/kg	4000	SL-1	--	--	--	--	--	--	--
n-Propylbenzene	103-65-1	mg/kg	8000	SL-1	--	--	--	--	--	--	--
o-Xylene	95-47-6	mg/kg	--	--	--	--	--	--	--	--	--
p-Isopropyltoluene	99-87-6	mg/kg	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	135-98-8	mg/kg	8000	SL-1	--	--	--	--	--	--	--
Styrene	100-42-5	mg/kg	300	SL-9	--	--	--	--	--	--	--
tert-Butylbenzene	98-06-6	mg/kg	8000	SL-1	--	--	--	--	--	--	--
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0289	SL-3	--	--	--	--	--	--	--
Toluene	108-88-3	mg/kg	0.72	SL-3	--	--	--	--	--	--	--
Total Xylenes	1330-20-7	mg/kg	0.944	SL-3	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	156-60-5	mg/kg	5.17	SL-3	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00627	SL-3	--	--	--	--	--	--	--
Trichloroethene (TCE)	79-01-6	mg/kg	0.0044	SL-3	--	--	--	--	--	--	--
Trichlorofluoromethane	75-69-4	mg/kg	24000	SL-1	--	--	--	--	--	--	--
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1	--	--	--	--	--	--	--
Vinyl Chloride	75-01-4	mg/kg	0.00106	SL-3	--	--	--	--	--	--	--
Conventionals											
Total Organic Carbon	TOC	%				0.218	0.37	0.366	0.0643	0.337	1.06
Total Solids	TS	%				--	--	--	--	--	--

Vadose zone is considered from ground surface to 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

TEQ = Toxic Equivalency

"--" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

- SL-1 Direct Contact Unrestricted
- SL-3 Protect Surface Water via Ground Water Vadose Zone
- SL-8 Protect Sediment via Erosion
- SL-9 Site-Specific TEE Unrestricted
- SL-10 Natural Background

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293 , South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-13	SS-14	SS-15	SS-16	SS-17	SS-18
					Date Sample	02/10/2016	02/10/2016	02/09/2016	02/09/2016	02/10/2016	02/10/2016
					Depth	SPM-SS-13-02102016	SPM-SS-14-02102016	SPM-SS-15-02102016	SPM-SS-16-02092016	SPM-SS-17-02102016	SPM-SS-18-02102016
						0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft
m,p-Xylenes	179601-23-1	mg/kg	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1	--	--	--	--	--	--	--
Methylene Chloride	75-09-2	mg/kg	0.435	SL-3	--	--	--	--	--	--	--
Methyliodide	74-88-4	mg/kg	--	--	--	--	--	--	--	--	--
n-Butylbenzene	104-51-8	mg/kg	4000	SL-1	--	--	--	--	--	--	--
n-Propylbenzene	103-65-1	mg/kg	8000	SL-1	--	--	--	--	--	--	--
o-Xylene	95-47-6	mg/kg	--	--	--	--	--	--	--	--	--
p-Isopropyltoluene	99-87-6	mg/kg	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	135-98-8	mg/kg	8000	SL-1	--	--	--	--	--	--	--
Styrene	100-42-5	mg/kg	300	SL-9	--	--	--	--	--	--	--
tert-Butylbenzene	98-06-6	mg/kg	8000	SL-1	--	--	--	--	--	--	--
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0289	SL-3	--	--	--	--	--	--	--
Toluene	108-88-3	mg/kg	0.72	SL-3	--	--	--	--	--	--	--
Total Xylenes	1330-20-7	mg/kg	0.944	SL-3	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	156-60-5	mg/kg	5.17	SL-3	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00627	SL-3	--	--	--	--	--	--	--
Trichloroethene (TCE)	79-01-6	mg/kg	0.0044	SL-3	--	--	--	--	--	--	--
Trichlorofluoromethane	75-69-4	mg/kg	24000	SL-1	--	--	--	--	--	--	--
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1	--	--	--	--	--	--	--
Vinyl Chloride	75-01-4	mg/kg	0.00106	SL-3	--	--	--	--	--	--	--
Conventionals											
Total Organic Carbon	TOC	%				0.217	0.107	0.701	0.514	0.0516	1.45
Total Solids	TS	%				--	--	--	--	--	--

Vadose zone is considered from ground surface to 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

TEQ = Toxic Equivalency

"--" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

SL-1	Direct Contact Unrestricted
SL-3	Protect Surface Water via Ground Water Vadose Zone
SL-8	Protect Sediment via Erosion
SL-9	Site-Specific TEE Unrestricted
SL-10	Natural Background

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293 , South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-19	SS-20	SS-21	SS-22	SS-23	SS-24
					Date Sample Depth	02/10/2016 0 - 1.6 ft	02/10/2016 0 - 1.6 ft	02/08/2016 0 - 1.6 ft	02/08/2016 0 - 1.6 ft	02/08/2016 0 - 1.6 ft	02/10/2016 0 - 1.6 ft
m,p-Xylenes	179601-23-1	mg/kg				--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1		--	--	--	--	--	--
Methylene Chloride	75-09-2	mg/kg	0.435	SL-3		--	--	--	--	--	--
Methyliodide	74-88-4	mg/kg				--	--	--	--	--	--
n-Butylbenzene	104-51-8	mg/kg	4000	SL-1		--	--	--	--	--	--
n-Propylbenzene	103-65-1	mg/kg	8000	SL-1		--	--	--	--	--	--
o-Xylene	95-47-6	mg/kg				--	--	--	--	--	--
p-Isopropyltoluene	99-87-6	mg/kg				--	--	--	--	--	--
sec-Butylbenzene	135-98-8	mg/kg	8000	SL-1		--	--	--	--	--	--
Styrene	100-42-5	mg/kg	300	SL-9		--	--	--	--	--	--
tert-Butylbenzene	98-06-6	mg/kg	8000	SL-1		--	--	--	--	--	--
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0289	SL-3		--	--	--	--	--	--
Toluene	108-88-3	mg/kg	0.72	SL-3		--	--	--	--	--	--
Total Xylenes	1330-20-7	mg/kg	0.944	SL-3		--	--	--	--	--	--
trans-1,2-Dichloroethene	156-60-5	mg/kg	5.17	SL-3		--	--	--	--	--	--
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00627	SL-3		--	--	--	--	--	--
Trichloroethene (TCE)	79-01-6	mg/kg	0.0044	SL-3		--	--	--	--	--	--
Trichlorofluoromethane	75-69-4	mg/kg	24000	SL-1		--	--	--	--	--	--
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1		--	--	--	--	--	--
Vinyl Chloride	75-01-4	mg/kg	0.00106	SL-3		--	--	--	--	--	--
Conventionals											
Total Organic Carbon	TOC	%				0.246	0.128	1.14	0.507	0.46	0.446
Total Solids	TS	%				--	--	--	--	--	--

Vadose zone is considered from ground surface to 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

TEQ = Toxic Equivalency

"-" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

SL-1	Direct Contact Unrestricted
SL-3	Protect Surface Water via Ground Water Vadose Zone
SL-8	Protect Sediment via Erosion
SL-9	Site-Specific TEE Unrestricted
SL-10	Natural Background

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293 , South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-25	SS-26	SS-27	SS-28	SS-29	SS-30	SS-31
					Date Sample	02/08/2016	02/08/2016	02/08/2016	02/11/2016	02/11/2016	02/11/2016	11/17/2017
Depth					SPM-SS-25-02082016	SPM-SS-26-02082016	SPM-SS-27-02082016	SPM-SS-28-02112016	SPM-SS-29-02112016	SPM-SS-30-02112016	SPM-SS-31-0-1.5	
					0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.6 ft	0 - 1.5 ft
m,p-Xylenes	179601-23-1	mg/kg	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1	--	--	--	--	--	--	--	--
Methylene Chloride	75-09-2	mg/kg	0.435	SL-3	--	--	--	--	--	--	--	--
Methyliodide	74-88-4	mg/kg	--	--	--	--	--	--	--	--	--	--
n-Butylbenzene	104-51-8	mg/kg	4000	SL-1	--	--	--	--	--	--	--	--
n-Propylbenzene	103-65-1	mg/kg	8000	SL-1	--	--	--	--	--	--	--	--
o-Xylene	95-47-6	mg/kg	--	--	--	--	--	--	--	--	--	--
p-Isopropyltoluene	99-87-6	mg/kg	--	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	135-98-8	mg/kg	8000	SL-1	--	--	--	--	--	--	--	--
Styrene	100-42-5	mg/kg	300	SL-9	--	--	--	--	--	--	--	--
tert-Butylbenzene	98-06-6	mg/kg	8000	SL-1	--	--	--	--	--	--	--	--
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0289	SL-3	--	--	--	--	--	--	--	--
Toluene	108-88-3	mg/kg	0.72	SL-3	--	--	--	--	--	--	--	--
Total Xylenes	1330-20-7	mg/kg	0.944	SL-3	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	156-60-5	mg/kg	5.17	SL-3	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00627	SL-3	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	79-01-6	mg/kg	0.0044	SL-3	--	--	--	--	--	--	--	--
Trichlorofluoromethane	75-69-4	mg/kg	24000	SL-1	--	--	--	--	--	--	--	--
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1	--	--	--	--	--	--	--	--
Vinyl Chloride	75-01-4	mg/kg	0.00106	SL-3	--	--	--	--	--	--	--	--
Conventionals												
Total Organic Carbon	TOC	%			0.573	0.13	0.252	0.618	1.18	0.927	--	--
Total Solids	TS	%			--	--	--	--	--	--	--	--

Vadose zone is considered from ground surface to 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

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ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

- SL-1 Direct Contact Unrestricted
- SL-3 Protect Surface Water via Ground Water Vadose Zone
- SL-8 Protect Sediment via Erosion
- SL-9 Site-Specific TEE Unrestricted
- SL-10 Natural Background

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293 , South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	SS-32	SS-33	SS-34	SS-35	SS-36	SS-37	SS-38	SS-39	T117 A10	T117 A11
					Date	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	11/17/2017	01/17/2006	01/24/2006
Sample	SS-32-0-1.5	SS-33-0-1.5	SS-34-0-1.5	SS-35-0-1.5	SS-36-0-1.5	SS-37-0-1.5	SS-38-0-1	SS-39-0-1.25	T117-A10-SB-01	T117-A11-SB-0-0-0.5					
Depth	0 - 1.5 ft	0 - 1.5 ft	0 - 1.5 ft	0 - 1.5 ft	0 - 1.5 ft	0 - 1.5 ft	0 - 1 ft	0 - 1.25 ft	0 - 1.5 ft	0 - 0.5 ft					
m,p-Xylenes	179601-23-1	mg/kg			--	--	--	--	--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride	75-09-2	mg/kg	0.435	SL-3	--	--	--	--	--	--	--	--	--	--	--
Methyliodide	74-88-4	mg/kg			--	--	--	--	--	--	--	--	--	--	--
n-Butylbenzene	104-51-8	mg/kg	4000	SL-1	--	--	--	--	--	--	--	--	--	--	--
n-Propylbenzene	103-65-1	mg/kg	8000	SL-1	--	--	--	--	--	--	--	--	--	--	--
o-Xylene	95-47-6	mg/kg			--	--	--	--	--	--	--	--	--	--	--
p-Isopropyltoluene	99-87-6	mg/kg			--	--	--	--	--	--	--	--	--	--	--
sec-Butylbenzene	135-98-8	mg/kg	8000	SL-1	--	--	--	--	--	--	--	--	--	--	--
Styrene	100-42-5	mg/kg	300	SL-9	--	--	--	--	--	--	--	--	--	--	--
tert-Butylbenzene	98-06-6	mg/kg	8000	SL-1	--	--	--	--	--	--	--	--	--	--	--
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0289	SL-3	--	--	--	--	--	--	--	--	--	--	--
Toluene	106-98-3	mg/kg	0.72	SL-3	--	--	--	--	--	--	--	--	--	--	--
Total Xylenes	1330-20-7	mg/kg	0.944	SL-3	--	--	--	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	156-60-5	mg/kg	5.17	SL-3	--	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00627	SL-3	--	--	--	--	--	--	--	--	--	--	--
Trichloroethene (TCE)	79-01-6	mg/kg	0.0044	SL-3	--	--	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	75-69-4	mg/kg	24000	SL-1	--	--	--	--	--	--	--	--	--	--	--
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1	--	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	75-01-4	mg/kg	0.00106	SL-3	--	--	--	--	--	--	--	--	--	--	--
Conventionals															
Total Organic Carbon	TOC	%			--	--	--	--	--	--	--	--	--	0.945	0.721
Total Solids	TS	%			--	--	--	--	--	--	--	--	--	85.5	89.2

Vadose zone is considered from ground surface to 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

TEQ = Toxic Equivalency

"-" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

- SL-1 Direct Contact Unrestricted
- SL-3 Protect Surface Water via Ground Water Vadose Zone
- SL-8 Protect Sediment via Erosion
- SL-9 Site-Specific TEE Unrestricted
- SL-10 Natural Background

Table B.1. Soil Chemical Analytical Results - Vadose Zone

Project No. 190293 , South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI_VADOSE-SOILS_SLS 2022.02	Screening Level Source	Location	T117 A12
					Date	T117 A12
					01/24/2006	01/24/2006
					T117-A12-SB-0.0-0.5	T117-A12-SB-0.5-1.5
					0 - 0.5 ft	0.5 - 1.5 ft
m,p-Xylenes	179601-23-1	mg/kg			--	--
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1	--	--
Methylene Chloride	75-09-2	mg/kg	0.435	SL-3	--	--
Methyliodide	74-88-4	mg/kg			--	--
n-Butylbenzene	104-51-8	mg/kg	4000	SL-1	--	--
n-Propylbenzene	103-65-1	mg/kg	8000	SL-1	--	--
o-Xylene	95-47-6	mg/kg			--	--
p-Isopropyltoluene	99-87-6	mg/kg			--	--
sec-Butylbenzene	135-98-8	mg/kg	8000	SL-1	--	--
Styrene	100-42-5	mg/kg	300	SL-9	--	--
tert-Butylbenzene	98-06-6	mg/kg	8000	SL-1	--	--
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0289	SL-3	--	--
Toluene	106-98-3	mg/kg	0.72	SL-3	--	--
Total Xylenes	1330-20-7	mg/kg	0.944	SL-3	--	--
trans-1,2-Dichloroethene	156-60-5	mg/kg	5.17	SL-3	--	--
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.00627	SL-3	--	--
Trichloroethene (TCE)	79-01-6	mg/kg	0.0044	SL-3	--	--
Trichlorofluoromethane	75-69-4	mg/kg	24000	SL-1	--	--
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1	--	--
Vinyl Chloride	75-01-4	mg/kg	0.00106	SL-3	--	--
Conventionals						
Total Organic Carbon	TOC	%			1.25	--
Total Solids	TS	%			84.8	87.28

Vadose zone is considered from ground surface to 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

TEQ = Toxic Equivalency

"-" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

SL-1	Direct Contact Unrestricted
SL-3	Protect Surface Water via Ground Water Vadose Zone
SL-8	Protect Sediment via Erosion
SL-9	Site-Specific TEE Unrestricted
SL-10	Natural Background

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM, RI, SATURAT ED-SOIL_SLS 2022.02	Screening Level Source	Location Date Sample Depth		B-01	B-02	B-03	B-04	MW-04	MW-04	MW-04
					11/17/2017 B-01-8.5-9.5 8.5 - 9.5 ft	11/17/2017 B-02-6.5-7 6.5 - 7 ft	11/17/2017 B-03-6.5-7 6.5 - 7 ft	11/17/2017 B-04-6.5-7 6.5 - 7 ft	03/04/2021 MW-4-7-8 7 - 8 ft	03/04/2021 MW-4-10.5-11.5 10.5 - 11.5 ft	03/04/2021 MW-4-13.5-14.5 13.5 - 14.5 ft		
Metals													
Arsenic	7440-38-2	mg/kg	7.3	SL-10	--	--	--	--	--	1.88	29.3	2.92	
Barium	7440-39-3	mg/kg	8.26	SL-6	--	--	--	--	--	--	--	--	--
Cadmium	7440-43-9	mg/kg	0.77	SL-10	--	--	--	--	--	0.08 J	0.07 J	0.7	
Chromium	7440-47-3	mg/kg	48.2	SL-10	--	--	--	--	--	21.6	9.92	35.5	
Copper	7440-50-8	mg/kg	36.4	SL-10	--	--	--	--	--	9.18	20.7	37.9	
Lead	7439-92-1	mg/kg	50	SL-9	--	--	--	--	--	9.7 J	3.18 J	166 J	
Mercury	7439-97-6	mg/kg	0.07	SL-10	--	--	--	--	--	0.0141 J	0.0234 J	0.422	
Nickel	7440-02-0	mg/kg	48	SL-10	--	--	--	--	--	9.59	8.51	12.3	
Selenium	7782-49-2	mg/kg	0.3	SL-9	--	--	--	--	--	--	--	--	--
Silver	7440-22-4	mg/kg	0.0163	SL-6	--	--	--	--	--	--	--	--	--
Zinc	7440-66-6	mg/kg	85.1	SL-10	--	--	--	--	--	30.4	25.5	94.8	
Butyl Tin Ions													
Dibutyltin Ion	14488-53-0	mg/kg			--	--	--	--	--	--	--	--	--
Monobutyltin	78763-54-9	mg/kg			--	--	--	--	--	--	--	--	--
Tetrabutyltin	1461-25-2	mg/kg			--	--	--	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	mg/kg	0.000111	SL-7	--	--	--	--	--	--	--	--	--
Polychlorinated Biphenyl Aroclors													
Aroclor 1016	12674-11-2	mg/kg			< 0.064 U	< 6.3 U	< 1.3 U	< 1.2 U	< 0.231 U	< 0.004 U	< 0.255 U		
Aroclor 1221	11104-28-2	mg/kg			< 0.064 U	< 6.3 U	< 1.3 U	< 1.2 U	< 0.231 U	< 0.004 U	< 0.255 U		
Aroclor 1232	11141-16-5	mg/kg			< 0.064 U	< 6.3 U	< 1.3 U	< 1.2 U	< 0.231 U	< 0.004 U	< 0.255 U		
Aroclor 1242	53469-21-9	mg/kg			< 0.064 U	15	3.6	2.3	< 0.231 U	< 0.004 U	< 0.255 U		
Aroclor 1248	12672-29-6	mg/kg			< 0.064 U	< 6.3 U	< 1.3 U	< 1.2 U	9.52	0.0512	< 0.255 U		
Aroclor 1254	11097-69-1	mg/kg			< 0.064 U	93 J	7	6	10.4	0.0787	3.91		
Aroclor 1260	11096-82-5	mg/kg			< 0.064 U	23	3	2.4	6.45	0.0409	1.87		
Aroclor 1262	37324-23-5	mg/kg			--	--	--	--	< 0.231 U	< 0.004 U	< 0.255 U		
Aroclor 1268	11100-14-4	mg/kg			--	--	--	--	< 0.231 U	< 0.004 U	< 0.255 U		
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	5.49E-07	SL-6	< 0.064 U	144 J	16.2	13.1	27.1	0.183	6.67		
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	5.49E-07	SL-6	< 0.064 U	131	13.6	10.7	26.4	0.171	5.78		
Polychlorinated Biphenyl Congeners													
Total PCB Congeners	T-PCBCong	mg/kg	5.49E-07	SL-6	--	99.1	--	--	22.1	--	--		
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	3.47E-10	SL-6	--	0.00270 J	--	--	0.000499	--	--		
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	3.47E-10	SL-6	--	0.00270 J	--	--	0.000514	--	--		
Dioxins/Furans													
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	--	--	0.000704 J	--	--		
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	--	--	0.000299 J	--	--		
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10	--	--	--	--	0.00100 J	--	--		
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10	--	--	--	--	0.00100 J	--	--		
Polycyclic Aromatic Hydrocarbons													
1-Methylnaphthalene	90-12-0	mg/kg	2.26	SL-7	--	--	--	--	0.0836 J	0.00784	0.0122		
2-Methylnaphthalene	91-57-6	mg/kg	0.0388	SL-7	--	--	--	--	0.102 J	0.0151	0.0216		
Acenaphthene	83-32-9	mg/kg	0.0277	SL-7	--	--	--	--	0.411	0.0101	0.0876		
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8	--	--	--	--	0.0583	0.00259 J	0.0374		
Anthracene	120-12-7	mg/kg	0.0511	SL-7	--	--	--	--	0.904	0.00982	0.284		
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.67	SL-8	--	--	--	--	0.0756	0.0361	0.0259		
Fluoranthene	206-44-0	mg/kg	0.0899	SL-7	--	--	--	--	0.681	0.0443	0.185		
Fluorene	86-73-7	mg/kg	0.0294	SL-7	--	--	--	--	0.696	0.0132	0.2		
Naphthalene	91-20-3	mg/kg	0.00207	SL-6	--	--	--	--	< 0.0497 U	0.00484 J	< 0.00667 U		
Phenanthrene	85-01-8	mg/kg	1.5	SL-8	--	--	--	--	< 0.0497 U	0.0283	0.0233		
Pyrene	129-00-0	mg/kg	0.137	SL-7	--	--	--	--	0.517	0.0457	0.17		
Benzo(a)anthracene	56-55-3	mg/kg			--	--	--	--	0.179	0.0156	0.054		
Benzo(a)pyrene	50-32-8	mg/kg	1.55E-05	SL-6	--	--	--	--	0.108	0.0171	0.0343		
Benzo(b)fluoranthene	205-99-2	mg/kg			--	--	--	--	0.106	0.0163	0.0297		
Benzo(j)fluoranthene	205-82-3	mg/kg			--	--	--	--	0.0569	0.0106	0.0156		
Benzo(k)fluoranthene	Benz-jk-fluor	mg/kg			--	--	--	--	--	--	--		
Benzo(k)fluoranthene	207-08-9	mg/kg			--	--	--	--	0.0545	0.00937	0.017		
Chrysene	218-01-9	mg/kg			--	--	--	--	0.282	0.0233	0.0873		
Dibenzo(a,h)anthracene	53-70-3	mg/kg			--	--	--	--	0.0195 J	0.00336 J	0.00704		
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg			--	--	--	--	0.0595	0.0161	0.0175		
Total Benzo(a)fluoranthenes	TOTBFA	mg/kg	3.2	SL-8	--	--	--	--	0.208	0.0363	0.0655		
Total HPAHs	T-HPAHs	mg/kg	12	SL-8	--	--	--	--	2.13 J	0.238 J	0.647		
Total LPAHs	T-LPAHs	mg/kg	5.2	SL-8	--	--	--	--	2.07	0.0689 J	0.632		
Total PAHs (ND=0)	T-PAHs	mg/kg			--	--	--	--	4.20 J	0.307 J	1.28		
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	mg/kg	1.55E-05	SL-6	--	--	--	--	0.163 J	0.0249 J	0.0493		
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg	1.55E-05	SL-6	--	--	--	--	0.163 J	0.0249 J	0.0493		

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM, RI, SATURAT ED-SOIL_SLS 2022.02	Screening Level Source	Location	MW-04	MW-05	MW-05	MW-05	MW-05	MW-05	MW-06
					Date	03/04/2021	03/05/2021	03/05/2021	03/05/2021	03/05/2021	03/05/2021	03/05/2021
					Sample	MW-4-18-20	MW-5-6-7	MW-5-8-9-5	MW-5-15-16	MW-5-20-22.5	MW-5-26.5-28	MW-6
					Depth	18 - 20 ft	6 - 7 ft	8 - 9.5 ft	15 - 16 ft	20 - 22.5 ft	26.5 - 28 ft	MW-6-9 9 ft
Metals												
Arsenic	7440-38-2	mg/kg	7.3	SL-10		1.7	1.4	1.12 J	1.75	1.43	5.29	1.33
Barium	7440-39-3	mg/kg	8.26	SL-6		--	--	--	--	--	--	--
Cadmium	7440-43-9	mg/kg	0.77	SL-10		0.05 J	3.74	0.26	0.17	0.08 J	0.13	< 0.13 U
Chromium	7440-47-3	mg/kg	48.2	SL-10		8.78	77.3	20.6 J	12.6	11.6	50	10.7
Copper	7440-50-8	mg/kg	36.4	SL-10		10.4	35	14.2	12.4	10.5	31	8.8
Lead	7439-92-1	mg/kg	50	SL-9		1.34	586 J	64.5 J	39.3	10	7.64	1.67
Mercury	7439-97-6	mg/kg	0.07	SL-10		--	0.211	0.045	0.0566	--	0.0432	--
Nickel	7440-02-0	mg/kg	48	SL-10		7.66	8.5	8.52	7.49	8.37	58.4	6.06
Selenium	7782-49-2	mg/kg	0.3	SL-9		--	--	--	--	--	--	--
Silver	7440-22-4	mg/kg	0.0163	SL-6		--	--	--	--	--	--	--
Zinc	7440-66-6	mg/kg	85.1	SL-10		26.1	418	110 J	44.3	26.2	70.2	34.5
Butyl Tin Ions												
Dibutyltin Ion	14488-53-0	mg/kg	--			--	< 0.0572 U	< 0.0577 U	0.00308 J	--	0.0239	--
Monobutyltin	78763-54-9	mg/kg	--			--	< 0.0404 U	< 0.0408 U	0.00188 J	--	0.0144	--
Tetrabutyltin	1461-25-2	mg/kg	--			--	< 0.0495 U	< 0.0499 U	< 0.00496 U	--	< 0.00496 U	--
Tributyltin Ion	36643-28-4	mg/kg	0.000111	SL-7		--	< 0.0382 U	0.00749 J	0.00281 J	--	0.026	--
Polychlorinated Biphenyl Aroclors												
Aroclor 1016	12674-11-2	mg/kg				< 0.004 U	< 1.44 U	< 0.311 U	< 0.1 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1221	11104-28-2	mg/kg				< 0.004 U	< 1.44 U	< 0.311 U	< 0.1 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1232	11141-16-5	mg/kg				< 0.004 U	< 1.44 U	< 0.311 U	< 0.1 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1242	53469-21-9	mg/kg				< 0.004 U	< 1.44 U	< 0.311 U	< 0.1 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1248	12672-29-6	mg/kg				< 0.004 U	< 1.44 U	2.62 J	< 0.1 U	0.0424	< 0.004 U	0.0088 J
Aroclor 1254	11097-89-1	mg/kg				0.0043	18.9	3.87 J	0.72	0.14	0.0076	0.0318
Aroclor 1260	11096-82-5	mg/kg				0.0017 J	7	1.28	0.234	0.0504	0.0034 J	0.0145
Aroclor 1262	37324-23-5	mg/kg				< 0.004 U	< 1.44 U	< 0.311 U	< 0.1 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1268	11100-14-4	mg/kg				< 0.004 U	< 1.44 U	< 0.311 U	< 0.1 U	< 0.004 U	< 0.004 U	< 0.004 U
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	5.49E-07	SL-6		0.0200 J	30.9	8.70	1.30	0.245	0.0250 J	0.0671 J
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	5.49E-07	SL-6		0.00600 J	25.9	7.77	0.954	0.233	0.0110 J	0.0551 J
Polychlorinated Biphenyl Congeners												
Total PCB Congeners	T-PCBCong	mg/kg	5.49E-07	SL-6		--	36.9	--	--	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	3.47E-10	SL-6		--	0.00103	--	--	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	3.47E-10	SL-6		--	0.00104	--	--	--	--	--
Dioxins/Furans												
Total CDD TEQ (ND = 1/2 RDL)	CDD-TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF-TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons												
1-Methylnaphthalene	90-12-0	mg/kg	2.26	SL-7		0.00107 J	1.05	0.383 J	0.0517	0.00471 J	< 0.00499 U	0.00315 J
2-Methylnaphthalene	91-57-6	mg/kg	0.0388	SL-7		0.00142 J	0.342	0.511 J	0.0554	0.00556	< 0.00499 U	0.00608
Acenaphthene	83-32-9	mg/kg	0.0277	SL-7		< 0.00498 U	0.298	0.0768	0.0108	0.00175 J	0.0011 J	< 0.00499 U
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8		< 0.00498 U	0.0672	0.0256 J	0.00404 J	< 0.00498 U	< 0.00499 U	< 0.00499 U
Anthracene	120-12-7	mg/kg	0.0511	SL-7		< 0.00498 U	0.797	0.14	0.0369	0.00467 J	0.00092 J	0.00177 J
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.67	SL-8		< 0.00498 U	0.0811	0.0221 J	0.00627	0.00152 J	0.00152 J	0.00317 J
Fluoranthene	206-44-0	mg/kg	0.0899	SL-7		< 0.00498 U	0.62	0.118	0.0307	0.00489 J	0.00233 J	0.00597
Fluorene	86-73-7	mg/kg	0.0294	SL-7		< 0.00498 U	0.573	0.118	0.0316	0.0045 J	0.00181 J	< 0.00499 U
Naphthalene	91-20-3	mg/kg	0.00207	SL-6		< 0.00498 U	< 0.00596 U	< 0.00504 U	0.00353 J	0.00167 J	< 0.00499 U	0.0031 J
Phenanthrene	85-01-8	mg/kg	1.5	SL-8		0.0019 J	0.94	0.287 J	0.0625	0.0101	0.00422 J	0.00836
Pyrene	129-00-0	mg/kg	0.137	SL-7		< 0.00498 U	0.587	0.121	0.0276	0.00564	0.00298 J	0.00606
Benzo(a)anthracene	56-55-3	mg/kg				< 0.00498 U	0.184	0.0372 J	0.00845	0.00267 J	< 0.00499 U	0.00245 J
Benzo(a)pyrene	50-32-8	mg/kg	1.55E-05	SL-6		< 0.00498 U	0.133	0.0314 J	0.00629	0.00188 J	< 0.00499 U	0.00322 J
Benzo(b)fluoranthene	205-99-2	mg/kg				< 0.00498 U	0.118	0.0148 J	0.00704	0.00201 J	< 0.00499 U	0.00342 J
Benzo(j)fluoranthene	205-82-3	mg/kg				< 0.00498 U	0.0694	0.0169 J	0.00451 J	0.00123 J	< 0.00499 U	0.0021 J
Benzo(k)fluoranthene	Benz-jk-fluor	mg/kg				--	--	--	--	--	--	--
Benzo(l)fluoranthene	207-08-9	mg/kg				< 0.00498 U	0.0734	0.0107 J	0.00392 J	0.00135 J	< 0.00499 U	0.00164 J
Chrysene	218-01-9	mg/kg				< 0.00498 U	0.266	0.0736	0.0166	0.00355 J	0.00199 J	0.00464 J
Dibenz(o,a,h)anthracene	53-70-3	mg/kg				< 0.00498 U	0.0226 J	< 0.00499 U	0.00119 J	< 0.00498 U	< 0.00499 U	< 0.00499 U
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg				< 0.00498 U	0.0918	0.0244 J	0.00514	< 0.00498 U	< 0.00499 U	0.00199 J
Total Benzofluoranthenes	TOTBFA	mg/kg	3.2	SL-8		< 0.00997 U	0.257	0.0451 J	0.0152	0.00479 J	< 0.00997 U	0.0071 J
Total HPAHs	T-HPAHs	mg/kg	12	SL-8		< 0.00997 U	2.24	0.473 J	0.113 J	0.0235 J	0.00882 J	0.0346 J
Total LPAHs	T-LPAHs	mg/kg	5.2	SL-8		0.00190 J	2.68	0.647 J	0.149 J	0.0227 J	0.00805 J	0.0132 J
Total PAHs (ND=0)	T-PAHs	mg/kg				0.00190 J	4.92 J	1.12 J	0.263 J	0.0462 J	0.0169 J	0.0478 J
Total cPAHs TEQ (ND = 0)	T-cPAHs-0U	mg/kg	1.55E-05	SL-6		< 0.00498 U	0.192 J	0.0522 J	0.00903 J	0.00252 J	0.0000199 J	0.00443 J
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAHs-1/2U	mg/kg	1.55E-05	SL-6		< 0.0040089 U	0.192 J	0.0547 J	0.00903 J	0.00302 J	0.00401 J	0.00468 J

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI SATURAT ED-SOIL_SLS 2022.02	Screening Level Source	Location	MW-06	MW-07	MW-08	MW-08	MW-10	MW-11	MW-12
					Date	03/05/2021	03/09/2021	03/09/2021	03/09/2021	03/08/2021	03/08/2021	03/03/2021
					Sample	MW-6-18-20	MW-7-17-19	MW-8-8-9	MW-8-18-20	MW-10-5-5-6-5	MW-11-6-7	MW-12-9-5-10.5
					Depth	18 - 20 ft	17 - 19 ft	8 - 9 ft	18 - 20 ft	5.5 - 6.5 ft	6 - 9 ft	9.5 - 10.5 ft
Metals												
Arsenic	7440-38-2	mg/kg	7.3	SL-10		1.53	1.75	1.78 J	--	3.17	2.66	1.41
Barium	7440-39-3	mg/kg	8.26	SL-6		--	--	--	--	--	--	--
Cadmium	7440-43-9	mg/kg	0.77	SL-10		< 0.12 U	< 0.12 U	< 0.12 U	--	0.05 J	< 0.13 U	0.1 J
Chromium	7440-47-3	mg/kg	48.2	SL-10		8.37	10.8	6.99 J	--	10.3	10.9	9.88
Copper	7440-50-8	mg/kg	36.4	SL-10		11.4	10.7	8.7	--	15.6	18.3	12.9
Lead	7439-92-1	mg/kg	50	SL-9		1.36	1.6	1.15 J	--	2.08	2.77	2.03
Mercury	7439-97-6	mg/kg	0.07	SL-10		--	--	< 0.0256 U	--	0.0312	0.0157 J	--
Nickel	7440-02-0	mg/kg	48	SL-10		6.94	11.3	5.26 J	--	9.07	8.9	7.3
Selenium	7782-49-2	mg/kg	0.3	SL-9		--	--	--	--	--	--	--
Silver	7440-22-4	mg/kg	0.0163	SL-6		--	--	--	--	--	--	--
Zinc	7440-66-6	mg/kg	85.1	SL-10		21.7	28.7	19.4	--	24.1	24.1	40
Butyl Tin Ions												
Dibutyltin Ion	14488-53-0	mg/kg	--	--		--	--	< 0.00574 U	--	< 0.00578 U	< 0.00572 U	--
Monobutyltin	78763-54-9	mg/kg	--	--		--	--	< 0.00405 U	--	< 0.00408 U	< 0.00404 U	--
Tetrabutyltin	1461-25-2	mg/kg	--	--		--	--	< 0.00497 U	--	< 0.005 U	< 0.00495 U	--
Tributyltin Ion	36643-28-4	mg/kg	0.000111	SL-7		--	--	< 0.00383 U	--	< 0.00386 U	< 0.00382 U	--
Polychlorinated Biphenyl Aroclors												
Aroclor 1016	12674-11-2	mg/kg	--	--		< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1221	11104-28-2	mg/kg	--	--		< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1232	11141-16-5	mg/kg	--	--		< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1242	53469-21-9	mg/kg	--	--		< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1248	12672-29-6	mg/kg	--	--		< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1254	11097-69-1	mg/kg	--	--		< 0.004 U	< 0.004 U	0.006	< 0.004 U	< 0.004 U	< 0.004 U	0.0039 J
Aroclor 1260	11096-82-5	mg/kg	--	--		< 0.004 U	0.0009 J	0.0029 J	< 0.004 U	0.0008 J	0.0021 J	< 0.004 U
Aroclor 1262	37324-23-5	mg/kg	--	--		< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	0.0014 J
Aroclor 1268	11100-14-4	mg/kg	--	--		< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	5.49E-07	SL-6		< 0.004 U	0.0169 J	0.0229 J	< 0.004 U	0.0168 J	0.0181 J	0.0193 J
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	5.49E-07	SL-6		< 0.004 U	0.000900 J	0.00890 J	< 0.004 U	0.000800 J	0.00210 J	0.00530 J
Polychlorinated Biphenyl Congeners												
Total PCB Congeners	T-PCBCong	mg/kg	5.49E-07	SL-6		--	--	--	--	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	3.47E-10	SL-6		--	--	--	--	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	3.47E-10	SL-6		--	--	--	--	--	--	--
Dioxins/Furans												
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons												
1-Methylnaphthalene	90-12-0	mg/kg	2.26	SL-7		0.00116 J	--	< 0.00497 U	--	< 0.00498 U	< 0.00497 U	--
2-Methylnaphthalene	91-57-6	mg/kg	0.0388	SL-7		0.0018 J	--	< 0.00497 U	--	< 0.00498 U	< 0.00497 U	--
Acenaphthene	83-32-9	mg/kg	0.0277	SL-7		< 0.005 U	--	< 0.00497 U	--	< 0.00498 U	< 0.00497 U	--
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8		< 0.005 U	--	< 0.00497 U	--	< 0.00498 U	< 0.00497 U	--
Anthracene	120-12-7	mg/kg	0.0511	SL-7		< 0.005 U	--	0.00221 J	--	< 0.00498 U	< 0.00497 U	--
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.67	SL-8		< 0.005 U	--	< 0.00497 U	--	< 0.00498 U	0.00164 J	--
Fluoranthene	206-44-0	mg/kg	0.0899	SL-7		< 0.005 U	--	< 0.00497 U	--	< 0.00498 U	0.0006 J	--
Fluorene	86-73-7	mg/kg	0.0294	SL-7		< 0.005 U	--	< 0.00497 U	--	< 0.00498 U	< 0.00497 U	--
Naphthalene	91-20-3	mg/kg	0.00207	SL-6		< 0.005 U	--	0.00131 J	--	< 0.00498 U	< 0.00497 U	--
Phenanthrene	85-01-8	mg/kg	1.5	SL-8		0.0017 J	--	0.00218 J	--	0.00131 J	0.00117 J	--
Pyrene	129-00-0	mg/kg	0.137	SL-7		0.00075 J	--	< 0.00497 U	--	< 0.00498 U	0.00076 J	--
Benzo(a)anthracene	56-55-3	mg/kg	--	--		< 0.005 U	--	< 0.00497 U	--	< 0.00498 U	< 0.00497 U	--
Benzo(a)pyrene	50-32-8	mg/kg	1.55E-05	SL-6		< 0.005 U	--	< 0.00497 U	--	< 0.00498 U	< 0.00497 U	--
Benzo(b)fluoranthene	205-99-2	mg/kg	--	--		< 0.005 U	--	< 0.00497 U	--	< 0.00498 U	< 0.00497 U	--
Benzo(i)fluoranthene	205-82-3	mg/kg	--	--		< 0.005 U	--	< 0.00497 U	--	< 0.00498 U	< 0.00497 U	--
Benzo(j,k)fluoranthene	Benz-jk-fluor	mg/kg	--	--		--	--	--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	mg/kg	--	--		< 0.005 U	--	< 0.00497 U	--	< 0.00498 U	< 0.00497 U	--
Chrysene	218-01-9	mg/kg	--	--		< 0.005 U	--	< 0.00497 U	--	< 0.00498 U	0.00118 J	--
Dibenzo(a,h)anthracene	53-70-3	mg/kg	--	--		< 0.005 U	--	< 0.00497 U	--	< 0.00498 U	< 0.00497 U	--
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	--	--		< 0.005 U	--	< 0.00497 U	--	< 0.00498 U	< 0.00497 U	--
Total Benzofluoranthenes	TOTBFA	mg/kg	3.2	SL-8		< 0.00999 U	--	< 0.00993 U	--	< 0.00996 U	< 0.00995 U	--
Total HPAHs	T-HPAHs	mg/kg	12	SL-8		0.000750 J	--	< 0.00497 U	--	< 0.00498 U	0.00418 J	--
Total LPAHs	T-LPAHs	mg/kg	5.2	SL-8		0.00170 J	--	0.00570 J	--	0.00131 J	0.00117 J	--
Total PAHs (ND=0)	T-PAHs	mg/kg	0.00245 J	--		0.00245 J	--	0.00570 J	--	0.00131 J	0.00535 J	--
Total cPAHs TEQ (ND = 0)	T-cPAHs-0U	mg/kg	1.55E-05	SL-6		< 0.005 U	--	< 0 U	--	< 0 U	0.0000118 J	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAHs-1/2U	mg/kg	1.55E-05	SL-6		< 0.004025 U	--	< 0.00375235 U	--	< 0.0037599 U	0.00374 J	--

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI SATURAT ED-SOIL_SLS 2022.02	Screening Level Source	Location	MW-13	MW-13	SB-01	SB-02	SB-03	SB-03	SB-04
					Date	03/01/2021	03/01/2021	09/27/2007	09/28/2007	09/27/2007	09/27/2007	09/27/2007
					Sample	MW-13-9.5-10.5	MW-13-18-19.5	SB-01-9	SB-02-9	SB-03-7	SB-03-13.5	SB-04-8
					Depth	9.5 - 10.5 ft	18 - 19.5 ft	9 - 11 ft	9 - 11 ft	7 - 9 ft	14 - 16 ft	8 - 10 ft
Metals												
Arsenic	7440-38-2	mg/kg	7.3	SL-10		1.78 J	--	1.5	2.2	1	1.7	4.2
Barium	7440-39-3	mg/kg	8.26	SL-6		--	--	--	--	--	--	--
Cadmium	7440-43-9	mg/kg	0.77	SL-10		< 0.12 U	--	0.037	0.063	0.281	0.029	0.097
Chromium	7440-47-3	mg/kg	48.2	SL-10		8.61	--	7.98	9.47	23.1	8.4	11.8
Copper	7440-50-8	mg/kg	36.4	SL-10		11.2 J	--	9.74	56	10.8	7.58	19.9
Lead	7439-92-1	mg/kg	50	SL-9		1.39 J	--	1.29 J	13.7 J	31.8 J	2.23 J	3.32 J
Mercury	7439-97-6	mg/kg	0.07	SL-10		0.016 J	--	0.007	0.009	0.015	0.01	0.048
Nickel	7440-02-0	mg/kg	48	SL-10		6.38	--	--	--	--	--	--
Selenium	7782-49-2	mg/kg	0.3	SL-9		--	--	--	--	--	--	--
Silver	7440-22-4	mg/kg	0.0163	SL-6		--	--	0.06	0.066	0.07	0.055	0.108
Zinc	7440-66-6	mg/kg	85.1	SL-10		17.9	--	19.1	29.3	33	15	26.3
Butyl Tin Ions												
Dibutyltin Ion	14488-53-0	mg/kg	--			--	--	--	--	--	--	--
Monobutyltin	78763-54-9	mg/kg	--			--	--	--	--	--	--	--
Tetrabutyltin	1461-25-2	mg/kg	--			--	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	mg/kg	0.000111	SL-7		--	--	--	--	--	--	--
Polychlorinated Biphenyl Aroclors												
Aroclor 1016	12674-11-2	mg/kg	--			< 0.004 U	--	< 0.0099 U	< 0.01 U	< 0.0099 U	< 0.0099 U	< 0.01 U
Aroclor 1221	11104-28-2	mg/kg	--			< 0.004 U	--	--	--	--	--	--
Aroclor 1232	11141-16-5	mg/kg	--			< 0.004 U	--	--	--	--	--	--
Aroclor 1242	53469-21-9	mg/kg	--			< 0.004 U	--	--	--	--	--	--
Aroclor 1248	12672-29-6	mg/kg	--			< 0.004 U	--	< 0.0099 U	< 0.01 U	< 0.0099 U	< 0.0099 U	< 0.01 U
Aroclor 1254	11097-69-1	mg/kg	--			< 0.004 U	--	< 0.0099 U	< 0.01 U	0.092	0.039	< 0.01 U
Aroclor 1260	11096-82-5	mg/kg	--			< 0.004 U	--	< 0.0099 U	0.021	0.088	< 0.0099 U	< 0.01 U
Aroclor 1262	37324-23-5	mg/kg	--			< 0.004 U	--	--	--	--	--	--
Aroclor 1268	11100-14-4	mg/kg	--			< 0.004 U	--	--	--	--	--	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	5.49E-07	SL-6		< 0.004 U	--	--	0.0360 J	0.190 J	0.0539 J	< 0.01 UJ
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	5.49E-07	SL-6		< 0.004 U	--	< 0.0099 U	0.021	0.18	0.039	< 0.01 U
Polychlorinated Biphenyl Congeners												
Total PCB Congeners	T-PCBCong	mg/kg	5.49E-07	SL-6		--	--	--	--	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	3.47E-10	SL-6		--	--	--	--	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	3.47E-10	SL-6		--	--	--	--	--	--	--
Dioxins/Furans												
Total CDD TEQ (ND = 1/2 RDL)	CDD-TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF-TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons												
1-Methylnaphthalene	90-12-0	mg/kg	2.26	SL-7		< 0.00495 U	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	mg/kg	0.0388	SL-7		< 0.00495 U	--	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0099 U	< 0.01 U
Acenaphthene	83-32-9	mg/kg	0.0277	SL-7		< 0.00495 U	--	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0099 U	< 0.01 U
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8		< 0.00495 U	--	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0099 U	< 0.01 U
Anthracene	120-12-7	mg/kg	0.0511	SL-7		< 0.00495 U	--	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0099 U	< 0.01 U
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.67	SL-8		< 0.00495 U	--	< 0.01 U	0.0064	< 0.01 U	< 0.0099 U	0.0065
Fluoranthene	206-44-0	mg/kg	0.0899	SL-7		< 0.00495 U	--	< 0.01 U	0.0091	0.0046	0.003	0.013
Fluorene	86-73-7	mg/kg	0.0294	SL-7		< 0.00495 U	--	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0099 U	< 0.01 U
Naphthalene	91-20-3	mg/kg	0.00207	SL-6		< 0.00495 U	< 0.00653 U	< 0.01 U	< 0.01 U	0.0037	< 0.0099 U	< 0.01 U
Phenanthrene	85-01-8	mg/kg	1.5	SL-8		0.00136 J	--	< 0.01 U	0.0029	0.0081	0.0038	0.0062
Pyrene	129-00-0	mg/kg	0.137	SL-7		< 0.00495 U	--	< 0.01 U	0.0083	0.0051	0.0033	0.017
Benzo(a)anthracene	56-55-3	mg/kg	--			< 0.00495 U	--	< 0.01 U	0.0052	< 0.01 U	< 0.0099 U	0.0063
Benzo(a)pyrene	50-32-8	mg/kg	1.55E-05	SL-6		< 0.00495 U	--	< 0.01 U	0.006	< 0.01 U	< 0.0099 U	0.0075
Benzo(b)fluoranthene	205-99-2	mg/kg	--			< 0.00495 U	--	< 0.01 U	0.01	< 0.01 U	< 0.0099 U	0.0079
Benzo(i)fluoranthene	205-82-3	mg/kg	--			< 0.00495 U	--	--	--	--	--	--
Benzo(j,k)fluoranthene	Benz-jk-fluor	mg/kg	--			--	--	--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	mg/kg	--			< 0.00495 U	--	< 0.01 U	0.0036	< 0.01 U	< 0.0099 U	0.0023
Chrysene	218-01-9	mg/kg	--			< 0.00495 U	--	< 0.01 U	0.0071	< 0.01 U	< 0.0099 U	0.0071
Dibenzo(a,h)anthracene	53-70-3	mg/kg	--			< 0.00495 U	--	< 0.01 U	0.0022	< 0.01 U	< 0.0099 U	< 0.01 U
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	--			< 0.00495 U	--	< 0.01 U	0.006	< 0.01 U	< 0.0099 U	0.0061
Total Benzofluoranthenes	TOTBFA	mg/kg	3.2	SL-8		< 0.0099 U	--	--	--	--	--	--
Total HPAHs	T-HPAHs	mg/kg	12	SL-8		< 0.00495 U	--	< 0.01 U	0.0639	0.00970	0.00630	0.0737
Total LPAHs	T-LPAHs	mg/kg	5.2	SL-8		0.00136 J	--	< 0.01 U	0.00290	0.0118	0.00380	0.00620
Total PAHs (ND=0)	T-PAHs	mg/kg	--			0.00136 J	--	< 0.01 U	0.0668	0.0215	0.0101	0.0799
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	mg/kg	1.55E-05	SL-6		< 0 U	--	< 0 U	0.00877	< 0 U	< 0 U	0.00983
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg	1.55E-05	SL-6		< 0.00373725 U	--	< 0.00755 U	0.00877	< 0.00755 U	< 0.0074745 U	0.0103

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI SATURAT ED-SOIL_SLS 2022.02	Screening Level Source	Location	SB-05	SB-06	SB-07	SB-08	SB-09	SB-10	SB-13
					Date	09/27/2007	09/28/2007	09/28/2007	09/27/2007	09/27/2007	09/28/2007	10/01/2007
					Sample	SB-05-8	SB-06-8	SB-07-9	SB-08-9	SB-09-10	SB-10-14	SB-13-7
					Depth	8 - 10 ft	8 - 10 ft	9 - 11 ft	9 - 11 ft	10 - 12 ft	14 - 16 ft	7 - 9 ft
Metals												
Arsenic	7440-38-2	mg/kg	7.3	SL-10		8.7	1.9	1.4	2.1	2	1.8	1.2
Barium	7440-39-3	mg/kg	8.26	SL-6		--	--	--	--	--	--	--
Cadmium	7440-43-9	mg/kg	0.77	SL-10		0.084	0.021	0.025	0.061	0.029	0.141	0.577
Chromium	7440-47-3	mg/kg	48.2	SL-10		13.4	7.51	6.37	10.6	7.66	8.6	21.5
Copper	7440-50-8	mg/kg	36.4	SL-10		21.7	7.19	7.38	13.9	10.6	10.8	5.43
Lead	7439-92-1	mg/kg	50	SL-9		4.39 J	1.49 J	2.13 J	2.09 J	1.46 J	16.3 J	33.9
Mercury	7439-97-6	mg/kg	0.07	SL-10		0.064	0.004	0.005	0.028	0.008	0.007	0.021
Nickel	7440-02-0	mg/kg	48	SL-10		--	--	--	--	--	--	--
Selenium	7782-49-2	mg/kg	0.3	SL-9		--	--	--	--	--	--	--
Silver	7440-22-4	mg/kg	0.0163	SL-6		0.145	0.055	0.049	0.091	0.064	0.116	0.057
Zinc	7440-66-6	mg/kg	85.1	SL-10		28.9	15.4	14.8	22.6	17.6	28.7	122
Butyl Tin Ions												
Dibutyltin Ion	14488-53-0	mg/kg				--	--	--	--	--	--	--
Monobutyltin	78763-54-9	mg/kg				--	--	--	--	--	--	--
Tetrabutyltin	1461-25-2	mg/kg				--	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	mg/kg	0.000111	SL-7		--	--	--	--	--	--	--
Polychlorinated Biphenyl Aroclors												
Aroclor 1016	12674-11-2	mg/kg				< 0.0099 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0099 U	< 0.0099 U	< 1 U
Aroclor 1221	11104-28-2	mg/kg				--	--	--	--	--	--	--
Aroclor 1232	11141-16-5	mg/kg				--	--	--	--	--	--	--
Aroclor 1242	53469-21-9	mg/kg				--	--	--	--	--	--	--
Aroclor 1248	12672-29-6	mg/kg				< 0.0099 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0099 U	< 0.0099 U	< 1 U
Aroclor 1254	11097-69-1	mg/kg				< 0.0099 U	0.023	0.0059 J	< 0.01 U	< 0.0099 U	0.022	13
Aroclor 1260	11096-82-5	mg/kg				< 0.0099 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0099 U	0.024	< 1 U
Aroclor 1262	37324-23-5	mg/kg				--	--	--	--	--	--	--
Aroclor 1268	11100-14-4	mg/kg				--	--	--	--	--	--	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	5.49E-07	SL-6		< 0.0099 UJ	0.0380 J	0.0209 J	< 0.01 UJ	< 0.0099 UJ	0.0559 J	14.5 J
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	5.49E-07	SL-6		< 0.0099 U	0.023	0.0059	< 0.01 U	< 0.0099 U	0.046	13
Polychlorinated Biphenyl Congeners												
Total PCB Congeners	T-PCBCong	mg/kg	5.49E-07	SL-6		--	--	--	--	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	3.47E-10	SL-6		--	--	--	--	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	3.47E-10	SL-6		--	--	--	--	--	--	--
Dioxins/Furans												
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons												
1-Methylnaphthalene	90-12-0	mg/kg	2.26	SL-7		--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	mg/kg	0.0388	SL-7		< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	< 0.01 U	< 0.19 U
Acenaphthene	83-32-9	mg/kg	0.0277	SL-7		< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	< 0.01 U	< 0.19 U
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8		< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	< 0.01 U	< 0.19 U
Anthracene	120-12-7	mg/kg	0.0511	SL-7		< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	< 0.01 U	< 0.19 U
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.67	SL-8		0.0058	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	0.058	< 0.19 U
Fluoranthene	206-44-0	mg/kg	0.0899	SL-7		0.011	< 0.0098 U	< 0.0099 U	0.0024	0.0021	0.003	< 0.19 U
Fluorene	86-73-7	mg/kg	0.0294	SL-7		< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	< 0.01 U	< 0.19 U
Naphthalene	91-20-3	mg/kg	0.00207	SL-6		< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	< 0.01 U	< 0.19 U
Phenanthrene	85-01-8	mg/kg	1.5	SL-8		0.0054	0.0025	< 0.0099 U	0.0031	0.0024	0.0024	< 0.19 U
Pyrene	129-00-0	mg/kg	0.137	SL-7		0.014	< 0.0098 U	< 0.0099 U	0.0025	0.0026	0.0043	< 0.19 U
Benzo(a)anthracene	56-55-3	mg/kg				0.0048	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	0.0022	< 0.19 U
Benzo(a)pyrene	50-32-8	mg/kg	1.55E-05	SL-6		0.0061	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	0.0044	< 0.19 U
Benzo(b)fluoranthene	205-99-2	mg/kg				0.0072	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	0.0084	< 0.19 U
Benzo(i)fluoranthene	205-82-3	mg/kg				--	--	--	--	--	--	--
Benzo(j,k)fluoranthene	Benz-jk-fluor	mg/kg				--	--	--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	mg/kg				< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	0.0019	< 0.19 U
Chrysene	218-01-9	mg/kg				0.0064	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	0.0063	< 0.19 U
Dibenzo(a,h)anthracene	53-70-3	mg/kg				< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	< 0.01 U	< 0.19 U
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg				0.0066	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	0.0057	< 0.19 U
Total Benzofluoranthenes	TOTBFA	mg/kg	3.2	SL-8		--	--	--	--	--	--	--
Total HPAHs	T-HPAHs	mg/kg	12	SL-8		0.0619	< 0.0098 U	< 0.0099 U	0.00490	0.00470	0.0420	< 0.19 U
Total LPAHs	T-LPAHs	mg/kg	5.2	SL-8		0.00540	0.00250	< 0.0099 U	0.00310	0.00240	0.00240	< 0.19 U
Total PAHs (ND=0)	T-PAHs	mg/kg				0.0673	0.00250	< 0.0099 U	0.00800	0.00710	0.0444	< 0.19 U
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	mg/kg	1.55E-05	SL-6		0.00802	< 0 U	< 0 U	< 0 U	< 0 U	0.00628	< 0 U
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg	1.55E-05	SL-6		0.00902	< 0.007399 U	< 0.0074745 U	< 0.0074745 U	< 0.007399 U	0.00678	< 0.14345 U

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI SATURAT ED-SOIL_SLS 2022.02	Screening Level Source	Location	SB-14	SB-17	SB-18A	SB-19	SB-20A	SB-21	SB-22
					Date Sample Depth	10/01/2007 SB-14-7.5 8 - 10 ft	07/27/2011 SB17-10.0-072711 10 - 10 ft	07/27/2011 SB18A-9.0-072711 9 - 9 ft	07/28/2011 SB19-8.0-072811 8 - 8 ft	07/27/2011 SB20A-8.5-072711 8.5 - 8.5 ft	07/27/2011 SB21-9.0-072711 9 - 9 ft	07/27/2011 SB22-10.0-072711 10 - 10 ft
Metals												
Arsenic	7440-38-2	mg/kg	7.3	SL-10		1.6	--	--	--	--	< 12 U	< 13 U
Barium	7440-39-3	mg/kg	8.26	SL-6		--	--	--	--	--	31	35
Cadmium	7440-43-9	mg/kg	0.77	SL-10		0.159	--	--	--	--	0.61	< 0.65 U
Chromium	7440-47-3	mg/kg	48.2	SL-10		22.1	--	--	--	--	27	25
Copper	7440-50-8	mg/kg	36.4	SL-10		9.88	--	--	--	--	--	--
Lead	7439-92-1	mg/kg	50	SL-9		18.2	--	--	--	--	46	23
Mercury	7439-97-6	mg/kg	0.07	SL-10		0.274	--	--	--	--	< 0.3 U	< 0.32 U
Nickel	7440-02-0	mg/kg	48	SL-10		--	--	--	--	--	--	--
Selenium	7782-49-2	mg/kg	0.3	SL-9		--	--	--	--	--	< 12 U	< 13 U
Silver	7440-22-4	mg/kg	0.0163	SL-6		0.058	--	--	--	--	< 0.59 U	< 0.65 U
Zinc	7440-66-6	mg/kg	85.1	SL-10		26.4	--	--	--	--	--	--
Butyl Tin Ions												
Dibutyltin Ion	14488-53-0	mg/kg	--			--	--	--	--	--	--	--
Monobutyltin	78763-54-9	mg/kg	--			--	--	--	--	--	--	--
Tetrabutyltin	1461-25-2	mg/kg	--			--	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	mg/kg	0.000111	SL-7		--	--	--	--	--	--	--
Polychlorinated Biphenyl Aroclors												
Aroclor 1016	12674-11-2	mg/kg	--			< 0.099 U	--	--	--	--	< 1.2 U	< 0.65 U
Aroclor 1221	11104-28-2	mg/kg	--			--	--	--	--	--	< 1.2 U	< 0.65 U
Aroclor 1232	11141-16-5	mg/kg	--			--	--	--	--	--	< 1.2 U	< 0.65 U
Aroclor 1242	53469-21-9	mg/kg	--			--	--	--	--	--	< 1.2 U	< 0.65 U
Aroclor 1248	12672-29-6	mg/kg	--			< 0.099 U	--	--	--	--	< 1.2 U	< 0.65 U
Aroclor 1254	11097-69-1	mg/kg	--			7	--	--	--	--	8.9	3.1
Aroclor 1260	11096-82-5	mg/kg	--			4.9	--	--	--	--	< 1.2 U	< 0.65 U
Aroclor 1262	37324-23-5	mg/kg	--			--	--	--	--	--	--	--
Aroclor 1268	11100-14-4	mg/kg	--			--	--	--	--	--	--	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	5.49E-07	SL-6		12.0 J	--	--	--	--	12.5	5.05
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	5.49E-07	SL-6		11.9	--	--	--	--	8.9	3.1
Polychlorinated Biphenyl Congeners												
Total PCB Congeners	T-PCBCong	mg/kg	5.49E-07	SL-6		--	--	--	--	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	3.47E-10	SL-6		--	--	--	--	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	3.47E-10	SL-6		--	--	--	--	--	--	--
Dioxins/Furans												
Total CDD TEQ (ND = 1/2 RDL)	CDD-TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF-TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons												
1-Methylnaphthalene	90-12-0	mg/kg	2.26	SL-7		--	--	--	--	--	< 0.016 U	0.13
2-Methylnaphthalene	91-57-6	mg/kg	0.0388	SL-7		4.5	--	--	--	--	< 0.016 U	< 0.015 U
Acenaphthene	83-32-9	mg/kg	0.0277	SL-7		0.51 J	--	--	--	--	< 0.016 U	0.21
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8		< 1 U	--	--	--	--	< 0.016 U	0.052
Anthracene	120-12-7	mg/kg	0.0511	SL-7		1.2	--	--	--	--	0.016	0.51
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.67	SL-8		< 1 U	--	--	--	--	< 0.016 U	0.035
Fluoranthene	206-44-0	mg/kg	0.0899	SL-7		0.88 J	--	--	--	--	0.023	0.46
Fluorene	86-73-7	mg/kg	0.0294	SL-7		1	--	--	--	--	< 0.016 U	0.45
Naphthalene	91-20-3	mg/kg	0.00207	SL-6		0.51 J	--	--	--	--	< 0.016 U	0.12
Phenanthrene	85-01-8	mg/kg	1.5	SL-8		2.4	--	--	--	--	< 0.016 U	0.045
Pyrene	129-00-0	mg/kg	0.137	SL-7		0.99 J	--	--	--	--	0.031	0.45
Benzo(a)anthracene	56-55-3	mg/kg	--			< 1 U	--	--	--	--	< 0.016 U	0.12
Benzo(a)pyrene	50-32-8	mg/kg	1.55E-05	SL-6		< 1 U	--	--	--	--	< 0.016 U	0.17
Benzo(b)fluoranthene	205-99-2	mg/kg	--			< 1 U	--	--	--	--	< 0.016 U	0.081
Benzo(i)fluoranthene	205-82-3	mg/kg	--			--	--	--	--	--	--	--
Benzo(j,k)fluoranthene	Benz-jk-fluor	mg/kg	--			--	--	--	--	--	< 0.016 U	0.066
Benzo(k)fluoranthene	207-08-9	mg/kg	--			< 1 U	--	--	--	--	--	--
Chrysene	218-01-9	mg/kg	--			0.53 J	--	--	--	--	0.022	0.19
Dibenzo(a,h)anthracene	53-70-3	mg/kg	--			< 1 U	--	--	--	--	< 0.016 U	0.017
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	--			< 1 U	--	--	--	--	< 0.016 U	0.029
Total Benzofluoranthenes	TOTBFA	mg/kg	3.2	SL-8		--	--	--	--	--	--	--
Total HPAHs	T-HPAH	mg/kg	12	SL-8		2.40 J	--	--	--	--	0.0760	1.62
Total LPAHs	T-LPAH	mg/kg	5.2	SL-8		5.62 J	--	--	--	--	0.0160	1.39
Total PAHs (ND=0)	T-PAH	mg/kg	--			8.02 J	--	--	--	--	0.0920	3.01
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	mg/kg	1.55E-05	SL-6		0.00530 J	--	--	--	--	0.000220	0.203
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg	1.55E-05	SL-6		0.755 J	--	--	--	--	0.0122	0.203

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI SATURAT ED-SOIL_SLS 2022.02	Screening Level Source	Location	SB-22	SB-23	SB-24	SB-25	SB-26	SB-26	SB-26
					Date	07/27/2011	07/28/2011	07/28/2011	07/28/2011	03/04/2021	03/04/2021	03/04/2021
					Sample	SB22-14.0-072711	SB23-8.0-072811	SB24-7.0-072811	SB25-10.0-072811	SB-26-5-5-6.5	SB-26-12.5	SB-26-18-20
					Depth	14 - 14 ft	8 - 8 ft	7 - 7 ft	10 - 10 ft	5.5 - 6.5 ft	12.5 ft	18 - 20 ft
Metals												
Arsenic	7440-38-2	mg/kg	7.3	SL-10	--	--	--	--	--	1.6	--	1.4
Barium	7440-39-3	mg/kg	8.26	SL-6	--	--	--	--	--	--	--	--
Cadmium	7440-43-9	mg/kg	0.77	SL-10	--	--	--	--	--	0.04 J	--	0.05 J
Chromium	7440-47-3	mg/kg	48.2	SL-10	--	--	--	--	--	35.4	--	8.48
Copper	7440-50-8	mg/kg	36.4	SL-10	--	--	--	--	--	11.3	--	8.6
Lead	7439-92-1	mg/kg	50	SL-9	--	--	--	--	--	7.02 J	--	1.19
Mercury	7439-97-6	mg/kg	0.07	SL-10	--	--	--	--	--	< 0.0301 U	--	--
Nickel	7440-02-0	mg/kg	48	SL-10	--	--	--	--	--	5.63	--	7.16
Selenium	7782-49-2	mg/kg	0.3	SL-9	--	--	--	--	--	--	--	--
Silver	7440-22-4	mg/kg	0.0163	SL-6	--	--	--	--	--	--	--	--
Zinc	7440-66-6	mg/kg	85.1	SL-10	--	--	--	--	--	24.8	--	19
Butyl Tin Ions												
Dibutyltin Ion	14488-53-0	mg/kg	--	--	--	--	--	--	--	--	--	--
Monobutyltin	78763-54-9	mg/kg	--	--	--	--	--	--	--	--	--	--
Tetrabutyltin	1461-25-2	mg/kg	--	--	--	--	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	mg/kg	0.000111	SL-7	--	--	--	--	--	--	--	--
Polychlorinated Biphenyl Aroclors												
Aroclor 1016	12674-11-2	mg/kg	--	--	--	--	--	--	--	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1221	11104-28-2	mg/kg	--	--	--	--	--	--	--	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1232	11141-16-5	mg/kg	--	--	--	--	--	--	--	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1242	53469-21-9	mg/kg	--	--	--	--	--	--	--	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1248	12672-29-6	mg/kg	--	--	--	--	--	--	--	< 0.004 U	0.0237	< 0.004 U
Aroclor 1254	11097-69-1	mg/kg	--	--	--	--	--	--	--	0.065	0.0421	< 0.004 U
Aroclor 1260	11096-82-5	mg/kg	--	--	--	--	--	--	--	0.0325	0.0251	< 0.004 U
Aroclor 1262	37324-23-5	mg/kg	--	--	--	--	--	--	--	< 0.004 U	< 0.004 U	< 0.004 U
Aroclor 1268	11100-14-4	mg/kg	--	--	--	--	--	--	--	< 0.004 U	< 0.004 U	< 0.004 U
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	5.49E-07	SL-6	--	--	--	--	--	0.112	0.103	< 0.004 U
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	5.49E-07	SL-6	--	--	--	--	--	0.0975	0.0909	< 0.004 U
Polychlorinated Biphenyl Congeners												
Total PCB Congeners	T-PCBCong	mg/kg	5.49E-07	SL-6	--	--	--	--	--	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	3.47E-10	SL-6	--	--	--	--	--	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	3.47E-10	SL-6	--	--	--	--	--	--	--	--
Dioxins/Furans												
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	mg/kg	2E-06	SL-9	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10	--	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons												
1-Methylnaphthalene	90-12-0	mg/kg	2.26	SL-7	--	--	--	--	--	< 0.00499 U	0.00469 J	--
2-Methylnaphthalene	91-57-6	mg/kg	0.0388	SL-7	--	--	--	--	--	< 0.00499 U	0.00714	--
Acenaphthene	83-32-9	mg/kg	0.0277	SL-7	--	--	--	--	--	< 0.00499 U	0.00081 J	--
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8	--	--	--	--	--	< 0.00499 U	0.00119 J	--
Anthracene	120-12-7	mg/kg	0.0511	SL-7	--	--	--	--	--	< 0.00499 U	0.001 J	--
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.67	SL-8	--	--	--	--	--	0.00146 J	0.00223 J	--
Fluoranthene	206-44-0	mg/kg	0.0899	SL-7	--	--	--	--	--	0.00074 J	0.00378 J	--
Fluorene	86-73-7	mg/kg	0.0294	SL-7	--	--	--	--	--	< 0.00499 U	0.00241 J	--
Naphthalene	91-20-3	mg/kg	0.00207	SL-6	--	--	--	--	--	< 0.00536 U	0.00445 J	--
Phenanthrene	85-01-8	mg/kg	1.5	SL-8	--	--	--	--	--	< 0.00499 U	0.00906	--
Pyrene	129-00-0	mg/kg	0.137	SL-7	--	--	--	--	--	0.001 J	0.00533	--
Benzo(a)anthracene	56-55-3	mg/kg	--	--	--	--	--	--	--	< 0.00499 U	0.00212 J	--
Benzo(a)pyrene	50-32-8	mg/kg	1.55E-05	SL-6	--	--	--	--	--	< 0.00499 U	0.00166 J	--
Benzo(b)fluoranthene	205-99-2	mg/kg	--	--	--	--	--	--	--	< 0.00499 U	0.00214 J	--
Benzo(i)fluoranthene	205-82-3	mg/kg	--	--	--	--	--	--	--	< 0.00499 U	0.00115 J	--
Benzo(j,k)fluoranthene	Benz-jk-fluor	mg/kg	--	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	mg/kg	--	--	--	--	--	--	--	< 0.00499 U	0.00094 J	--
Chrysene	218-01-9	mg/kg	--	--	--	--	--	--	--	< 0.00499 U	0.00405 J	--
Dibenzo(a,h)anthracene	53-70-3	mg/kg	--	--	--	--	--	--	--	< 0.00499 U	< 0.00498 U	--
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	--	--	--	--	--	--	--	< 0.00499 U	0.00135 J	--
Total Benzo(a)fluoranthenes	TOTBFA	mg/kg	3.2	SL-8	--	--	--	--	--	< 0.00997 U	0.00411 J	--
Total HPAHs	T-HPAHs	mg/kg	12	SL-8	--	--	--	--	--	0.00320 J	0.0246 J	--
Total LPAHs	T-LPAHs	mg/kg	5.2	SL-8	--	--	--	--	--	< 0.00536 U	0.0189 J	--
Total PAHs (ND=0)	T-PAHs	mg/kg	--	--	--	--	--	--	--	0.00320 J	0.0436 J	--
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	mg/kg	1.55E-05	SL-6	--	--	--	--	--	< 0.00499 U	0.00247 J	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg	1.55E-05	SL-6	--	--	--	--	--	< 0.00401695 U	0.00272 J	--

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI SATURAT ED-SOIL_SLS 2022.02	Screening Level Source	Location	SB-27	SB-27	SB-28	SB-30	SB-30	SB-30	SB-31
					Date	03/09/2021	03/09/2021	03/01/2021	03/01/2021	03/01/2021	03/01/2021	
					Sample	SB-27-8-9	SB-27-18-20	SB-28-14.5-15.5	SB-30-11.5-12.5	SB-30-12.5-14.5	SB-30-23-25	SB-31-10-11
					Depth	8 - 9 ft	18 - 20 ft	14.5 - 15.5 ft	11.5 - 12.5 ft	12.5 - 14.5 ft	23 - 25 ft	10 - 11 ft
Metals												
Arsenic	7440-38-2	mg/kg	7.3	SL-10		4.06 J	1.79	2 J	--	--	2.27 J	4.78
Barium	7440-39-3	mg/kg	8.26	SL-6		--	--	--	--	--	--	--
Cadmium	7440-43-9	mg/kg	0.77	SL-10		0.17	< 0.11 U	< 0.12 U	--	--	0.05 J	0.12 J
Chromium	7440-47-3	mg/kg	48.2	SL-10		69.2	9.65	8.91	--	--	11.1	27.8
Copper	7440-50-8	mg/kg	36.4	SL-10		38.2	9.8	9.02 J	--	--	12.1 J	27.3
Lead	7439-92-1	mg/kg	50	SL-9		11 J	1.38	1.39 J	--	--	1.27 J	4.42
Mercury	7439-97-6	mg/kg	0.07	SL-10		0.0162 J	--	0.00968 J	--	--	0.01 J	--
Nickel	7440-02-0	mg/kg	48	SL-10		14.7 J	9.62	8.17	--	--	10.8	20.7
Selenium	7782-49-2	mg/kg	0.3	SL-9		--	--	--	--	--	--	--
Silver	7440-22-4	mg/kg	0.0163	SL-6		--	--	--	--	--	--	--
Zinc	7440-66-6	mg/kg	85.1	SL-10		53.2	26.4	23.9	--	--	21.3	35.3
Butyl Tin Ions												
Dibutyltin Ion	14488-53-0	mg/kg				0.00936	--	< 0.0057 U	--	--	--	--
Monobutyltin	78763-54-9	mg/kg				0.00473	--	< 0.00402 U	--	--	--	--
Tetrabutyltin	1461-25-2	mg/kg				< 0.00498 U	--	< 0.00493 U	--	--	--	--
Tributyltin Ion	36643-28-4	mg/kg	0.000111	SL-7		0.01	--	< 0.00381 U	--	--	--	--
Polychlorinated Biphenyl Aroclors												
Aroclor 1016	12674-11-2	mg/kg				< 0.0197 U	< 0.004 U	< 0.004 U	--	--	< 0.004 U	--
Aroclor 1221	11104-28-2	mg/kg				< 0.0197 U	< 0.004 U	< 0.004 U	--	--	< 0.004 U	--
Aroclor 1232	11141-16-5	mg/kg				< 0.0197 U	< 0.004 U	< 0.004 U	--	--	< 0.004 U	--
Aroclor 1242	53469-21-9	mg/kg				< 0.0197 U	< 0.004 U	< 0.004 U	--	--	< 0.004 U	--
Aroclor 1248	12672-29-6	mg/kg				< 0.0197 U	< 0.004 U	< 0.004 U	--	--	< 0.004 U	--
Aroclor 1254	11097-69-1	mg/kg				< 0.0197 U	< 0.004 U	< 0.004 U	--	--	< 0.004 U	--
Aroclor 1260	11096-82-5	mg/kg				0.0125 J	< 0.004 U	< 0.004 U	--	--	< 0.004 U	--
Aroclor 1262	37324-23-5	mg/kg				< 0.0197 U	< 0.004 U	< 0.004 U	--	--	< 0.004 U	--
Aroclor 1268	11100-14-4	mg/kg				< 0.0197 U	< 0.004 U	< 0.004 U	--	--	< 0.004 U	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	5.49E-07	SL-6		0.0913 J	< 0.004 U	< 0.004 U	--	--	< 0.004 U	--
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	5.49E-07	SL-6		0.0125 J	< 0.004 U	< 0.004 U	--	--	< 0.004 U	--
Polychlorinated Biphenyl Congeners												
Total PCB Congeners	T-PCBCong	mg/kg	5.49E-07	SL-6		--	--	--	--	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	3.47E-10	SL-6		--	--	--	--	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	3.47E-10	SL-6		--	--	--	--	--	--	--
Dioxins/Furans												
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10		--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons												
1-Methylnaphthalene	90-12-0	mg/kg	2.26	SL-7		< 0.0248 U	--	< 0.00497 U	--	--	0.00551	--
2-Methylnaphthalene	91-57-6	mg/kg	0.0388	SL-7		< 0.0248 U	--	< 0.00497 U	--	--	< 0.00553 U	--
Acenaphthene	83-32-9	mg/kg	0.0277	SL-7		< 0.0248 U	--	< 0.00497 U	--	--	0.00411 J	--
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8		< 0.0248 U	--	< 0.00497 U	--	--	< 0.00498 U	--
Anthracene	120-12-7	mg/kg	0.0511	SL-7		< 0.0248 U	--	< 0.00497 U	--	--	0.00087 J	--
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.67	SL-8		0.0152 J	--	< 0.00497 U	--	--	< 0.00498 U	--
Fluoranthene	206-44-0	mg/kg	0.0899	SL-7		0.0106 J	--	< 0.00497 U	--	--	0.00153 J	--
Fluorene	86-73-7	mg/kg	0.0294	SL-7		< 0.0248 U	--	< 0.00497 U	--	--	< 0.00498 U	--
Naphthalene	91-20-3	mg/kg	0.00207	SL-6		< 0.00472 U	--	< 0.00497 U	--	< 0.00642 UJ	< 0.00498 U	--
Phenanthrene	85-01-8	mg/kg	1.5	SL-8		0.012 J	--	0.00149 J	--	--	0.0116	--
Pyrene	129-00-0	mg/kg	0.137	SL-7		0.00767 J	--	0.00065 J	--	--	0.00277 J	--
Benzo(a)anthracene	56-55-3	mg/kg				< 0.0248 U	--	< 0.00497 U	--	--	0.00215 J	--
Benzo(a)pyrene	50-32-8	mg/kg	1.55E-05	SL-6		0.0103 J	--	< 0.00497 U	--	--	0.00112 J	--
Benzo(b)fluoranthene	205-99-2	mg/kg				0.0111 J	--	< 0.00497 U	--	--	0.0016 J	--
Benzo(i)fluoranthene	205-82-3	mg/kg				0.00446 J	--	< 0.00497 U	--	--	0.00113 J	--
Benzo(j,k)fluoranthene	Benz-jk-fluor	mg/kg				--	--	--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	mg/kg				< 0.0248 U	--	< 0.00497 U	--	--	< 0.00498 U	--
Chrysene	218-01-9	mg/kg				0.0246 J	--	< 0.00497 U	--	--	0.00368 J	--
Dibenzo(a,h)anthracene	53-70-3	mg/kg				< 0.0248 U	--	< 0.00497 U	--	--	< 0.00498 U	--
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg				0.00606 J	--	< 0.00497 U	--	--	< 0.00498 U	--
Total Benzo(a)fluoranthenes	TOTBFA	mg/kg	3.2	SL-8		0.0223 J	--	< 0.00394 U	--	--	0.00367 J	--
Total HPAHs	T-HPAH	mg/kg	12	SL-8		0.0855 J	--	0.000650 J	--	--	0.0129 J	--
Total LPAHs	T-LPAH	mg/kg	5.2	SL-8		0.0120 J	--	0.00149 J	--	--	0.0197 J	--
Total PAHs (ND=0)	T-PAH	mg/kg				0.0975 J	--	0.00214 J	--	--	0.0326 J	--
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	mg/kg	1.55E-05	SL-6		0.0123 J	--	< 0 U	--	--	0.00153 J	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg	1.55E-05	SL-6		0.0160 J	--	< 0.00375235 U	--	--	0.00228 J	--

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM RI SATURAT ED-SOIL_SLS 2022.02	Screening Level Source	Location	SB-31	SB-31	SB-32	SB-33	SB-34
					Date	03/01/2021	03/01/2021	03/08/2021	03/03/2021	03/01/2021
					Sample	SB-31-13-14.5	SB-31-19-20	SB-32-7-8	SB-33-5.5-6.5	SB-34-5.5-6.5
					Depth	13 - 14.5 ft	19 - 20 ft	7 - 8 ft	5.5 - 6.5 ft	5.5 - 6.5 ft
Metals										
Arsenic	7440-38-2	mg/kg	7.3	SL-10		3.05 J	1.53 J	--	--	--
Barium	7440-39-3	mg/kg	8.26	SL-6		--	--	--	--	--
Cadmium	7440-43-9	mg/kg	0.77	SL-10		0.05 J	< 0.12 U	--	--	--
Chromium	7440-47-3	mg/kg	48.2	SL-10		15	9.89	--	--	--
Copper	7440-50-8	mg/kg	36.4	SL-10		20 J	10.1 J	--	--	--
Lead	7439-92-1	mg/kg	50	SL-9		3.37 J	1.37 J	--	--	--
Mercury	7439-97-6	mg/kg	0.07	SL-10		0.0285	< 0.0271 U	--	--	--
Nickel	7440-02-0	mg/kg	48	SL-10		17.5	7.96	--	--	--
Selenium	7782-49-2	mg/kg	0.3	SL-9		--	--	--	--	--
Silver	7440-22-4	mg/kg	0.0163	SL-6		--	--	--	--	--
Zinc	7440-66-6	mg/kg	85.1	SL-10		29.2	22.2	--	--	--
Butyl Tin Ions										
Dibutyltin Ion	14488-53-0	mg/kg				--	--	--	--	--
Monobutyltin	78763-54-9	mg/kg				--	--	--	--	--
Tetrabutyltin	1461-25-2	mg/kg				--	--	--	--	--
Tributyltin Ion	36643-28-4	mg/kg	0.000111	SL-7		--	--	--	--	--
Polychlorinated Biphenyl Aroclors										
Aroclor 1016	12674-11-2	mg/kg				< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	--
Aroclor 1221	11104-28-2	mg/kg				< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	--
Aroclor 1232	11141-16-5	mg/kg				< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	--
Aroclor 1242	53469-21-9	mg/kg				< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	--
Aroclor 1248	12672-29-6	mg/kg				< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	--
Aroclor 1254	11097-69-1	mg/kg				< 0.004 U	0.0018 J	< 0.004 U	< 0.004 U	--
Aroclor 1260	11096-82-5	mg/kg				< 0.004 U	0.0008 J	< 0.004 U	< 0.004 U	--
Aroclor 1262	37324-23-5	mg/kg				< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	--
Aroclor 1268	11100-14-4	mg/kg				< 0.004 U	< 0.004 U	< 0.004 U	< 0.004 U	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	5.49E-07	SL-6		< 0.004 U	0.0166 J	< 0.004 U	< 0.004 U	--
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	5.49E-07	SL-6		< 0.004 U	0.00260 J	< 0.004 U	< 0.004 U	--
Polychlorinated Biphenyl Congeners										
Total PCB Congeners	T-PCBCong	mg/kg	5.49E-07	SL-6		--	--	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg	3.47E-10	SL-6		--	--	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg	3.47E-10	SL-6		--	--	--	--	--
Dioxins/Furans										
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	mg/kg	2E-06	SL-9		--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg	5.2E-06	SL-10		--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg	5.2E-06	SL-10		--	--	--	--	--
Polycyclic Aromatic Hydrocarbons										
1-Methylnaphthalene	90-12-0	mg/kg	2.26	SL-7		0.745	< 0.0109 U	--	--	--
2-Methylnaphthalene	91-57-6	mg/kg	0.0388	SL-7		0.284	< 0.00948 U	--	--	--
Acenaphthene	83-32-9	mg/kg	0.0277	SL-7		0.00443 J	0.0048 J	--	--	--
Acenaphthylene	208-96-8	mg/kg	1.3	SL-8		0.00176 J	< 0.00498 U	--	--	--
Anthracene	120-12-7	mg/kg	0.0511	SL-7		0.0017 J	< 0.00498 U	--	--	--
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.67	SL-8		0.0014 J	< 0.00498 U	--	--	--
Fluoranthene	206-44-0	mg/kg	0.0899	SL-7		< 0.00498 U	< 0.00498 U	--	--	--
Fluorene	86-73-7	mg/kg	0.0294	SL-7		0.0072	< 0.00498 U	--	--	--
Naphthalene	91-20-3	mg/kg	0.00207	SL-6		0.0749	< 0.00498 U	--	--	< 0.00612 U
Phenanthrene	85-01-8	mg/kg	1.5	SL-8		0.011	0.0204	--	--	--
Pyrene	129-00-0	mg/kg	0.137	SL-7		0.00293 J	0.00279 J	--	--	--
Benzo(a)anthracene	56-55-3	mg/kg				0.00111 J	0.00167 J	--	--	--
Benzo(a)pyrene	50-32-8	mg/kg	1.55E-05	SL-6		< 0.00498 U	0.00116 J	--	--	--
Benzo(b)fluoranthene	205-99-2	mg/kg				< 0.00498 U	0.0015 J	--	--	--
Benzo(i)fluoranthene	205-82-3	mg/kg				< 0.00498 U	0.0007 J	--	--	--
Benzo(j,k)fluoranthene	Benz-jk-fluor	mg/kg				--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	mg/kg				< 0.00498 U	< 0.00498 U	--	--	--
Chrysene	218-01-9	mg/kg				0.00211 J	0.00334 J	--	--	--
Dibenzo(a,h)anthracene	53-70-3	mg/kg				< 0.00498 U	< 0.00498 U	--	--	--
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg				< 0.00498 U	< 0.00498 U	--	--	--
Total Benzo(a)fluoranthenes	TOTBFA	mg/kg	3.2	SL-8		< 0.00996 U	< 0.00996 U	--	--	--
Total HPAHs	T-HPAH	mg/kg	12	SL-8		0.00970 J	0.0123 J	--	--	--
Total LPAHs	T-LPAH	mg/kg	5.2	SL-8		0.101 J	0.0252 J	--	--	--
Total PAHs (ND=0)	T-PAH	mg/kg				0.111 J	0.0375 J	--	--	--
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	mg/kg	1.55E-05	SL-6		0.000132 J	0.00151 J	--	--	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg	1.55E-05	SL-6		0.00362 J	0.00226 J	--	--	--

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date Sample Depth	B-01 11/17/2017 B-01-8.5-9.5 8.5 - 9.5 ft	B-02 11/17/2017 B-02-6.5-7 6.5 - 7 ft	B-03 11/17/2017 B-03-6.5-7 6.5 - 7 ft	B-04 11/17/2017 B-04-6.5-7 6.5 - 7 ft	MW-04 03/04/2021 MW-4-7-8 7 - 8 ft	MW-04 03/04/2021 MW-4-10.5-11.5 10.5 - 11.5 ft	MW-04 03/04/2021 MW-4-13.5-14.5 13.5 - 14.5 ft
Semivolatile Organic Compounds								
1,2-Dinitrobenzene	528-29-0	mg/kg	8	SL-1	--	--	--	--
1,2-Diphenylhydrazine	122-66-7	mg/kg	3.59E-05	SL-6	--	--	--	--
1,3-Dinitrobenzene	99-65-0	mg/kg	8	SL-1	--	--	--	--
1,4-Dinitrobenzene	100-25-4	mg/kg	8	SL-1	--	--	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	2400	SL-1	--	--	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	mg/kg	--	--	--	--	--	--
2,3-Dichloroaniline	608-27-5	mg/kg	--	--	--	--	--	--
2,4,5-Trichlorophenol	95-95-4	mg/kg	6.98E-05	SL-6	--	< 0.0997 U	< 0.0997 U	< 0.1 U
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.401	SL-6	--	< 0.0997 U	< 0.0997 U	< 0.1 U
2,4-Dichlorophenol	120-83-2	mg/kg	0.00434	SL-6	--	< 0.0997 U	< 0.0997 U	< 0.1 U
2,4-Dimethylphenol	105-67-9	mg/kg	0.00227	SL-7	--	0.0376 J	< 0.0997 U	< 0.1 U
2,4-Dinitrophenol	51-28-5	mg/kg	0.0287	SL-6	--	< 0.199 UJ	< 0.199 UJ	< 0.2 UJ
2,4-Dinitrotoluene	121-14-2	mg/kg	0.000155	SL-6	--	< 0.0997 U	< 0.0997 U	< 0.1 U
2,6-Dinitrotoluene	606-20-2	mg/kg	0.0654	SL-7	--	< 0.0997 U	< 0.0997 U	< 0.1 U
2-Chloronaphthalene	91-58-7	mg/kg	0.277	SL-6	--	< 0.0199 U	< 0.0199 U	< 0.02 U
2-Chlorophenol	95-57-8	mg/kg	0.0115	SL-6	--	< 0.0199 U	< 0.0199 U	< 0.02 U
2-Methylphenol	95-48-7	mg/kg	0.00636	SL-7	--	< 0.0199 U	< 0.0199 U	< 0.02 U
2-Nitroaniline	88-74-4	mg/kg	292	SL-7	--	< 0.0997 U	< 0.0997 U	< 0.1 U
2-Nitrophenol	88-75-5	mg/kg	--	--	--	< 0.0199 U	< 0.0199 U	< 0.02 U
3 & 4 Methylphenol	65794-96-9	mg/kg	--	--	--	--	--	--
3,3'-Dichlorobenzidine	91-94-1	mg/kg	2E-06	SL-6	--	< 0.0997 U	< 0.0997 U	< 0.1 U
3-Nitroaniline	99-09-2	mg/kg	--	--	--	< 0.0997 U	< 0.0997 U	< 0.1 U
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.00728	SL-6	--	< 0.199 UJ	< 0.199 UJ	< 0.2 UJ
4-Bromophenyl phenyl ether	101-55-3	mg/kg	--	--	--	< 0.0199 U	< 0.0199 U	< 0.02 U
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.028	SL-6	--	< 0.0997 U	< 0.0997 U	< 0.1 U
4-Chloroaniline	106-47-8	mg/kg	0.96	SL-7	--	< 0.0997 U	< 0.0997 U	< 0.1 U
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	--	--	--	< 0.0199 U	< 0.0199 U	< 0.02 U
4-Methylphenol	106-44-5	mg/kg	0.0624	SL-7	--	< 0.0199 U	< 0.0199 U	< 0.02 U
4-Nitroaniline	100-01-6	mg/kg	30.5	SL-7	--	< 0.0997 U	< 0.0997 U	< 0.1 U
4-Nitrophenol	100-02-7	mg/kg	7	SL-9	--	< 0.0997 U	< 0.0997 U	< 0.1 U
Aniline	62-53-3	mg/kg	42.7	SL-7	--	--	--	--
Benzidine	92-87-5	mg/kg	3.4E-08	SL-6	--	--	--	--
Benzoic acid	65-85-0	mg/kg	0.169	SL-7	--	0.433 J	< 0.199 UJ	0.138 J
Benzyl alcohol	100-51-6	mg/kg	0.0174	SL-7	--	< 0.0199 U	< 0.0199 U	< 0.02 U
Benzyl butyl phthalate	85-68-7	mg/kg	0.000182	SL-6	--	< 0.0199 U	< 0.0199 U	< 0.02 U
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg	0.333	SL-6	--	< 0.0199 U	< 0.0199 U	< 0.02 U
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	--	--	--	< 0.0199 U	< 0.0199 U	< 0.02 U
Bis(2-chloroethyl) ether	111-44-4	mg/kg	2.18E-05	SL-6	--	< 0.0199 U	< 0.0199 U	< 0.02 U
bis(2-Chloroisopropyl)ether	39638-32-9	mg/kg	--	--	--	--	--	--
Bis(2-ethylhexyl) adipate	103-23-1	mg/kg	833	SL-1	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	0.00512	SL-6	--	1.52	0.0373 J	0.617
Carbazole	86-74-8	mg/kg	--	--	--	< 0.0199 U	< 0.0199 U	< 0.02 U
Dibenzofuran	132-64-9	mg/kg	0.0292	SL-7	--	0.248	0.00631	0.0714
Diethyl phthalate	84-66-2	mg/kg	0.0341	SL-7	--	< 0.0199 U	< 0.0199 U	0.0667
Dimethyl phthalate	131-11-3	mg/kg	0.0188	SL-7	--	< 0.0199 U	< 0.0199 U	< 0.02 U
Di-n-butyl phthalate	84-74-2	mg/kg	0.0149	SL-6	--	< 0.0199 U	< 0.0199 U	< 0.02 U
Di-n-octyl phthalate	117-84-0	mg/kg	0.327	SL-7	--	< 0.199 U	< 0.0199 U	< 0.02 U
Hexachlorobenzene	118-74-1	mg/kg	4.01E-07	SL-6	--	< 0.01 U	< 0.0025 U	< 0.00498 U
Hexachlorobutadiene	87-68-3	mg/kg	1.13E-05	SL-6	--	0.0115 J	< 0.0025 U	< 0.00498 U
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.00169	SL-6	--	< 0.0997 UJ	< 0.0997 UJ	< 0.1 UJ
Hexachloroethane	67-72-1	mg/kg	9.67E-06	SL-6	--	< 0.0199 U	< 0.0199 U	< 0.02 U
Isophorone	78-59-1	mg/kg	0.0387	SL-6	--	< 0.0199 U	< 0.0199 U	0.0688
Nitrobenzene	98-95-3	mg/kg	0.0406	SL-6	--	< 0.0199 U	< 0.0199 U	< 0.02 U
N-Nitrosodimethylamine	62-75-9	mg/kg	0.000105	SL-6	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	3.26E-05	SL-6	--	< 0.0199 U	< 0.0199 U	< 0.02 U
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.00161	SL-7	--	< 0.0199 U	< 0.0199 U	< 0.02 U
Pentachlorophenol	87-86-5	mg/kg	1.76E-06	SL-6	--	< 0.0997 UJ	< 0.0997 UJ	< 0.1 UJ
Phenol	108-95-2	mg/kg	0.0479	SL-7	--	< 0.0199 U	< 0.0199 U	< 0.02 U
Pyridine	110-86-1	mg/kg	36.4	SL-7	--	--	--	--
Pesticides and Herbicides								
2,4'-DDD	53-19-0	mg/kg	--	--	--	< 0.02 U	< 0.005 U	< 0.00997 U
2,4'-DDE	3424-82-6	mg/kg	--	--	--	< 8.88 U	< 0.005 U	< 2.49 U
2,4'-DDT	789-02-6	mg/kg	--	--	--	< 8.88 U	< 0.005 U	< 0.00997 U
4,4'-DDD	72-54-8	mg/kg	3.64E-07	SL-6	--	< 0.02 U	< 0.005 U	< 0.00997 U
4,4'-DDE	72-55-9	mg/kg	7.63E-08	SL-6	--	< 6.66 U	< 0.005 U	< 2.99 U
4,4'-DDT	50-29-3	mg/kg	8.14E-07	SL-6	--	< 11.1 U	< 0.005 U	< 2.99 U
Aldrin	309-00-2	mg/kg	2.01E-09	SL-6	--	7.46	0.0439	2.39

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location	MW-04	MW-05	MW-05	MW-05	MW-05	MW-05	MW-05	MW-06
	Date	03/04/2021	03/05/2021	03/05/2021	03/05/2021	03/05/2021	03/05/2021	03/05/2021	03/05/2021
	Sample	MW-4-18-20	MW-5-6-7	MW-5-8-9.5	MW-5-15-16	MW-5-20-22.5	MW-5-26.5-28	MW-6-9	
	Depth	18 - 20 ft	6 - 7 ft	8 - 9.5 ft	15 - 16 ft	20 - 22.5 ft	26.5 - 28 ft	9 ft	
Semivolatile Organic Compounds									
1,2-Dinitrobenzene	528-29-0	mg/kg	8						
1,2-Diphenylhydrazine	122-66-7	mg/kg	3.59E-05						
1,3-Dinitrobenzene	99-65-0	mg/kg	8						
1,4-Dinitrobenzene	100-25-4	mg/kg	8						
2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	2400						
2,3,5,6-Tetrachlorophenol	935-95-5	mg/kg							
2,3-Dichloroaniline	608-27-5	mg/kg							
2,4,5-Trichlorophenol	95-95-4	mg/kg	6.98E-05	SL-6	< 0.0999 U	< 0.0997 U	< 0.0996 U	< 0.1 U	< 0.0997 U
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.401	SL-6	< 0.0999 U	< 0.0997 U	< 0.0996 U	< 0.1 U	< 0.0997 U
2,4-Dichlorophenol	120-83-2	mg/kg	0.00434	SL-6	< 0.0999 U	< 0.0997 U	< 0.0996 U	< 0.1 U	< 0.0997 U
2,4-Dimethylphenol	105-67-9	mg/kg	0.00227	SL-7	< 0.0999 U	< 0.0997 U	< 0.0996 U	< 0.1 U	< 0.0997 U
2,4-Dinitrophenol	51-28-5	mg/kg	0.0287	SL-6	< 0.2 UJ	< 0.199 UJ	< 0.199 UJ	< 0.2 UJ	< 0.2 UJ
2,4-Dinitrotoluene	121-14-2	mg/kg	0.000155	SL-6	< 0.0999 U	< 0.0997 U	< 0.0996 U	< 0.1 U	< 0.0997 U
2,6-Dinitrotoluene	606-20-2	mg/kg	0.0654	SL-7	< 0.0999 U	< 0.0997 U	< 0.0996 U	< 0.1 U	< 0.0997 U
2-Chloronaphthalene	91-58-7	mg/kg	0.277	SL-6	< 0.2 U	< 0.0999 U	< 0.0996 U	< 0.2 U	< 0.2 U
2-Chlorophenol	95-57-8	mg/kg	0.0115	SL-6	< 0.2 U	< 0.0999 U	< 0.0996 U	< 0.2 U	< 0.2 U
2-Methylphenol	95-48-7	mg/kg	0.00636	SL-7	< 0.2 U	< 0.0999 U	< 0.0996 U	< 0.2 U	< 0.2 U
2-Nitroaniline	88-74-4	mg/kg	292	SL-7	< 0.0999 U	< 0.0997 U	< 0.0996 U	< 0.1 U	< 0.0997 U
2-Nitrophenol	88-75-5	mg/kg			< 0.2 U	< 0.0999 U	< 0.0996 U	< 0.2 U	< 0.2 U
3 & 4 Methylphenol	65794-96-9	mg/kg							
3,3'-Dichlorobenzidine	91-94-1	mg/kg	2E-06	SL-6	< 0.0999 U	< 0.0997 U	< 0.0996 U	< 0.1 U	< 0.0997 U
3-Nitroaniline	99-09-2	mg/kg			< 0.0999 U	< 0.0997 U	< 0.0996 U	< 0.1 U	< 0.0997 U
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.00728	SL-6	< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
4-Bromophenyl phenyl ether	101-55-3	mg/kg			< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.028	SL-6	< 0.0999 U	< 0.0997 U	< 0.0996 U	< 0.1 U	< 0.0997 U
4-Chloroaniline	106-47-8	mg/kg	0.96	SL-7	< 0.0999 U	< 0.0997 U	< 0.0996 U	< 0.1 U	< 0.0997 U
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg			< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
4-Methylphenol	106-44-5	mg/kg	0.0624	SL-7	< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 UJ	< 0.2 UJ
4-Nitroaniline	100-01-6	mg/kg	30.5	SL-7	< 0.0999 U	< 0.0997 U	< 0.0996 U	< 0.1 U	< 0.0997 U
4-Nitrophenol	100-02-7	mg/kg	7	SL-9	< 0.0999 U	< 0.0997 U	< 0.0996 U	< 0.1 U	< 0.0997 U
Aniline	62-53-3	mg/kg	42.7	SL-7					
Benzidine	92-87-5	mg/kg	3.4E-08	SL-6					
Benzoic acid	65-85-0	mg/kg	0.169	SL-7	< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 UJ	< 0.2 UJ
Benzyl alcohol	100-51-6	mg/kg	0.0174	SL-7	< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
Benzyl butyl phthalate	85-68-7	mg/kg	0.000182	SL-6	< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg	0.333	SL-6	< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
Bis(2-chloroethoxy)methane	111-91-1	mg/kg			< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
Bis(2-chloroethyl) ether	111-44-4	mg/kg	2.18E-05	SL-6	< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
bis(2-Chloroisopropyl) ether	39638-32-9	mg/kg							
Bis(2-ethylhexyl) adipate	103-23-1	mg/kg	833	SL-1					
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	0.00512	SL-6	< 0.0499 U	1.56	0.939 J	0.113	0.0438 J
Carbazole	86-74-8	mg/kg			< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
Dibenzofuran	132-64-9	mg/kg	0.0292	SL-7	< 0.00498 U	0.211	0.0556	0.0113	0.00187 J
Diethyl phthalate	84-66-2	mg/kg	0.0341	SL-7	< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
Dimethyl phthalate	131-11-3	mg/kg	0.0188	SL-7	< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
Di-n-butyl phthalate	84-74-2	mg/kg	0.0149	SL-6	< 0.2 U	< 0.199 UJ	< 0.199 UJ	0.0992 J	< 0.2 U
Di-n-octyl phthalate	117-84-0	mg/kg	0.327	SL-7	< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
Hexachlorobenzene	118-74-1	mg/kg	4.01E-07	SL-6	< 0.0005 U	0.0469	< 0.005 U	< 0.00499 U	< 0.00249 U
Hexachlorobutadiene	87-68-3	mg/kg	1.13E-05	SL-6	< 0.0005 U	0.00612 J	< 0.00504 U	< 0.00638 U	< 0.00249 U
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.00169	SL-6	< 0.0999 UJ	< 0.0997 UJ	< 0.0996 UJ	< 0.1 UJ	< 0.0997 UJ
Hexachloroethane	67-72-1	mg/kg	9.67E-06	SL-6	< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
Isophorone	78-59-1	mg/kg	0.0387	SL-6	< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
Nitrobenzene	98-95-3	mg/kg	0.0406	SL-6	< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
N-Nitrosodimethylamine	62-75-9	mg/kg	0.000105	SL-6					
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	3.26E-05	SL-6	< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.00161	SL-7	< 0.2 U	0.0995 J	< 0.199 UJ	< 0.2 U	< 0.2 U
Pentachlorophenol	87-86-5	mg/kg	1.76E-06	SL-6	< 0.0999 UJ	< 0.0997 UJ	< 0.0996 UJ	< 0.1 UJ	< 0.0997 UJ
Phenol	108-95-2	mg/kg	0.0479	SL-7	< 0.2 U	< 0.199 UJ	< 0.199 UJ	< 0.2 U	< 0.2 U
Pyridine	110-86-1	mg/kg	36.4	SL-7					
Pesticides and Herbicides									
2,4'-DDD	53-19-0	mg/kg			< 0.001 U	< 0.2 U	< 0.44 U	< 0.00998 U	< 0.00498 U
2,4'-DDE	3424-82-6	mg/kg			< 0.001 U	< 11.1 U	< 2.22 U	< 0.00998 U	< 0.00498 U
2,4'-DDT	789-02-6	mg/kg			< 0.001 U	< 19.9 U	< 2.22 U	< 0.00998 U	< 0.00498 U
4,4'-DDD	72-54-8	mg/kg	3.64E-07	SL-6	< 0.001 U	< 0.2 U	< 0.01 U	< 0.00998 U	< 0.00498 U
4,4'-DDE	72-55-9	mg/kg	7.63E-08	SL-6	< 0.001 U	< 22.2 U	< 2 U	< 0.549 U	< 0.00498 U
4,4'-DDT	50-29-3	mg/kg	8.14E-07	SL-6	< 0.001 U	< 44.3 U	< 2.22 U	< 0.00998 U	< 0.00498 U
Aldrin	309-00-2	mg/kg	2.01E-09	SL-6	< 0.0005 U	20.3	2.45 J	0.525	0.0732
								0.00523	< 0.002 U

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date Sample Depth	MW-06 03/05/2021 MW-6-18-20 18 - 20 ft	MW-07 03/09/2021 MW-7-17-19 17 - 19 ft	MW-08 03/09/2021 MW-8-8-9 8 - 9 ft	MW-08 03/09/2021 MW-8-18-20 18 - 20 ft	MW-10 03/08/2021 MW-10-5.5-6.5 5.5 - 6.5 ft	MW-11 03/08/2021 MW-11-6-7 6 - 9 ft	MW-12 03/03/2021 MW-12-9.5-10.5 9.5 - 10.5 ft
Semivolatile Organic Compounds								
1,2-Dinitrobenzene	528-29-0	mg/kg	8	SL-1	--	--	--	--
1,2-Diphenylhydrazine	122-66-7	mg/kg	3.59E-05	SL-6	--	--	--	--
1,3-Dinitrobenzene	99-65-0	mg/kg	8	SL-1	--	--	--	--
1,4-Dinitrobenzene	100-25-4	mg/kg	8	SL-1	--	--	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	2400	SL-1	--	--	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	mg/kg	--	--	--	--	--	--
2,3-Dichloroaniline	608-27-5	mg/kg	--	--	--	--	--	--
2,4,5-Trichlorophenol	95-95-4	mg/kg	6.98E-05	SL-6	< 0.1 U	< 0.0995 U	< 0.0998 U	< 0.0995 U
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.401	SL-6	< 0.1 U	< 0.0995 U	< 0.0998 U	< 0.0995 U
2,4-Dichlorophenol	120-83-2	mg/kg	0.00434	SL-6	< 0.1 U	< 0.0995 U	< 0.0998 U	< 0.0995 U
2,4-Dimethylphenol	105-67-9	mg/kg	0.00227	SL-7	< 0.1 U	< 0.0995 U	< 0.0998 U	< 0.0995 U
2,4-Dinitrophenol	51-28-5	mg/kg	0.0287	SL-6	< 0.2 UJ	< 0.199 UJ	< 0.2 UJ	< 0.199 UJ
2,4-Dinitrotoluene	121-14-2	mg/kg	0.000155	SL-6	< 0.1 U	< 0.0995 U	< 0.0998 U	< 0.0995 U
2,6-Dinitrotoluene	606-20-2	mg/kg	0.0654	SL-7	< 0.1 U	< 0.0995 U	< 0.0998 U	< 0.0995 U
2-Chloronaphthalene	91-58-7	mg/kg	0.277	SL-6	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
2-Chlorophenol	95-57-8	mg/kg	0.0115	SL-6	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
2-Methylphenol	95-48-7	mg/kg	0.00636	SL-7	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
2-Nitroaniline	88-74-4	mg/kg	292	SL-7	< 0.1 U	< 0.0995 U	< 0.0998 U	< 0.0995 U
2-Nitrophenol	88-75-5	mg/kg	< 0.02 U	--	< 0.0995 U	< 0.0998 U	< 0.02 U	< 0.0199 U
3 & 4 Methylphenol	65794-96-9	mg/kg	--	--	--	--	--	--
3,3'-Dichlorobenzidine	91-94-1	mg/kg	2E-06	SL-6	< 0.1 U	< 0.0995 U	< 0.0998 U	< 0.0995 U
3-Nitroaniline	99-09-2	mg/kg	--	--	< 0.1 U	< 0.0995 U	< 0.0998 U	< 0.0995 U
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.00728	SL-6	< 0.2 U	< 0.199 U	< 0.2 U	< 0.199 U
4-Bromophenyl phenyl ether	101-55-3	mg/kg	--	--	< 0.02 U	< 0.0995 U	< 0.02 U	< 0.0199 U
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.028	SL-6	< 0.1 U	< 0.0995 U	< 0.0998 U	< 0.0995 U
4-Chloroaniline	106-47-8	mg/kg	0.96	SL-7	< 0.1 U	< 0.0995 U	< 0.0998 U	< 0.0995 U
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	--	--	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
4-Methylphenol	106-44-5	mg/kg	0.0624	SL-7	< 0.02 U	< 0.0199 U	< 0.02 UJ	< 0.0199 UJ
4-Nitroaniline	100-01-6	mg/kg	30.5	SL-7	< 0.1 U	< 0.0995 U	< 0.0998 U	< 0.0995 U
4-Nitrophenol	100-02-7	mg/kg	7	SL-9	< 0.1 U	< 0.0995 U	< 0.0998 U	< 0.0995 U
Aniline	62-53-3	mg/kg	42.7	SL-7	--	--	--	--
Benzidine	92-87-5	mg/kg	3.4E-08	SL-6	--	--	--	--
Benzoic acid	65-85-0	mg/kg	0.169	SL-7	< 0.2 U	< 0.199 UJ	< 0.2 UJ	< 0.199 UJ
Benzyl alcohol	100-51-6	mg/kg	0.0174	SL-7	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
Benzyl butyl phthalate	85-68-7	mg/kg	0.000182	SL-6	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg	0.333	SL-6	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	--	--	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
Bis(2-chloroethyl) ether	111-44-4	mg/kg	2.18E-05	SL-6	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
bis(2-Chloroisopropyl)ether	39638-32-9	mg/kg	--	--	--	--	--	--
Bis(2-ethylhexyl) adipate	103-23-1	mg/kg	833	SL-1	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	0.00512	SL-6	< 0.05 U	< 0.0497 U	< 0.0499 U	< 0.0497 U
Carbazole	86-74-8	mg/kg	--	--	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
Dibenzofuran	132-64-9	mg/kg	0.0292	SL-7	< 0.005 U	< 0.00497 U	< 0.00498 U	< 0.00497 U
Diethyl phthalate	84-66-2	mg/kg	0.0341	SL-7	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
Dimethyl phthalate	131-11-3	mg/kg	0.0188	SL-7	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
Di-n-butyl phthalate	84-74-2	mg/kg	0.0149	SL-6	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
Di-n-octyl phthalate	117-84-0	mg/kg	0.327	SL-7	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
Hexachlorobenzene	118-74-1	mg/kg	4.01E-07	SL-6	< 0.0005 U	< 0.0005 U	< 0.02 U	< 0.0199 U
Hexachlorobutadiene	87-68-3	mg/kg	1.13E-05	SL-6	< 0.0005 U	< 0.0005 U	< 0.00508 U	< 0.00563 U
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.00169	SL-6	< 0.1 UJ	< 0.0995 UJ	< 0.0998 UJ	< 0.0995 UJ
Hexachloroethane	67-72-1	mg/kg	9.67E-06	SL-6	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
Isophorone	78-59-1	mg/kg	0.0387	SL-6	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
Nitrobenzene	98-95-3	mg/kg	0.0406	SL-6	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
N-Nitrosodimethylamine	62-75-9	mg/kg	0.000105	SL-6	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	3.26E-05	SL-6	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.00161	SL-7	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
Pentachlorophenol	87-86-5	mg/kg	1.76E-06	SL-6	< 0.1 UJ	< 0.0995 UJ	< 0.0998 UJ	< 0.0995 UJ
Phenol	108-95-2	mg/kg	0.0479	SL-7	< 0.02 U	< 0.0199 U	< 0.02 U	< 0.0199 U
Pyridine	110-86-1	mg/kg	36.4	SL-7	--	--	--	--
Pesticides and Herbicides								
2,4'-DDD	53-19-0	mg/kg	--	--	< 0.001 U	--	--	--
2,4'-DDE	3424-82-6	mg/kg	--	--	< 0.001 U	--	--	--
2,4'-DDT	789-02-6	mg/kg	--	--	< 0.001 U	--	--	--
4,4'-DDD	72-54-8	mg/kg	3.64E-07	SL-6	< 0.001 U	--	--	--
4,4'-DDE	72-55-9	mg/kg	7.63E-08	SL-6	< 0.001 U	--	--	--
4,4'-DDT	50-29-3	mg/kg	8.14E-07	SL-6	< 0.001 U	--	--	--
Aldrin	309-00-2	mg/kg	2.01E-09	SL-6	< 0.0005 U	--	--	--

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location	MW-13	MW-13	SB-01	SB-02	SB-03	SB-03	SB-04
	Date	03/01/2021	03/01/2021	09/27/2007	09/28/2007	09/27/2007	09/27/2007	09/27/2007
	Sample	MW-13-9.5-10.5	MW-13-18-19.5	SB-01-9	SB-02-9	SB-03-7	SB-03-13.5	SB-04-8
	Depth	9.5 - 10.5 ft	18 - 19.5 ft	9 - 11 ft	9 - 11 ft	7 - 9 ft	14 - 16 ft	8 - 10 ft
Semivolatile Organic Compounds								
1,2-Dinitrobenzene	528-29-0	mg/kg	8	SL-1	--	--	--	--
1,2-Diphenylhydrazine	122-66-7	mg/kg	3.59E-05	SL-6	--	--	--	--
1,3-Dinitrobenzene	99-65-0	mg/kg	8	SL-1	--	--	--	--
1,4-Dinitrobenzene	100-25-4	mg/kg	8	SL-1	--	--	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	2400	SL-1	--	--	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	mg/kg	--	--	--	--	--	--
2,3-Dichloroaniline	608-27-5	mg/kg	--	--	--	--	--	--
2,4,5-Trichlorophenol	95-95-4	mg/kg	6.98E-05	SL-6	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.401	SL-6	--	--	--	--
2,4-Dichlorophenol	120-83-2	mg/kg	0.00434	SL-6	--	--	--	--
2,4-Dimethylphenol	105-67-9	mg/kg	0.00227	SL-7	--	--	--	--
2,4-Dinitrophenol	51-28-5	mg/kg	0.0287	SL-6	--	--	--	--
2,4-Dinitrotoluene	121-14-2	mg/kg	0.000155	SL-6	--	--	--	--
2,6-Dinitrotoluene	606-20-2	mg/kg	0.0654	SL-7	--	--	--	--
2-Chloronaphthalene	91-58-7	mg/kg	0.277	SL-6	--	--	--	--
2-Chlorophenol	95-57-8	mg/kg	0.0115	SL-6	--	--	--	--
2-Methylphenol	95-48-7	mg/kg	0.00636	SL-7	--	--	--	--
2-Nitroaniline	88-74-4	mg/kg	292	SL-7	--	--	--	--
2-Nitrophenol	88-75-5	mg/kg	--	--	--	--	--	--
3 & 4 Methylphenol	65794-96-9	mg/kg	--	--	--	--	--	--
3,3'-Dichlorobenzidine	91-94-1	mg/kg	2E-06	SL-6	--	--	--	--
3-Nitroaniline	99-09-2	mg/kg	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.00728	SL-6	--	--	--	--
4-Bromophenyl phenyl ether	101-55-3	mg/kg	--	--	--	--	--	--
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.028	SL-6	--	--	--	--
4-Chloroaniline	106-47-8	mg/kg	0.96	SL-7	--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	--	--	--	--	--	--
4-Methylphenol	106-44-5	mg/kg	0.0624	SL-7	--	--	--	--
4-Nitroaniline	100-01-6	mg/kg	30.5	SL-7	--	--	--	--
4-Nitrophenol	100-02-7	mg/kg	7	SL-9	--	--	--	--
Aniline	62-53-3	mg/kg	42.7	SL-7	--	--	--	--
Benzidine	92-87-5	mg/kg	3.4E-08	SL-6	--	--	--	--
Benzoic acid	65-85-0	mg/kg	0.169	SL-7	--	--	--	--
Benzyl alcohol	100-51-6	mg/kg	0.0174	SL-7	--	--	--	--
Benzyl butyl phthalate	85-68-7	mg/kg	0.000182	SL-6	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg	0.333	SL-6	--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	--	--	--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	mg/kg	2.18E-05	SL-6	--	--	--	--
bis(2-Chloroisopropyl) ether	39638-32-9	mg/kg	--	--	--	--	--	--
Bis(2-ethylhexyl) adipate	103-23-1	mg/kg	833	SL-1	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	0.00512	SL-6	--	--	--	--
Carbazole	86-74-8	mg/kg	--	--	--	--	--	--
Dibenzofuran	132-64-9	mg/kg	0.0292	SL-7	--	--	--	--
Diethyl phthalate	84-66-2	mg/kg	0.0341	SL-7	--	--	--	--
Dimethyl phthalate	131-11-3	mg/kg	0.0188	SL-7	--	--	--	--
Di-n-butyl phthalate	84-74-2	mg/kg	0.0149	SL-6	--	--	--	--
Di-n-octyl phthalate	117-84-0	mg/kg	0.327	SL-7	--	--	--	--
Hexachlorobenzene	118-74-1	mg/kg	4.01E-07	SL-6	--	--	--	--
Hexachlorobutadiene	87-68-3	mg/kg	1.13E-05	SL-6	--	--	--	--
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.00169	SL-6	--	--	--	--
Hexachloroethane	67-72-1	mg/kg	9.67E-06	SL-6	--	--	--	--
Isophorone	78-59-1	mg/kg	0.0387	SL-6	--	--	--	--
Nitrobenzene	98-95-3	mg/kg	0.0406	SL-6	--	--	--	--
N-Nitrosodimethylamine	62-75-9	mg/kg	0.000105	SL-6	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	3.26E-05	SL-6	--	--	--	--
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.00161	SL-7	--	--	--	--
Pentachlorophenol	87-86-5	mg/kg	1.76E-06	SL-6	--	--	--	--
Phenol	108-95-2	mg/kg	0.0479	SL-7	--	--	--	--
Pyridine	110-86-1	mg/kg	36.4	SL-7	--	--	--	--
Pesticides and Herbicides								
2,4'-DDD	53-19-0	mg/kg	--	--	--	--	--	--
2,4'-DDE	3424-82-6	mg/kg	--	--	--	--	--	--
2,4'-DDT	789-02-6	mg/kg	--	--	--	--	--	--
4,4'-DDD	72-54-8	mg/kg	3.64E-07	SL-6	--	--	--	--
4,4'-DDE	72-55-9	mg/kg	7.63E-08	SL-6	--	--	--	--
4,4'-DDT	50-29-3	mg/kg	8.14E-07	SL-6	--	--	--	--
Aldrin	309-00-2	mg/kg	2.01E-09	SL-6	--	--	--	--

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location	SB-05	SB-06	SB-07	SB-08	SB-09	SB-10	SB-13
	Date	09/27/2007	09/28/2007	09/28/2007	09/27/2007	09/27/2007	09/28/2007	10/01/2007
	Sample	SB-05-8	SB-06-8	SB-07-9	SB-08-9	SB-09-10	SB-10-14	SB-13-7
	Depth	8 - 10 ft	8 - 10 ft	9 - 11 ft	9 - 11 ft	10 - 12 ft	14 - 16 ft	7 - 9 ft
Semivolatile Organic Compounds								
1,2-Dinitrobenzene	528-29-0	mg/kg	8	SL-1	--	--	--	--
1,2-Diphenylhydrazine	122-66-7	mg/kg	3.59E-05	SL-6	--	--	--	--
1,3-Dinitrobenzene	99-65-0	mg/kg	8	SL-1	--	--	--	--
1,4-Dinitrobenzene	100-25-4	mg/kg	8	SL-1	--	--	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	2400	SL-1	--	--	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	mg/kg	--	--	--	--	--	--
2,3-Dichloroaniline	608-27-5	mg/kg	--	--	--	--	--	--
2,4,5-Trichlorophenol	95-95-4	mg/kg	6.98E-05	SL-6	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.401	SL-6	--	--	--	--
2,4-Dichlorophenol	120-83-2	mg/kg	0.00434	SL-6	--	--	--	--
2,4-Dimethylphenol	105-67-9	mg/kg	0.00227	SL-7	< 0.05 R	< 0.049 R	< 0.05 R	< 0.049 R
2,4-Dinitrophenol	51-28-5	mg/kg	0.0287	SL-6	--	--	--	--
2,4-Dinitrotoluene	121-14-2	mg/kg	0.000155	SL-6	--	--	--	--
2,6-Dinitrotoluene	606-20-2	mg/kg	0.0654	SL-7	--	--	--	--
2-Chloronaphthalene	91-58-7	mg/kg	0.277	SL-6	--	--	--	--
2-Chlorophenol	95-57-8	mg/kg	0.0115	SL-6	--	--	--	--
2-Methylphenol	95-48-7	mg/kg	0.00636	SL-7	< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U
2-Nitroaniline	88-74-4	mg/kg	292	SL-7	--	--	--	--
2-Nitrophenol	88-75-5	mg/kg	--	--	--	--	--	--
3 & 4 Methylphenol	65794-96-9	mg/kg	--	--	--	--	--	--
3,3'-Dichlorobenzidine	91-94-1	mg/kg	2E-06	SL-6	--	--	--	--
3-Nitroaniline	99-09-2	mg/kg	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.00728	SL-6	--	--	--	--
4-Bromophenyl phenyl ether	101-55-3	mg/kg	--	--	--	--	--	--
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.028	SL-6	--	--	--	--
4-Chloroaniline	106-47-8	mg/kg	0.96	SL-7	--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	--	--	--	--	--	--
4-Methylphenol	106-44-5	mg/kg	0.0624	SL-7	< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U
4-Nitroaniline	100-01-6	mg/kg	30.5	SL-7	--	--	--	--
4-Nitrophenol	100-02-7	mg/kg	7	SL-9	--	--	--	--
Aniline	62-53-3	mg/kg	42.7	SL-7	--	--	--	--
Benzidine	92-87-5	mg/kg	3.4E-08	SL-6	--	--	--	--
Benzoic acid	65-85-0	mg/kg	0.169	SL-7	0.19	< 0.2 U	< 0.2 U	< 0.2 U
Benzyl alcohol	100-51-6	mg/kg	0.0174	SL-7	< 0.02 U	< 0.02 U	< 0.02 U	< 0.02 U
Benzyl butyl phthalate	85-68-7	mg/kg	0.000182	SL-6	< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg	0.333	SL-6	--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	--	--	--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	mg/kg	2.18E-05	SL-6	--	--	--	--
bis(2-Chloroisopropyl)ether	39638-32-9	mg/kg	--	--	--	--	--	--
Bis(2-ethylhexyl) adipate	103-23-1	mg/kg	833	SL-1	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	0.00512	SL-6	< 0.1 U	< 0.018 U	< 0.099 U	< 0.012 U
Carbazole	86-74-8	mg/kg	--	--	--	--	--	--
Dibenzofuran	132-64-9	mg/kg	0.0292	SL-7	< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U
Diethyl phthalate	84-66-2	mg/kg	0.0341	SL-7	< 0.01 U	< 0.0036 U	< 0.0019 U	< 0.003 U
Dimethyl phthalate	131-11-3	mg/kg	0.0188	SL-7	< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U
Di-n-butyl phthalate	84-74-2	mg/kg	0.0149	SL-6	< 0.02 U	< 0.011 U	< 0.0095 U	< 0.012 U
Di-n-octyl phthalate	117-84-0	mg/kg	0.327	SL-7	< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U
Hexachlorobenzene	118-74-1	mg/kg	4.01E-07	SL-6	< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U
Hexachlorobutadiene	87-68-3	mg/kg	1.13E-05	SL-6	< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.00169	SL-6	--	--	--	--
Hexachloroethane	67-72-1	mg/kg	9.67E-06	SL-6	--	--	--	--
Isophorone	78-59-1	mg/kg	0.0387	SL-6	--	--	--	--
Nitrobenzene	98-95-3	mg/kg	0.0406	SL-6	--	--	--	--
N-Nitrosodimethylamine	62-75-9	mg/kg	0.000105	SL-6	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	3.26E-05	SL-6	--	--	--	--
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.00161	SL-7	< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U
Pentachlorophenol	87-86-5	mg/kg	1.76E-06	SL-6	< 0.1 U	< 0.098 U	< 0.099 U	< 0.098 U
Phenol	108-95-2	mg/kg	0.0479	SL-7	< 0.045 U	< 0.021 U	< 0.016 U	< 0.024 U
Pyridine	110-86-1	mg/kg	36.4	SL-7	--	--	--	--
Pesticides and Herbicides								
2,4'-DDD	53-19-0	mg/kg	--	--	< 0.00099 U	< 0.001 U	< 0.001 U	< 0.00099 U
2,4'-DDE	3424-82-6	mg/kg	--	--	< 0.00099 U	< 0.001 U	< 0.001 U	< 0.00099 U
2,4'-DDT	789-02-6	mg/kg	--	--	< 0.00099 U	0.0011	0.0017	< 0.001 U
4,4'-DDD	72-54-8	mg/kg	3.64E-07	SL-6	< 0.00099 U	< 0.001 U	0.00026	< 0.001 U
4,4'-DDE	72-55-9	mg/kg	7.63E-08	SL-6	< 0.00099 U	0.0016	0.0021	0.00049
4,4'-DDT	50-29-3	mg/kg	8.14E-07	SL-6	< 0.00099 U	0.0018	0.0033	< 0.001 U
Aldrin	309-00-2	mg/kg	2.01E-09	SL-6	< 0.00099 U	< 0.001 U	0.002	< 0.001 U

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date Sample Depth	SB-14 10/01/2007 SB-14-7.5 8 - 10 ft	SB-17 07/27/2011 SB17-10.0-072711 10 - 10 ft	SB-18A 07/27/2011 SB18A-9.0-072711 9 - 9 ft	SB-19 07/28/2011 SB19-8.0-072811 8 - 8 ft	SB-20A 07/27/2011 SB20A-8.5-072711 8.5 - 8.5 ft	SB-21 07/27/2011 SB21-9.0-072711 9 - 9 ft	SB-22 07/27/2011 SB22-10.0-072711 10 - 10 ft
Semivolatile Organic Compounds								
1,2-Dinitrobenzene	528-29-0	mg/kg	8	SL-1	--	--	< 0.4 U	< 0.43 U
1,2-Diphenylhydrazine	122-66-7	mg/kg	3.59E-05	SL-6	--	--	< 0.4 U	< 0.43 U
1,3-Dinitrobenzene	99-65-0	mg/kg	8	SL-1	--	--	< 0.4 U	< 0.43 U
1,4-Dinitrobenzene	100-25-4	mg/kg	8	SL-1	--	--	< 0.4 U	< 0.43 U
2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	2400	SL-1	--	--	< 0.4 U	< 0.43 U
2,3,5,6-Tetrachlorophenol	935-95-5	mg/kg	--	--	--	--	< 0.4 U	< 0.43 U
2,3-Dichloroaniline	608-27-5	mg/kg	--	--	--	--	< 0.4 U	< 0.43 U
2,4,5-Trichlorophenol	95-95-4	mg/kg	6.98E-05	SL-6	--	--	< 0.4 U	< 0.43 U
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.401	SL-6	--	--	< 0.4 U	< 0.43 U
2,4-Dichlorophenol	120-83-2	mg/kg	0.00434	SL-6	--	--	< 0.4 U	< 0.43 U
2,4-Dimethylphenol	105-67-9	mg/kg	0.00227	SL-7	< 5 R	--	< 4 U	< 4.3 U
2,4-Dinitrophenol	51-28-5	mg/kg	0.0287	SL-6	--	--	2.3	< 2.2 U
2,4-Dinitrotoluene	121-14-2	mg/kg	0.000155	SL-6	--	--	< 0.4 U	< 0.43 U
2,6-Dinitrotoluene	606-20-2	mg/kg	0.0654	SL-7	--	--	< 0.4 U	< 0.43 U
2-Chloronaphthalene	91-58-7	mg/kg	0.277	SL-6	--	--	< 0.4 U	< 0.43 U
2-Chlorophenol	95-57-8	mg/kg	0.0115	SL-6	--	--	< 0.4 U	< 0.43 U
2-Methylphenol	95-48-7	mg/kg	0.00636	SL-7	< 1 U	--	< 0.4 U	< 0.43 U
2-Nitroaniline	88-74-4	mg/kg	292	SL-7	--	--	< 0.4 U	< 0.43 U
2-Nitrophenol	88-75-5	mg/kg	--	--	--	--	< 0.4 U	< 0.43 U
3 & 4 Methylphenol	65794-96-9	mg/kg	--	--	--	--	< 0.4 U	< 0.43 U
3,3'-Dichlorobenzidine	91-94-1	mg/kg	2E-06	SL-6	--	--	< 4 U	< 4.3 U
3-Nitroaniline	99-09-2	mg/kg	--	--	--	--	< 0.4 U	< 0.43 U
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.00728	SL-6	--	--	< 2 U	< 2.2 U
4-Bromophenyl phenyl ether	101-55-3	mg/kg	--	--	--	--	< 0.4 U	< 0.43 U
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.028	SL-6	--	--	< 0.4 U	< 0.43 U
4-Chloroaniline	106-47-8	mg/kg	0.96	SL-7	--	--	< 0.4 U	< 0.43 U
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	--	--	--	--	< 0.4 U	< 0.43 U
4-Methylphenol	106-44-5	mg/kg	0.0624	SL-7	< 1 U	--	--	--
4-Nitroaniline	100-01-6	mg/kg	30.5	SL-7	--	--	< 0.4 U	< 0.43 U
4-Nitrophenol	100-02-7	mg/kg	7	SL-9	--	--	< 0.4 U	< 0.43 U
Aniline	62-53-3	mg/kg	42.7	SL-7	--	--	< 0.4 U	< 0.43 U
Benzidine	92-87-5	mg/kg	3.4E-08	SL-6	--	--	< 4 U	< 4.3 U
Benzoic acid	65-85-0	mg/kg	0.169	SL-7	< 20 U	--	--	--
Benzyl alcohol	100-51-6	mg/kg	0.0174	SL-7	< 2 U	--	< 0.4 U	< 0.43 U
Benzyl butyl phthalate	85-68-7	mg/kg	0.000182	SL-6	< 1 U	--	< 4 U	< 4.3 U
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg	0.333	SL-6	--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	--	--	--	--	< 0.4 U	< 0.43 U
Bis(2-chloroethyl) ether	111-44-4	mg/kg	2.18E-05	SL-6	--	--	< 0.4 U	< 0.43 U
bis(2-Chloroisopropyl)ether	39638-32-9	mg/kg	--	--	--	--	< 0.4 U	< 0.43 U
Bis(2-ethylhexyl) adipate	103-23-1	mg/kg	833	SL-1	--	--	< 0.4 U	< 0.43 U
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	0.00512	SL-6	2 J	--	< 0.4 U	0.74
Carbazole	86-74-8	mg/kg	--	--	--	--	< 0.4 U	< 0.43 U
Dibenzofuran	132-64-9	mg/kg	0.0292	SL-7	0.6 J	--	< 0.4 U	< 0.43 U
Diethyl phthalate	84-66-2	mg/kg	0.0341	SL-7	< 1 U	--	< 2 U	< 2.2 U
Dimethyl phthalate	131-11-3	mg/kg	0.0188	SL-7	< 1 U	--	< 0.4 U	< 0.43 U
Di-n-butyl phthalate	84-74-2	mg/kg	0.0149	SL-6	< 2 U	--	< 4 U	< 4.3 U
Di-n-octyl phthalate	117-84-0	mg/kg	0.327	SL-7	< 1 U	--	< 0.4 U	< 0.43 U
Hexachlorobenzene	118-74-1	mg/kg	4.01E-07	SL-6	< 1 U	--	< 0.4 U	< 0.43 U
Hexachlorobutadiene	87-68-3	mg/kg	1.13E-05	SL-6	< 0.025 U	--	< 0.33 U	< 0.38 U
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.00169	SL-6	--	--	< 0.4 U	< 0.43 U
Hexachloroethane	67-72-1	mg/kg	9.67E-06	SL-6	--	--	< 0.4 U	< 0.43 U
Isophorone	78-59-1	mg/kg	0.0387	SL-6	--	--	< 0.4 U	< 0.43 U
Nitrobenzene	98-95-3	mg/kg	0.0406	SL-6	--	--	< 0.4 U	< 0.43 U
N-Nitrosodimethylamine	62-75-9	mg/kg	0.000105	SL-6	--	--	< 0.4 U	< 0.43 U
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	3.26E-05	SL-6	--	--	< 0.4 U	< 0.43 U
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.00161	SL-7	< 1 U	--	< 0.4 U	< 0.43 U
Pentachlorophenol	87-86-5	mg/kg	1.76E-06	SL-6	< 10 U	--	< 2 U	< 2.2 U
Phenol	108-95-2	mg/kg	0.0479	SL-7	< 3 U	--	< 0.4 U	< 0.43 U
Pyridine	110-86-1	mg/kg	36.4	SL-7	--	--	< 4 U	< 4.3 U
Pesticides and Herbicides								
2,4'-DDD	53-19-0	mg/kg	--	--	< 0.098 U	--	--	--
2,4'-DDE	3424-82-6	mg/kg	--	--	< 0.074 U	--	--	--
2,4'-DDT	789-02-6	mg/kg	0.9	--	--	--	--	--
4,4'-DDD	72-54-8	mg/kg	3.64E-07	SL-6	0.13	--	< 0.012 U	< 0.013 U
4,4'-DDE	72-55-9	mg/kg	7.63E-08	SL-6	0.39 J	--	0.32	0.19
4,4'-DDT	50-29-3	mg/kg	8.14E-07	SL-6	1.2 J	--	< 0.012 U	< 0.013 U
Aldrin	309-00-2	mg/kg	2.01E-09	SL-6	9.4	--	0.018 J	3.5

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date Sample Depth	SB-22 07/27/2011 SB22-14.0-072711 14 - 14 ft	SB-23 07/28/2011 SB23-8.0-072811 8 - 8 ft	SB-24 07/28/2011 SB24-7.0-072811 7 - 7 ft	SB-25 07/28/2011 SB25-10.0-072811 10 - 10 ft	SB-26 03/04/2021 SB-26-5.5-6.5 5.5 - 6.5 ft	SB-26 03/04/2021 SB-26-12.5 12.5 ft	SB-26 03/04/2021 SB-26-18-20 18 - 20 ft
Semivolatile Organic Compounds								
1,2-Dinitrobenzene	528-29-0	mg/kg	8	SL-1	--	--	--	--
1,2-Diphenylhydrazine	122-66-7	mg/kg	3.59E-05	SL-6	--	--	--	--
1,3-Dinitrobenzene	99-65-0	mg/kg	8	SL-1	--	--	--	--
1,4-Dinitrobenzene	100-25-4	mg/kg	8	SL-1	--	--	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	2400	SL-1	--	--	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	mg/kg	--	--	--	--	--	--
2,3-Dichloroaniline	608-27-5	mg/kg	--	--	--	--	--	--
2,4,5-Trichlorophenol	95-95-4	mg/kg	6.98E-05	SL-6	--	< 0.0996 U	< 0.1 U	--
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.401	SL-6	--	< 0.0996 U	< 0.1 U	--
2,4-Dichlorophenol	120-83-2	mg/kg	0.00434	SL-6	--	< 0.0996 U	< 0.1 U	--
2,4-Dimethylphenol	105-67-9	mg/kg	0.00227	SL-7	--	< 0.0996 U	< 0.1 U	--
2,4-Dinitrophenol	51-28-5	mg/kg	0.0287	SL-6	--	< 0.199 UJ	< 0.2 UJ	--
2,4-Dinitrotoluene	121-14-2	mg/kg	0.000155	SL-6	--	< 0.0996 U	< 0.1 U	--
2,6-Dinitrotoluene	606-20-2	mg/kg	0.0654	SL-7	--	< 0.0996 U	< 0.1 U	--
2-Chloronaphthalene	91-58-7	mg/kg	0.277	SL-6	--	< 0.0199 U	< 0.02 U	--
2-Chlorophenol	95-57-8	mg/kg	0.0115	SL-6	--	< 0.0199 U	< 0.02 U	--
2-Methylphenol	95-48-7	mg/kg	0.00636	SL-7	--	< 0.0199 U	< 0.02 U	--
2-Nitroaniline	88-74-4	mg/kg	292	SL-7	--	< 0.0996 U	< 0.1 U	--
2-Nitrophenol	88-75-5	mg/kg	--	--	--	< 0.0199 U	< 0.02 U	--
3 & 4 Methylphenol	65794-96-9	mg/kg	--	--	--	--	--	--
3,3'-Dichlorobenzidine	91-94-1	mg/kg	2E-06	SL-6	--	< 0.0996 U	< 0.1 U	--
3-Nitroaniline	99-09-2	mg/kg	--	--	--	< 0.0996 U	< 0.1 U	--
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.00728	SL-6	--	< 0.199 UJ	< 0.2 U	--
4-Bromophenyl phenyl ether	101-55-3	mg/kg	--	--	--	< 0.0199 U	< 0.02 U	--
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.028	SL-6	--	< 0.0996 U	< 0.1 U	--
4-Chloroaniline	106-47-8	mg/kg	0.96	SL-7	--	< 0.0996 U	< 0.1 U	--
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	--	--	--	< 0.0199 U	< 0.02 U	--
4-Methylphenol	106-44-5	mg/kg	0.0624	SL-7	--	< 0.0199 U	< 0.02 U	--
4-Nitroaniline	100-01-6	mg/kg	30.5	SL-7	--	< 0.0996 U	< 0.1 U	--
4-Nitrophenol	100-02-7	mg/kg	7	SL-9	--	< 0.0996 U	< 0.1 U	--
Aniline	62-53-3	mg/kg	42.7	SL-7	--	--	--	--
Benzidine	92-87-5	mg/kg	3.4E-08	SL-6	--	--	--	--
Benzoic acid	65-85-0	mg/kg	0.169	SL-7	--	< 0.199 UJ	0.305	--
Benzyl alcohol	100-51-6	mg/kg	0.0174	SL-7	--	< 0.0199 U	< 0.02 U	--
Benzyl butyl phthalate	85-68-7	mg/kg	0.000182	SL-6	--	< 0.0199 U	< 0.02 U	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg	0.333	SL-6	--	< 0.0199 U	< 0.02 U	--
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	--	--	--	< 0.0199 U	< 0.02 U	--
Bis(2-chloroethyl) ether	111-44-4	mg/kg	2.18E-05	SL-6	--	< 0.0199 U	< 0.02 U	--
bis(2-Chloroisopropyl)ether	39638-32-9	mg/kg	--	--	--	--	--	--
Bis(2-ethylhexyl) adipate	103-23-1	mg/kg	833	SL-1	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	0.00512	SL-6	--	< 0.0498 U	< 0.05 U	--
Carbazole	86-74-8	mg/kg	--	--	--	< 0.0199 U	< 0.02 U	--
Dibenzofuran	132-64-9	mg/kg	0.0292	SL-7	--	< 0.00499 U	0.00241 J	--
Diethyl phthalate	84-66-2	mg/kg	0.0341	SL-7	--	0.124	< 0.02 U	--
Dimethyl phthalate	131-11-3	mg/kg	0.0188	SL-7	--	< 0.0199 U	< 0.02 U	--
Di-n-butyl phthalate	84-74-2	mg/kg	0.0149	SL-6	--	< 0.0199 U	< 0.02 U	--
Di-n-octyl phthalate	117-84-0	mg/kg	0.327	SL-7	--	< 0.0199 U	< 0.02 U	--
Hexachlorobenzene	118-74-1	mg/kg	4.01E-07	SL-6	--	< 0.00249 U	< 0.0005 U	--
Hexachlorobutadiene	87-68-3	mg/kg	1.13E-05	SL-6	--	< 0.00249 U	< 0.0005 U	--
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.00169	SL-6	--	< 0.0996 UJ	< 0.1 UJ	--
Hexachloroethane	67-72-1	mg/kg	9.67E-06	SL-6	--	< 0.0199 U	< 0.02 U	--
Isophorone	78-59-1	mg/kg	0.0387	SL-6	--	< 0.0199 U	< 0.02 U	--
Nitrobenzene	98-95-3	mg/kg	0.0406	SL-6	--	< 0.0199 U	< 0.02 U	--
N-Nitrosodimethylamine	62-75-9	mg/kg	0.000105	SL-6	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	3.26E-05	SL-6	--	< 0.0199 U	< 0.02 U	--
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.00161	SL-7	--	< 0.0199 U	< 0.02 U	--
Pentachlorophenol	87-86-5	mg/kg	1.76E-06	SL-6	--	< 0.0996 UJ	< 0.1 UJ	--
Phenol	108-95-2	mg/kg	0.0479	SL-7	--	< 0.0199 U	0.0129 J	--
Pyridine	110-86-1	mg/kg	36.4	SL-7	--	--	--	--
Pesticides and Herbicides								
2,4'-DDD	53-19-0	mg/kg	--	--	--	< 0.00498 U	< 0.001 U	--
2,4'-DDE	3424-82-6	mg/kg	--	--	--	< 0.00498 U	< 0.004 U	--
2,4'-DDT	789-02-6	mg/kg	--	--	--	< 0.00498 U	< 0.001 U	--
4,4'-DDD	72-54-8	mg/kg	3.64E-07	SL-6	--	< 0.00498 U	< 0.001 U	--
4,4'-DDE	72-55-9	mg/kg	7.63E-08	SL-6	--	< 0.00498 U	0.00323	--
4,4'-DDT	50-29-3	mg/kg	8.14E-07	SL-6	--	< 0.00498 U	< 0.001 U	--
Aldrin	309-00-2	mg/kg	2.01E-09	SL-6	--	0.015	< 0.0005 U	--

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location	SB-27	SB-27	SB-28	SB-30	SB-30	SB-30	SB-31
	Date	03/09/2021	03/09/2021	03/01/2021	03/01/2021	03/01/2021	03/01/2021	03/01/2021
	Sample	SB-27-8-9	SB-27-18-20	SB-28-14.5-15.5	SB-30-11.5-12.5	SB-30-12.5-14.5	SB-30-23-25	SB-31-10-11
	Depth	8 - 9 ft	18 - 20 ft	14.5 - 15.5 ft	11.5 - 12.5 ft	12.5 - 14.5 ft	23 - 25 ft	10 - 11 ft
Semivolatile Organic Compounds								
1,2-Dinitrobenzene	528-29-0	mg/kg	8	SL-1	--	--	--	--
1,2-Diphenylhydrazine	122-66-7	mg/kg	3.59E-05	SL-6	--	--	--	--
1,3-Dinitrobenzene	99-65-0	mg/kg	8	SL-1	--	--	--	--
1,4-Dinitrobenzene	100-25-4	mg/kg	8	SL-1	--	--	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	2400	SL-1	--	--	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	mg/kg	--	--	--	--	--	--
2,3-Dichloroaniline	608-27-5	mg/kg	--	--	--	--	--	--
2,4,5-Trichlorophenol	95-95-4	mg/kg	6.98E-05	SL-6	< 0.1 U	--	--	--
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.401	SL-6	< 0.1 U	--	--	--
2,4-Dichlorophenol	120-83-2	mg/kg	0.00434	SL-6	< 0.1 U	--	--	--
2,4-Dimethylphenol	105-67-9	mg/kg	0.00227	SL-7	< 0.1 U	--	--	--
2,4-Dinitrophenol	51-28-5	mg/kg	0.0287	SL-6	< 0.2 UJ	--	--	--
2,4-Dinitrotoluene	121-14-2	mg/kg	0.000155	SL-6	< 0.1 U	--	--	--
2,6-Dinitrotoluene	606-20-2	mg/kg	0.0654	SL-7	< 0.1 U	--	--	--
2-Chloronaphthalene	91-58-7	mg/kg	0.277	SL-6	< 0.02 U	--	--	--
2-Chlorophenol	95-57-8	mg/kg	0.0115	SL-6	< 0.02 U	--	--	--
2-Methylphenol	95-48-7	mg/kg	0.00636	SL-7	< 0.02 U	--	--	--
2-Nitroaniline	88-74-4	mg/kg	292	SL-7	< 0.1 U	--	--	--
2-Nitrophenol	88-75-5	mg/kg	--	--	< 0.02 U	--	--	--
3 & 4 Methylphenol	65794-96-9	mg/kg	--	--	--	--	--	--
3,3'-Dichlorobenzidine	91-94-1	mg/kg	2E-06	SL-6	< 0.1 U	--	--	--
3-Nitroaniline	99-09-2	mg/kg	--	--	< 0.1 U	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.00728	SL-6	< 0.2 U	--	--	--
4-Bromophenyl phenyl ether	101-55-3	mg/kg	--	--	< 0.02 U	--	--	--
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.028	SL-6	< 0.1 U	--	--	--
4-Chloroaniline	106-47-8	mg/kg	0.96	SL-7	< 0.1 U	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg	--	--	< 0.02 U	--	--	--
4-Methylphenol	106-44-5	mg/kg	0.0624	SL-7	< 0.02 U	--	--	--
4-Nitroaniline	100-01-6	mg/kg	30.5	SL-7	< 0.1 U	--	--	--
4-Nitrophenol	100-02-7	mg/kg	7	SL-9	< 0.1 U	--	--	--
Aniline	62-53-3	mg/kg	42.7	SL-7	--	--	--	--
Benzidine	92-87-5	mg/kg	3.4E-08	SL-6	--	--	--	--
Benzoic acid	65-85-0	mg/kg	0.169	SL-7	< 0.2 UJ	--	--	--
Benzyl alcohol	100-51-6	mg/kg	0.0174	SL-7	< 0.02 U	--	--	--
Benzyl butyl phthalate	85-68-7	mg/kg	0.000182	SL-6	< 0.02 U	--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg	0.333	SL-6	< 0.02 U	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	mg/kg	--	--	< 0.02 U	--	--	--
Bis(2-chloroethyl) ether	111-44-4	mg/kg	2.18E-05	SL-6	< 0.02 U	--	--	--
bis(2-Chloroisopropyl)ether	39638-32-9	mg/kg	--	--	--	--	--	--
Bis(2-ethylhexyl) adipate	103-23-1	mg/kg	833	SL-1	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	0.00512	SL-6	0.03 J	--	--	--
Carbazole	86-74-8	mg/kg	--	--	< 0.02 U	--	--	--
Dibenzofuran	132-64-9	mg/kg	0.0292	SL-7	< 0.0248 U	--	0.00259 J	--
Diethyl phthalate	84-66-2	mg/kg	0.0341	SL-7	< 0.02 U	--	--	--
Dimethyl phthalate	131-11-3	mg/kg	0.0188	SL-7	< 0.02 U	--	--	--
Di-n-butyl phthalate	84-74-2	mg/kg	0.0149	SL-6	0.006 J	--	--	--
Di-n-octyl phthalate	117-84-0	mg/kg	0.327	SL-7	< 0.02 U	--	--	--
Hexachlorobenzene	118-74-1	mg/kg	4.01E-07	SL-6	< 0.02 U	--	--	--
Hexachlorobutadiene	87-68-3	mg/kg	1.13E-05	SL-6	< 0.00472 U	--	< 0.00642 UJ	< 0.00747 U
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.00169	SL-6	< 0.1 UJ	--	--	--
Hexachloroethane	67-72-1	mg/kg	9.67E-06	SL-6	< 0.02 U	--	--	--
Isophorone	78-59-1	mg/kg	0.0387	SL-6	< 0.02 U	--	--	--
Nitrobenzene	98-95-3	mg/kg	0.0406	SL-6	< 0.02 U	--	--	--
N-Nitrosodimethylamine	62-75-9	mg/kg	0.000105	SL-6	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	3.26E-05	SL-6	< 0.02 U	--	--	--
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.00161	SL-7	< 0.02 U	--	--	--
Pentachlorophenol	87-86-5	mg/kg	1.76E-06	SL-6	< 0.1 UJ	--	--	--
Phenol	108-95-2	mg/kg	0.0479	SL-7	< 0.02 U	--	--	--
Pyridine	110-86-1	mg/kg	36.4	SL-7	--	--	--	--
Pesticides and Herbicides								
2,4'-DDD	53-19-0	mg/kg	--	--	--	--	--	--
2,4'-DDE	3424-82-6	mg/kg	--	--	--	--	--	--
2,4'-DDT	789-02-6	mg/kg	--	--	--	--	--	--
4,4'-DDD	72-54-8	mg/kg	3.64E-07	SL-6	--	--	--	--
4,4'-DDE	72-55-9	mg/kg	7.63E-08	SL-6	--	--	--	--
4,4'-DDT	50-29-3	mg/kg	8.14E-07	SL-6	--	--	--	--
Aldrin	309-00-2	mg/kg	2.01E-09	SL-6	--	--	--	--

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location	SB-31	SB-31	SB-32	SB-33	SB-34
	Date	03/01/2021	03/01/2021	03/08/2021	03/03/2021	03/01/2021
	Sample	SB-31-13-14.5	SB-31-19-20	SB-32-7-8	SB-33-5.5-6.5	SB-34-5.5-6.5
	Depth	13 - 14.5 ft	19 - 20 ft	7 - 8 ft	5.5 - 6.5 ft	5.5 - 6.5 ft
Semivolatile Organic Compounds						
1,2-Dinitrobenzene	528-29-0	mg/kg	8	SL-1	--	--
1,2-Diphenylhydrazine	122-66-7	mg/kg	3.59E-05	SL-6	--	--
1,3-Dinitrobenzene	99-65-0	mg/kg	8	SL-1	--	--
1,4-Dinitrobenzene	100-25-4	mg/kg	8	SL-1	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	mg/kg	2400	SL-1	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	mg/kg		--	--	--
2,3-Dichloroaniline	608-27-5	mg/kg		--	--	--
2,4,5-Trichlorophenol	95-95-4	mg/kg	6.98E-05	SL-6	--	--
2,4,6-Trichlorophenol	88-06-2	mg/kg	0.401	SL-6	--	--
2,4-Dichlorophenol	120-83-2	mg/kg	0.00434	SL-6	--	--
2,4-Dimethylphenol	105-67-9	mg/kg	0.00227	SL-7	--	--
2,4-Dinitrophenol	51-28-5	mg/kg	0.0287	SL-6	--	--
2,4-Dinitrotoluene	121-14-2	mg/kg	0.000155	SL-6	--	--
2,6-Dinitrotoluene	606-20-2	mg/kg	0.0654	SL-7	--	--
2-Chloronaphthalene	91-58-7	mg/kg	0.277	SL-6	--	--
2-Chlorophenol	95-57-8	mg/kg	0.0115	SL-6	--	--
2-Methylphenol	95-48-7	mg/kg	0.00636	SL-7	--	--
2-Nitroaniline	88-74-4	mg/kg	292	SL-7	--	--
2-Nitrophenol	88-75-5	mg/kg		--	--	--
3 & 4 Methylphenol	65794-96-9	mg/kg		--	--	--
3,3'-Dichlorobenzidine	91-94-1	mg/kg	2E-06	SL-6	--	--
3-Nitroaniline	99-09-2	mg/kg		--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg	0.00728	SL-6	--	--
4-Bromophenyl phenyl ether	101-55-3	mg/kg		--	--	--
4-Chloro-3-methylphenol	59-50-7	mg/kg	0.028	SL-6	--	--
4-Chloroaniline	106-47-8	mg/kg	0.96	SL-7	--	--
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg		--	--	--
4-Methylphenol	106-44-5	mg/kg	0.0624	SL-7	--	--
4-Nitroaniline	100-01-6	mg/kg	30.5	SL-7	--	--
4-Nitrophenol	100-02-7	mg/kg	7	SL-9	--	--
Aniline	62-53-3	mg/kg	42.7	SL-7	--	--
Benzidine	92-87-5	mg/kg	3.4E-08	SL-6	--	--
Benzoic acid	65-85-0	mg/kg	0.169	SL-7	--	--
Benzyl alcohol	100-51-6	mg/kg	0.0174	SL-7	--	--
Benzyl butyl phthalate	85-68-7	mg/kg	0.000182	SL-6	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg	0.333	SL-6	--	--
Bis(2-chloroethoxy)methane	111-91-1	mg/kg		--	--	--
Bis(2-chloroethyl) ether	111-44-4	mg/kg	2.18E-05	SL-6	--	--
bis(2-Chloroisopropyl)ether	39638-32-9	mg/kg		--	--	--
Bis(2-ethylhexyl) adipate	103-23-1	mg/kg	833	SL-1	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	0.00512	SL-6	--	--
Carbazole	86-74-8	mg/kg		--	--	--
Dibenzofuran	132-64-9	mg/kg	0.0292	SL-7	0.00205 J	0.00575
Diethyl phthalate	84-66-2	mg/kg	0.0341	SL-7	--	--
Dimethyl phthalate	131-11-3	mg/kg	0.0188	SL-7	--	--
Di-n-butyl phthalate	84-74-2	mg/kg	0.0149	SL-6	--	--
Di-n-octyl phthalate	117-84-0	mg/kg	0.327	SL-7	--	--
Hexachlorobenzene	118-74-1	mg/kg	4.01E-07	SL-6	--	--
Hexachlorobutadiene	87-68-3	mg/kg	1.13E-05	SL-6	< 39.7 U	< 0.00699 U
Hexachlorocyclopentadiene	77-47-4	mg/kg	0.00169	SL-6	--	--
Hexachloroethane	67-72-1	mg/kg	9.67E-06	SL-6	--	--
Isophorone	78-59-1	mg/kg	0.0387	SL-6	--	--
Nitrobenzene	98-95-3	mg/kg	0.0406	SL-6	--	--
N-Nitrosodimethylamine	62-75-9	mg/kg	0.000105	SL-6	--	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg	3.26E-05	SL-6	--	--
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.00161	SL-7	--	--
Pentachlorophenol	87-86-5	mg/kg	1.76E-06	SL-6	--	--
Phenol	108-95-2	mg/kg	0.0479	SL-7	--	--
Pyridine	110-86-1	mg/kg	36.4	SL-7	--	--
Pesticides and Herbicides						
2,4'-DDD	53-19-0	mg/kg		--	--	--
2,4'-DDE	3424-82-6	mg/kg		--	--	--
2,4'-DDT	789-02-6	mg/kg		--	--	--
4,4'-DDD	72-54-8	mg/kg	3.64E-07	SL-6	--	--
4,4'-DDE	72-55-9	mg/kg	7.63E-08	SL-6	--	--
4,4'-DDT	50-29-3	mg/kg	8.14E-07	SL-6	--	--
Aldrin	309-00-2	mg/kg	2.01E-09	SL-6	--	--

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date Sample Depth				B-01	B-02	B-03	B-04	MW-04	MW-04	MW-04
					11/17/2017 B-01-8.5-9.5 8.5 - 9.5 ft	11/17/2017 B-02-6.5-7 6.5 - 7 ft	11/17/2017 B-03-6.5-7 6.5 - 7 ft	11/17/2017 B-04-6.5-7 6.5 - 7 ft	03/04/2021 MW-4-7-8 7 - 8 ft	03/04/2021 MW-4-10.5-11.5 10.5 - 11.5 ft	03/04/2021 MW-4-13.5-14.5 13.5 - 14.5 ft
Alpha-BHC	319-84-6	mg/kg	9.82E-08	SL-6	--	--	--	--	< 0.01 U	< 0.0025 U	0.014
Beta-BHC	319-85-7	mg/kg	3.4E-06	SL-6	--	--	--	--	< 0.01 U	< 0.0025 U	< 0.00498 U
cis-Chlordane	5103-71-9	mg/kg	5.29E-06	SL-7	--	--	--	--	< 1.98 U	< 0.0025 U	< 0.997 U
cis-Nonachlor	5103-73-1	mg/kg			--	--	--	--	< 4.44 U	< 0.005 U	< 0.00997 U
Delta-BHC	319-86-8	mg/kg	6	SL-9	--	--	--	--	< 0.01 U	< 0.0025 U	< 0.00498 U
Dieldrin	60-57-1	mg/kg	3.09E-08	SL-6	--	--	--	--	1.75	0.00585 J	< 2.99 U
Endosulfan I	959-98-8	mg/kg	6.13E-05	SL-6	--	--	--	--	< 0.01 U	< 0.0025 U	< 0.00498 U
Endosulfan II	33213-65-9	mg/kg	6.13E-05	SL-6	--	--	--	--	< 4.44 U	< 0.005 U	< 0.498 U
Endosulfan Sulfate	1031-07-8	mg/kg	0.101	SL-6	--	--	--	--	< 0.02 U	< 0.005 U	< 0.00997 U
Endrin	72-20-8	mg/kg	2.22E-05	SL-6	--	--	--	--	< 0.02 U	< 0.005 U	< 0.00997 U
Endrin Aldehyde	7421-93-4	mg/kg	0.000124	SL-6	--	--	--	--	< 0.02 U	< 0.005 U	< 0.00997 U
Endrin ketone	53494-70-5	mg/kg			--	--	--	--	< 1.98 U	< 0.005 U	< 0.797 U
Heptachlor	76-44-8	mg/kg	3.34E-09	SL-6	--	--	--	--	< 1.32 U	< 0.0025 U	< 0.00498 U
Heptachlor Epoxide	1024-57-3	mg/kg	2.49E-08	SL-6	--	--	--	--	< 0.01 U	< 0.0025 U	< 0.00498 U
Lindane	58-89-9	mg/kg	0.000205	SL-6	--	--	--	--	< 0.01 U	< 0.0025 U	< 0.00498 U
Methoxychlor	72-43-5	mg/kg	0.00161	SL-6	--	--	--	--	< 0.1 U	< 0.025 U	< 0.0498 U
Mirex	2385-85-5	mg/kg	0.000357	SL-6	--	--	--	--	< 0.02 U	< 0.005 U	< 1.99 U
Oxychlordane	27304-13-8	mg/kg			--	--	--	--	< 0.02 U	< 0.005 U	< 0.00997 U
Total Chlordane	57-74-9	mg/kg	1.13E-06	SL-6	--	--	--	--	--	--	--
Toxaphene	8001-35-2	mg/kg	3.07E-06	SL-6	--	--	--	--	--	--	--
trans-Chlordane	5103-74-2	mg/kg	5.29E-06	SL-7	--	--	--	--	< 6.66 U	< 0.0025 U	< 0.997 U
trans-Nonachlor	39765-80-5	mg/kg			--	--	--	--	< 0.02 U	< 0.005 U	< 0.00997 U
Total Petroleum Hydrocarbons											
Gasoline Range Organics	TPH-GRO	mg/kg	30	SL-6	--	--	--	--	650	< 12.8 U	< 8.72 U
Diesel Range Organics	TPH-DRO	mg/kg	260	SL-9	--	--	--	--	7090	< 83.7 U	1770
Motor Oil Range Organics	TPH-ORO	mg/kg	260	SL-9	--	--	--	--	18700	202	5150
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg	260	SL-9	--	--	--	--	25800	202	6920
Volatile Organic Compounds											
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	18.7	SL-7	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
1,1,1-Trichloroethane	71-55-6	mg/kg	21.1	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00011	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
1,1,2-Trichloroethane	79-00-5	mg/kg	0.000326	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg	812000	SL-7	--	--	--	--	< 0.114 U	< 0.00367 U	< 0.00267 U
1,1-Dichloroethane	75-34-3	mg/kg	108	SL-7	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
1,1-Dichloroethene	75-35-4	mg/kg	1.41	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
1,1-Dichloropropene	563-58-6	mg/kg			--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
1,2,3-Trichlorobenzene	87-61-6	mg/kg	12.1	SL-7	--	--	--	--	< 0.285 U	< 0.00917 U	< 0.00667 U
1,2,3-Trichloropropane	96-18-4	mg/kg	0.00273	SL-7	--	--	--	--	< 0.114 U	< 0.00367 U	< 0.00267 U
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00188	SL-7	--	--	--	--	< 0.0199 U	< 0.00917 U	< 0.00667 U
1,2,4-Trimethylbenzene	95-63-6	mg/kg	179	SL-7	--	--	--	--	< 0.057 U	0.023	< 0.00133 U
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.102	SL-7	--	--	--	--	< 0.285 U	< 0.00917 U	< 0.00667 U
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	0.277	SL-7	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
1,2-Dichlorobenzene	95-50-1	mg/kg	0.00299	SL-7	--	--	--	--	0.035	< 0.00183 U	0.0107 J
1,2-Dichloroethane (EDC)	107-06-2	mg/kg	0.0237	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
1,2-Dichloropropane	78-87-5	mg/kg	0.00103	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
1,3,5-Trimethylbenzene	108-67-8	mg/kg	180	SL-7	--	--	--	--	< 0.057 U	0.00104 J	< 0.00133 U
1,3-Dichlorobenzene	541-73-1	mg/kg	0.00132	SL-6	--	--	--	--	< 0.0199 U	< 0.00183 U	< 0.00133 U
1,3-Dichloropropane	142-28-9	mg/kg	884	SL-7	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
1,4-Dichloro-2-Butene	110-57-6	mg/kg			--	--	--	--	< 0.285 U	< 0.00917 U	< 0.00667 U
1,4-Dichlorobenzene	106-46-7	mg/kg	0.00807	SL-7	--	--	--	--	0.009 J	< 0.00183 U	< 0.00133 U
2,2-Dichloropropane	594-20-7	mg/kg			--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
2-Butanone	78-93-3	mg/kg	48000	SL-1	--	--	--	--	< 0.285 U	0.00803 J	< 0.00667 U
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg			--	--	--	--	< 0.285 U	< 0.00917 U	< 0.00667 U
2-Chlorotoluene	95-49-8	mg/kg	414	SL-7	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
2-Hexanone	591-78-6	mg/kg	400	SL-1	--	--	--	--	< 0.285 U	< 0.00917 U	< 0.00667 U
2-Pentanone	107-87-9	mg/kg			--	--	--	--	< 0.285 U	< 0.00917 U	< 0.00667 U

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location			Date							
	Sample	Depth		MW-04 03/04/2021 MW-4-18-20 18 - 20 ft	MW-05 03/05/2021 MW-5-6-7 6 - 7 ft	MW-05 03/05/2021 MW-5-8-9.5 8 - 9.5 ft	MW-05 03/05/2021 MW-5-15-16 15 - 16 ft	MW-05 03/05/2021 MW-5-20-22.5 20 - 22.5 ft	MW-05 03/05/2021 MW-5-26.5-28 26.5 - 28 ft	MW-06 03/05/2021 MW-6-9 9 ft	
Alpha-BHC	319-84-6	mg/kg	9.82E-08	SL-6	< 0.0005 U	< 0.00998 U	< 0.005 U	< 0.00499 U	< 0.00249 U	< 0.0005 U	< 0.0005 U
Beta-BHC	319-85-7	mg/kg	3.4E-06	SL-6	< 0.0005 U	< 0.00998 U	< 0.16 U	< 0.00499 U	< 0.00249 U	< 0.0005 U	< 0.00998 U
cis-Chlordane	5103-71-9	mg/kg	5.29E-06	SL-7	< 0.0005 U	< 0.0005 U	< 6.64 U	< 0.00499 U	< 0.00249 U	< 0.0005 U	< 0.0005 U
cis-Nonachlor	5103-73-1	mg/kg			< 0.001 U	< 8.86 U	< 0.77 U	< 0.00998 U	< 0.0349 U	< 0.001 U	< 0.001 U
Delta-BHC	319-86-8	mg/kg	6	SL-9	< 0.0005 U	< 0.00998 U	< 0.005 U	< 0.00499 U	< 0.00249 U	< 0.0005 U	< 0.0005 U
Dieldrin	60-57-1	mg/kg	3.09E-08	SL-6	< 0.001 U	3.1	< 2 U	< 0.00998 U	0.0121	< 0.001 U	0.0175
Endosulfan I	969-98-8	mg/kg	6.13E-05	SL-6	< 0.0005 U	< 0.00998 U	< 0.005 U	< 0.00499 U	< 0.00249 U	< 0.0005 U	< 0.0005 U
Endosulfan II	33213-65-9	mg/kg	6.13E-05	SL-6	< 0.001 U	< 8.86 U	< 1.11 U	< 0.00998 U	< 0.00498 U	< 0.001 U	< 0.001 U
Endosulfan Sulfate	1031-07-8	mg/kg	0.101	SL-6	< 0.001 U	< 0.02 U	< 0.01 U	< 0.00998 U	< 0.00498 U	< 0.001 U	< 0.001 U
Endrin	72-20-8	mg/kg	2.22E-05	SL-6	< 0.001 U	< 0.02 U	< 0.01 U	< 0.00998 U	< 0.00498 U	< 0.001 U	< 0.001 U
Endrin Aldehyde	7421-93-4	mg/kg	0.000124	SL-6	< 0.001 U	< 0.02 U	< 0.01 U	< 0.00998 U	< 0.00498 U	< 0.001 U	< 0.001 U
Endrin ketone	53494-70-5	mg/kg			< 0.001 U	< 0.02 U	< 0.55 U	< 0.00998 U	< 0.00498 U	< 0.001 U	< 0.002 U
Heptachlor	76-44-8	mg/kg	3.34E-09	SL-6	< 0.0005 U	< 4.43 U	< 0.2 U	< 0.00499 U	< 0.00249 U	< 0.0005 U	< 0.0005 U
Heptachlor Epoxide	1024-57-3	mg/kg	2.49E-08	SL-6	< 0.0005 U	< 0.00998 U	< 0.005 U	< 0.439 U	< 0.00249 U	< 0.0005 U	< 0.002 U
Lindane	58-89-9	mg/kg	0.000205	SL-6	< 0.0005 U	< 0.00998 U	< 0.005 U	< 0.00499 U	< 0.00249 U	< 0.0005 U	< 0.0005 U
Methoxychlor	72-43-5	mg/kg	0.00161	SL-6	< 0.001 U	< 0.0998 U	< 0.05 U	< 0.0499 U	< 0.0249 U	< 0.00499 U	< 0.00499 U
Mirex	2385-85-5	mg/kg	0.000357	SL-6	< 0.001 U	< 0.02 U	< 0.01 U	< 0.00998 U	< 0.00498 U	< 0.001 U	< 0.001 U
Oxychlordane	27304-13-8	mg/kg			< 0.001 U	< 0.02 U	< 0.01 U	< 0.00998 U	< 0.00498 U	< 0.001 U	< 0.001 U
Total Chlordane	57-74-9	mg/kg	1.13E-06	SL-6	--	--	--	--	--	--	--
Toxaphene	8001-35-2	mg/kg	3.07E-06	SL-6	--	--	--	--	--	--	--
trans-Chlordane	5103-74-2	mg/kg	5.29E-06	SL-7	< 0.0005 U	< 0.00998 U	< 0.005 U	< 0.00499 U	< 0.00249 U	< 0.0005 U	< 0.0005 U
trans-Nonachlor	39765-80-5	mg/kg			< 0.001 U	< 4.43 U	< 0.01 U	< 0.00998 U	< 0.00498 U	< 0.001 U	< 0.001 U
Total Petroleum Hydrocarbons											
Gasoline Range Organics	TPH-GRO	mg/kg	30	SL-6	< 8.16 U	534	< 6.27 U	< 7.73 U	< 6.74 U	< 8.69 U	< 7.24 U
Diesel Range Organics	TPH-DRO	mg/kg	260	SL-9	< 67.5 U	9550	964 J	248	< 60.7 U	< 63 U	< 65.3 U
Motor Oil Range Organics	TPH-ORO	mg/kg	260	SL-9	< 135 U	26800	2490 J	777	< 126 U	< 126 U	< 131 U
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg	260	SL-9	< 135 U	36400	3450 J	1030	< 126 U	< 126 U	< 131 U
Volatile Organic Compounds											
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	18.7	SL-7	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
1,1,1-Trichloroethane	71-55-6	mg/kg	21.1	SL-6	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00011	SL-6	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
1,1,2-Trichloroethane	79-00-5	mg/kg	0.000326	SL-6	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg	812000	SL-7	< 0.00275 U	< 0.00238 U	< 0.00202 U	< 0.00255 U	< 0.00252 U	< 0.00294 U	< 0.00261 U
1,1-Dichloroethane	75-34-3	mg/kg	108	SL-7	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
1,1-Dichloroethene	75-35-4	mg/kg	1.41	SL-6	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
1,1-Dichloropropene	563-58-6	mg/kg			< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
1,2,3-Trichlorobenzene	87-61-6	mg/kg	12.1	SL-7	< 0.00688 U	< 0.00596 U	< 0.00504 U	< 0.00638 U	< 0.00629 U	< 0.00736 U	< 0.00653 U
1,2,3-Trichloropropane	96-18-4	mg/kg	0.00273	SL-7	< 0.00275 U	< 0.00238 U	< 0.00202 U	< 0.00255 U	< 0.00252 U	< 0.00294 U	< 0.00261 U
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00188	SL-7	< 0.00688 U	< 0.00596 U	< 0.00504 U	< 0.00638 U	< 0.00629 U	< 0.00736 U	< 0.00653 U
1,2,4-Trimethylbenzene	95-63-6	mg/kg	179	SL-7	< 0.00138 U	0.00775 J	< 0.00101 U	0.00042 J	< 0.00126 U	< 0.00147 U	< 0.00131 U
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.102	SL-7	< 0.00688 U	< 0.00596 U	< 0.00504 U	< 0.00638 U	< 0.00629 U	< 0.00736 U	< 0.00653 U
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	0.277	SL-7	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
1,2-Dichlorobenzene	95-50-1	mg/kg	0.00299	SL-7	< 0.00138 U	0.0538	0.0359	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
1,2-Dichloroethane (EDC)	107-06-2	mg/kg	0.0237	SL-6	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
1,2-Dichloropropane	78-87-5	mg/kg	0.00103	SL-6	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
1,3,5-Trimethylbenzene	108-67-8	mg/kg	180	SL-7	< 0.00138 U	0.0285 J	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
1,3-Dichlorobenzene	541-73-1	mg/kg	0.00132	SL-6	< 0.00138 U	0.00328 J	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
1,3-Dichloropropane	142-28-9	mg/kg	884	SL-7	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
1,4-Dichloro-2-Butene	110-57-6	mg/kg			< 0.00688 U	< 0.00596 U	< 0.00504 U	< 0.00638 U	< 0.00629 U	< 0.00736 U	< 0.00653 U
1,4-Dichlorobenzene	106-46-7	mg/kg	0.00807	SL-7	< 0.00138 U	0.014 J	0.0084 J	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
2,2-Dichloropropane	594-20-7	mg/kg			< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
2-Butanone	78-93-3	mg/kg	48000	SL-1	< 0.00688 U	< 0.00596 U	0.00382 J	< 0.00638 U	< 0.00629 U	< 0.00736 U	< 0.00653 U
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg			< 0.00688 U	< 0.00596 U	< 0.00504 U	< 0.00638 U	< 0.00629 U	< 0.00736 U	< 0.00653 U
2-Chlorotoluene	95-49-8	mg/kg	414	SL-7	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U
2-Hexanone	591-78-6	mg/kg	400	SL-1	< 0.00688 U	< 0.00596 U	< 0.00504 U	< 0.00638 U	< 0.00629 U	< 0.00736 U	< 0.00653 U
2-Pentanone	107-87-9	mg/kg			< 0.00688 U	< 0.00596 U	< 0.00504 U	< 0.00638 U	< 0.00629 U	< 0.00736 U	< 0.00653 U

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date Sample Depth	MW-06 03/05/2021 MW-6-18-20 18 - 20 ft	MW-07 03/09/2021 MW-7-17-19 17 - 19 ft	MW-08 03/09/2021 MW-8-8-9 8 - 9 ft	MW-08 03/09/2021 MW-8-18-20 18 - 20 ft	MW-10 03/08/2021 MW-10-5.5-6.5 5.5 - 6.5 ft	MW-11 03/08/2021 MW-11-6-7 6 - 9 ft	MW-12 03/03/2021 MW-12-9.5-10.5 9.5 - 10.5 ft		
									mg/kg	mg/kg
Alpha-BHC	319-84-6	mg/kg	9.82E-08	SL-6	< 0.0005 U	--	< 0.0005 U	--	--	--
Beta-BHC	319-85-7	mg/kg	3.4E-06	SL-6	< 0.0005 U	--	< 0.0005 U	--	--	--
cis-Chlordane	5103-71-9	mg/kg	5.29E-06	SL-7	< 0.0005 U	--	< 0.0005 U	--	--	--
cis-Nonachlor	5103-73-1	mg/kg			< 0.001 U	--	< 0.001 U	--	--	--
Delta-BHC	319-86-8	mg/kg	6	SL-9	< 0.0005 U	--	< 0.0005 U	--	--	--
Dieldrin	60-57-1	mg/kg	3.09E-08	SL-6	0.00114	--	< 0.001 U	--	--	--
Endosulfan I	959-98-8	mg/kg	6.13E-05	SL-6	< 0.0005 U	--	< 0.0005 U	--	--	--
Endosulfan II	33213-65-9	mg/kg	6.13E-05	SL-6	< 0.001 U	--	< 0.001 U	--	--	--
Endosulfan Sulfate	1031-07-8	mg/kg	0.101	SL-6	< 0.001 U	--	< 0.001 U	--	--	--
Endrin	72-20-8	mg/kg	2.22E-05	SL-6	< 0.001 UJ	--	< 0.001 UJ	--	--	--
Endrin Aldehyde	7421-93-4	mg/kg	0.000124	SL-6	< 0.001 U	--	< 0.001 U	--	--	--
Endrin ketone	53494-70-5	mg/kg			< 0.001 U	--	< 0.001 U	--	--	--
Heptachlor	76-44-8	mg/kg	3.34E-09	SL-6	< 0.0005 U	--	< 0.0005 U	--	--	--
Heptachlor Epoxide	1024-57-3	mg/kg	2.49E-08	SL-6	< 0.0005 U	--	< 0.0005 U	--	--	--
Lindane	58-89-9	mg/kg	0.000205	SL-6	< 0.0005 U	--	< 0.0005 U	--	--	--
Methoxychlor	72-43-5	mg/kg	0.00161	SL-6	< 0.00499 U	--	< 0.00499 U	--	--	--
Mirex	2385-85-5	mg/kg	0.000357	SL-6	< 0.001 U	--	< 0.001 U	--	--	--
Oxychlorodane	27304-13-8	mg/kg			< 0.001 U	--	< 0.001 U	--	--	--
Total Chlordane	57-74-9	mg/kg	1.13E-06	SL-6	--	--	--	--	--	--
Toxaphene	8001-35-2	mg/kg	3.07E-06	SL-6	--	--	--	--	--	--
trans-Chlordane	5103-74-2	mg/kg	5.29E-06	SL-7	< 0.0005 U	--	< 0.0005 U	--	--	--
trans-Nonachlor	39765-80-5	mg/kg			< 0.001 U	--	< 0.001 U	--	--	--
Total Petroleum Hydrocarbons										
Gasoline Range Organics	TPH-GRO	mg/kg	30	SL-6	< 9.26 U	--	< 8.85 U	--	< 6.54 U	< 6.56 U
Diesel Range Organics	TPH-DRO	mg/kg	260	SL-9	< 63.8 U	--	< 62.9 U	--	< 63.8 U	< 63.7 U
Motor Oil Range Organics	TPH-ORO	mg/kg	260	SL-9	< 128 U	--	< 126 U	--	< 128 U	< 127 U
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg	260	SL-9	< 128 U	--	< 126 U	--	< 128 U	< 127 U
Volatile Organic Compounds										
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	18.7	SL-7	< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
1,1,1-Trichloroethane	71-55-6	mg/kg	21.1	SL-6	< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00011	SL-6	< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
1,1,2-Trichloroethane	79-00-5	mg/kg	0.000326	SL-6	< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg	812000	SL-7	< 0.00233 U	--	< 0.0023 U	--	< 0.00203 U	< 0.00225 U
1,1-Dichloroethane	75-34-3	mg/kg	108	SL-7	< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
1,1-Dichloroethene	75-35-4	mg/kg	1.41	SL-6	< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
1,1-Dichloropropene	563-58-6	mg/kg			< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
1,2,3-Trichlorobenzene	87-61-6	mg/kg	12.1	SL-7	< 0.00582 U	--	< 0.00574 U	--	< 0.00508 U	< 0.00563 U
1,2,3-Trichloropropane	96-18-4	mg/kg	0.00273	SL-7	< 0.00233 U	--	< 0.0023 U	--	< 0.00203 U	< 0.00225 U
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00188	SL-7	< 0.00582 U	--	< 0.00574 U	--	< 0.00508 U	< 0.00563 U
1,2,4-Trimethylbenzene	95-63-6	mg/kg	179	SL-7	< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.102	SL-7	< 0.00582 U	--	< 0.00574 U	--	< 0.00508 U	< 0.00563 U
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	0.277	SL-7	< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
1,2-Dichlorobenzene	95-50-1	mg/kg	0.00299	SL-7	< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
1,2-Dichloroethane (EDC)	107-06-2	mg/kg	0.0237	SL-6	< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
1,2-Dichloropropane	78-87-5	mg/kg	0.00103	SL-6	< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
1,3,5-Trimethylbenzene	108-67-8	mg/kg	180	SL-7	< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
1,3-Dichlorobenzene	541-73-1	mg/kg	0.00132	SL-6	< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
1,3-Dichloropropane	142-28-9	mg/kg	884	SL-7	< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
1,4-Dichloro-2-Butene	110-57-6	mg/kg			< 0.00582 U	--	< 0.00574 U	--	< 0.00508 U	< 0.00563 U
1,4-Dichlorobenzene	106-46-7	mg/kg	0.00807	SL-7	< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
2,2-Dichloropropane	594-20-7	mg/kg			< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
2-Butanone	78-93-3	mg/kg	48000	SL-1	< 0.00582 U	--	< 0.00574 U	--	< 0.00508 U	< 0.00563 U
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg			< 0.00582 UJ	--	< 0.00574 UJ	--	< 0.00508 U	< 0.00563 U
2-Chlorotoluene	95-49-8	mg/kg	414	SL-7	< 0.00116 U	--	< 0.00115 U	--	< 0.00102 U	< 0.00113 U
2-Hexanone	591-78-6	mg/kg	400	SL-1	< 0.00582 U	--	< 0.00574 U	--	< 0.00508 U	< 0.00563 U
2-Pentanone	107-87-9	mg/kg			< 0.00582 UJ	--	< 0.00574 U	--	< 0.00508 U	< 0.00563 U

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location	Date	Sample	Depth	MW-13	MW-13	SB-01	SB-02	SB-03	SB-03	SB-04
					03/01/2021	03/01/2021	09/27/2007	09/28/2007	09/27/2007	09/27/2007	
					MW-13-9.5-10.5	MW-13-18-19.5	SB-01-9	SB-02-9	SB-03-7	SB-03-13.5	SB-04-8
					9.5 - 10.5 ft	18 - 19.5 ft	9 - 11 ft	9 - 11 ft	7 - 9 ft	14 - 16 ft	8 - 10 ft
Alpha-BHC		319-84-6	mg/kg	9.82E-08	SL-6	--	--	--	--	--	--
Beta-BHC		319-85-7	mg/kg	3.4E-06	SL-6	--	--	--	--	--	--
cis-Chlordane		5103-71-9	mg/kg	5.29E-06	SL-7	--	--	--	--	--	--
cis-Nonachlor		5103-73-1	mg/kg	--	--	--	--	--	--	--	--
Delta-BHC		319-86-8	mg/kg	6	SL-9	--	--	--	--	--	--
Dieldrin		60-57-1	mg/kg	3.09E-08	SL-6	--	< 0.00099 U	0.00058 J	0.027	< 0.00099 U	< 0.001 U
Endosulfan I		969-98-8	mg/kg	6.13E-05	SL-6	--	--	--	--	--	--
Endosulfan II		33213-65-9	mg/kg	6.13E-05	SL-6	--	--	--	--	--	--
Endosulfan Sulfate		1031-07-8	mg/kg	0.101	SL-6	--	--	--	--	--	--
Endrin		72-20-8	mg/kg	2.22E-05	SL-6	--	--	--	--	--	--
Endrin Aldehyde		7421-93-4	mg/kg	0.000124	SL-6	--	--	--	--	--	--
Endrin ketone		53494-70-5	mg/kg	--	--	--	--	--	--	--	--
Heptachlor		76-44-8	mg/kg	3.34E-09	SL-6	--	< 0.00099 U	< 0.001 U	< 0.00099 U	< 0.00099 U	< 0.001 U
Heptachlor Epoxide		1024-57-3	mg/kg	2.49E-08	SL-6	--	--	--	--	--	--
Lindane		58-89-9	mg/kg	0.000205	SL-6	--	< 0.00099 U	< 0.001 U	< 0.00099 U	< 0.00099 U	< 0.001 U
Methoxychlor		72-43-5	mg/kg	0.00161	SL-6	--	--	--	--	--	--
Mirex		2385-85-5	mg/kg	0.000357	SL-6	--	--	--	--	--	--
Oxychlorane		27304-13-8	mg/kg	--	--	--	--	--	--	--	--
Total Chlordane		57-74-9	mg/kg	1.13E-06	SL-6	--	< 0.0099 U	< 0.01 U	< 0.0099 U	< 0.0099 U	< 0.01 U
Toxaphene		8001-35-2	mg/kg	3.07E-06	SL-6	--	--	--	--	--	--
trans-Chlordane		5103-74-2	mg/kg	5.29E-06	SL-7	--	--	--	--	--	--
trans-Nonachlor		39765-80-5	mg/kg	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons											
Gasoline Range Organics	TPH-GRO	mg/kg	30	SL-6	10.4	71.9	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U
Diesel Range Organics	TPH-DRO	mg/kg	260	SL-9	< 62.1 U	< 70 U	< 50 U	< 50 U	< 50 U	< 50 U	< 50 U
Motor Oil Range Organics	TPH-ORO	mg/kg	260	SL-9	< 124 U	< 140 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg	260	SL-9	< 124 U	< 140 U	< 100 U	< 100 U	< 100 U	< 100 U	< 100 U
Volatile Organic Compounds											
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	18.7	SL-7	< 0.00125 U	< 0.00131 U	--	--	--	--	--
1,1,1-Trichloroethane	71-55-6	mg/kg	21.1	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00011	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
1,1,2-Trichloroethane	79-00-5	mg/kg	0.000326	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg	812000	SL-7	< 0.00251 U	< 0.00261 U	--	--	--	--	--
1,1-Dichloroethane	75-34-3	mg/kg	108	SL-7	< 0.00125 U	< 0.00131 U	--	--	--	--	--
1,1-Dichloroethene	75-35-4	mg/kg	1.41	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
1,1-Dichloropropene	563-58-6	mg/kg	--	--	< 0.00125 U	< 0.00131 U	--	--	--	--	--
1,2,3-Trichlorobenzene	87-61-6	mg/kg	12.1	SL-7	< 0.00627 U	< 0.00653 U	--	--	--	--	--
1,2,3-Trichloropropane	96-18-4	mg/kg	0.00273	SL-7	< 0.00251 U	< 0.00261 U	--	--	--	--	--
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00188	SL-7	< 0.00627 U	< 0.00653 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0099 U	< 0.01 U
1,2,4-Trimethylbenzene	95-63-6	mg/kg	179	SL-7	< 0.00125 U	< 0.00131 U	--	--	--	--	--
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.102	SL-7	< 0.00627 U	< 0.00653 U	--	--	--	--	--
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	0.277	SL-7	< 0.00125 U	< 0.00131 U	--	--	--	--	--
1,2-Dichlorobenzene	95-50-1	mg/kg	0.00299	SL-7	< 0.00125 U	< 0.00131 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0099 U	< 0.01 U
1,2-Dichloroethane (EDC)	107-06-2	mg/kg	0.0237	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
1,2-Dichloropropane	78-87-5	mg/kg	0.00103	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
1,3,5-Trimethylbenzene	108-67-8	mg/kg	180	SL-7	< 0.00125 U	< 0.00131 U	--	--	--	--	--
1,3-Dichlorobenzene	541-73-1	mg/kg	0.00132	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
1,3-Dichloropropane	142-28-9	mg/kg	884	SL-7	< 0.00125 U	< 0.00131 U	--	--	--	--	--
1,4-Dichloro-2-Butene	110-57-6	mg/kg	--	--	< 0.00627 U	< 0.00653 U	--	--	--	--	--
1,4-Dichlorobenzene	106-46-7	mg/kg	0.00807	SL-7	< 0.00125 U	< 0.00131 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0099 U	< 0.01 U
2,2-Dichloropropane	594-20-7	mg/kg	--	--	< 0.00125 U	< 0.00131 U	--	--	--	--	--
2-Butanone	78-93-3	mg/kg	48000	SL-1	< 0.00627 U	< 0.00653 U	--	--	--	--	--
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg	--	--	< 0.00627 UJ	< 0.00653 UJ	--	--	--	--	--
2-Chlorotoluene	95-49-8	mg/kg	414	SL-7	< 0.00125 U	< 0.00131 U	--	--	--	--	--
2-Hexanone	591-78-6	mg/kg	400	SL-1	< 0.00627 U	< 0.00653 U	--	--	--	--	--
2-Pentanone	107-87-9	mg/kg	--	--	< 0.00627 UJ	< 0.00653 UJ	--	--	--	--	--

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date Sample Depth				SB-05	SB-06	SB-07	SB-08	SB-09	SB-10	SB-13
					09/27/2007 SB-05-8 8 - 10 ft	09/28/2007 SB-06-8 8 - 10 ft	09/28/2007 SB-07-9 9 - 11 ft	09/27/2007 SB-08-9 9 - 11 ft	09/27/2007 SB-09-10 10 - 12 ft	09/28/2007 SB-10-14 14 - 16 ft	10/01/2007 SB-13-7 7 - 9 ft
Alpha-BHC	319-84-6	mg/kg	9.82E-08	SL-6	--	--	--	--	--	--	--
Beta-BHC	319-85-7	mg/kg	3.4E-06	SL-6	--	--	--	--	--	--	--
cis-Chlordane	5103-71-9	mg/kg	5.29E-06	SL-7	--	--	--	--	--	--	--
cis-Nonachlor	5103-73-1	mg/kg	--	--	--	--	--	--	--	--	--
Delta-BHC	319-86-8	mg/kg	6	SL-9	--	--	--	--	--	--	--
Dieldrin	60-57-1	mg/kg	3.09E-08	SL-6	< 0.00099 U	< 0.001 U	0.0017	< 0.001 U	< 0.00099 U	< 0.0017 U	< 0.12 U
Endosulfan I	969-98-8	mg/kg	6.13E-05	SL-6	--	--	--	--	--	--	--
Endosulfan II	33213-65-9	mg/kg	6.13E-05	SL-6	--	--	--	--	--	--	--
Endosulfan Sulfate	1031-07-8	mg/kg	0.101	SL-6	--	--	--	--	--	--	--
Endrin	72-20-8	mg/kg	2.22E-05	SL-6	--	--	--	--	--	--	--
Endrin Aldehyde	7421-93-4	mg/kg	0.000124	SL-6	--	--	--	--	--	--	--
Endrin ketone	53494-70-5	mg/kg	--	--	--	--	--	--	--	--	--
Heptachlor	76-44-8	mg/kg	3.34E-09	SL-6	0.00056	< 0.001 U	< 0.001 U	< 0.001 U	< 0.00099 U	< 0.00099 U	< 0.1 U
Heptachlor Epoxide	1024-57-3	mg/kg	2.49E-08	SL-6	--	--	--	--	--	--	--
Lindane	58-89-9	mg/kg	0.000205	SL-6	< 0.00099 U	< 0.001 U	< 0.001 U	< 0.001 U	< 0.00099 U	< 0.00099 U	< 0.1 U
Methoxychlor	72-43-5	mg/kg	0.00161	SL-6	--	--	--	--	--	--	--
Mirex	2385-85-5	mg/kg	0.000357	SL-6	--	--	--	--	--	--	--
Oxychlordane	27304-13-8	mg/kg	--	--	--	--	--	--	--	--	--
Total Chlordane	57-74-9	mg/kg	1.13E-06	SL-6	< 0.0099 U	< 0.01 U	< 0.01 U	< 0.01 U	< 0.0099 U	< 0.0099 U	< 3.2 U
Toxaphene	8001-35-2	mg/kg	3.07E-06	SL-6	--	--	--	--	--	--	--
trans-Chlordane	5103-74-2	mg/kg	5.29E-06	SL-7	--	--	--	--	--	--	--
trans-Nonachlor	39765-80-5	mg/kg	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons											
Gasoline Range Organics	TPH-GRO	mg/kg	30	SL-6	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 1.6 U
Diesel Range Organics	TPH-DRO	mg/kg	260	SL-9	23	37	< 50 U	< 50 U	< 50 U	< 50 U	950 J
Motor Oil Range Organics	TPH-ORO	mg/kg	260	SL-9	220 J	21	< 100 U	< 100 U	< 100 U	< 100 U	4700 J
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg	260	SL-9	243 J	247	< 100 U	< 100 U	< 100 U	< 100 U	5650 J
Volatile Organic Compounds											
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	18.7	SL-7	--	--	--	--	--	--	--
1,1,1-Trichloroethane	71-55-6	mg/kg	21.1	SL-6	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00011	SL-6	--	--	--	--	--	--	--
1,1,2-Trichloroethane	79-00-5	mg/kg	0.000326	SL-6	--	--	--	--	--	--	--
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg	812000	SL-7	--	--	--	--	--	--	--
1,1-Dichloroethane	75-34-3	mg/kg	108	SL-7	--	--	--	--	--	--	--
1,1-Dichloroethene	75-35-4	mg/kg	1.41	SL-6	--	--	--	--	--	--	--
1,1-Dichloropropene	563-58-6	mg/kg	--	--	--	--	--	--	--	--	--
1,2,3-Trichlorobenzene	87-61-6	mg/kg	12.1	SL-7	--	--	--	--	--	--	--
1,2,3-Trichloropropane	96-18-4	mg/kg	0.00273	SL-7	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00188	SL-7	< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	< 0.01 U	< 0.19 U
1,2,4-Trimethylbenzene	95-63-6	mg/kg	179	SL-7	--	--	--	--	--	--	--
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.102	SL-7	--	--	--	--	--	--	--
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	0.277	SL-7	--	--	--	--	--	--	--
1,2-Dichlorobenzene	95-50-1	mg/kg	0.00299	SL-7	< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	< 0.01 U	< 0.19 U
1,2-Dichloroethane (EDC)	107-06-2	mg/kg	0.0237	SL-6	--	--	--	--	--	--	--
1,2-Dichloropropane	78-87-5	mg/kg	0.00103	SL-6	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	108-67-8	mg/kg	180	SL-7	--	--	--	--	--	--	--
1,3-Dichlorobenzene	541-73-1	mg/kg	0.00132	SL-6	--	--	--	--	--	--	--
1,3-Dichloropropane	142-28-9	mg/kg	884	SL-7	--	--	--	--	--	--	--
1,4-Dichloro-2-Butene	110-57-6	mg/kg	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	106-46-7	mg/kg	0.00807	SL-7	< 0.01 U	< 0.0098 U	< 0.0099 U	< 0.0099 U	< 0.0098 U	< 0.01 U	< 0.19 U
2,2-Dichloropropane	594-20-7	mg/kg	--	--	--	--	--	--	--	--	--
2-Butanone	78-93-3	mg/kg	48000	SL-1	--	--	--	--	--	--	--
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg	--	--	--	--	--	--	--	--	--
2-Chlorotoluene	95-49-8	mg/kg	414	SL-7	--	--	--	--	--	--	--
2-Hexanone	591-78-6	mg/kg	400	SL-1	--	--	--	--	--	--	--
2-Pentanone	107-87-9	mg/kg	--	--	--	--	--	--	--	--	--

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date	Sample Depth	Unit	Location	SB-14	SB-17	SB-18A	SB-19	SB-20A	SB-21	SB-22
					10/01/2007 SB-14-7.5 8 - 10 ft	07/27/2011 SB17-10.0-072711 10 - 10 ft	07/27/2011 SB18A-9.0-072711 9 - 9 ft	07/28/2011 SB19-8.0-072811 8 - 8 ft	07/27/2011 SB20A-8.5-072711 8.5 - 8.5 ft	07/27/2011 SB21-9.0-072711 9 - 9 ft	07/27/2011 SB22-10.0-072711 10 - 10 ft
Alpha-BHC	319-84-6	mg/kg	9.82E-08	SL-6	--	--	--	--	--	< 0.0059 U	< 0.0065 U
Beta-BHC	319-85-7	mg/kg	3.4E-06	SL-6	--	--	--	--	--	< 0.0059 U	< 0.0065 U
cis-Chlordane	5103-71-9	mg/kg	5.29E-06	SL-7	--	--	--	--	--	0.047	< 0.013 U
cis-Nonachlor	5103-73-1	mg/kg	--	--	--	--	--	--	--	--	--
Delta-BHC	319-86-8	mg/kg	6	SL-9	--	--	--	--	--	< 0.0059 U	0.056 J
Dieldrin	60-57-1	mg/kg	3.09E-08	SL-6	< 0.071 U	--	--	--	--	0.18 J	0.082 J
Endosulfan I	969-98-8	mg/kg	6.13E-05	SL-6	--	--	--	--	--	< 0.0059 U	< 0.0065 U
Endosulfan II	33213-65-9	mg/kg	6.13E-05	SL-6	--	--	--	--	--	< 0.012 U	< 0.013 U
Endosulfan Sulfate	1031-07-8	mg/kg	0.101	SL-6	--	--	--	--	--	< 0.012 U	< 0.013 U
Endrin	72-20-8	mg/kg	2.22E-05	SL-6	--	--	--	--	--	< 0.012 U	< 0.013 U
Endrin Aldehyde	7421-93-4	mg/kg	0.000124	SL-6	--	--	--	--	--	0.16	0.036 J
Endrin ketone	53494-70-5	mg/kg	--	--	--	--	--	--	--	< 0.012 U	< 0.013 U
Heptachlor	76-44-8	mg/kg	3.34E-09	SL-6	< 0.0099 U	--	--	--	--	0.0076	0.017
Heptachlor Epoxide	1024-57-3	mg/kg	2.49E-08	SL-6	--	--	--	--	--	< 0.0059 U	< 0.0065 U
Lindane	58-89-9	mg/kg	0.000205	SL-6	< 0.0099 U	--	--	--	--	< 0.0059 U	< 0.0065 U
Methoxychlor	72-43-5	mg/kg	0.00161	SL-6	--	--	--	--	--	< 0.012 U	< 0.013 U
Mirex	2385-85-5	mg/kg	0.000357	SL-6	--	--	--	--	--	--	--
Oxychlorane	27304-13-8	mg/kg	--	--	--	--	--	--	--	--	--
Total Chlordane	57-74-9	mg/kg	1.13E-06	SL-6	< 5 U	--	--	--	--	--	--
Toxaphene	8001-35-2	mg/kg	3.07E-06	SL-6	--	--	--	--	--	< 0.0059 U	< 0.0065 U
trans-Chlordane	5103-74-2	mg/kg	5.29E-06	SL-7	--	--	--	--	--	0.18 J	< 0.013 U
trans-Nonachlor	39765-80-5	mg/kg	--	--	--	--	--	--	--	--	--
Total Petroleum Hydrocarbons											
Gasoline Range Organics	TPH-GRO	mg/kg	30	SL-6	350 J	--	--	--	< 6 U	< 6.6 U	< 7.2 U
Diesel Range Organics	TPH-DRO	mg/kg	260	SL-9	3000 J	34 J	< 29 U	< 170 U	170 J	400 J	1600 J
Motor Oil Range Organics	TPH-ORO	mg/kg	260	SL-9	8900 J	220	82	780	1200	2900	6700
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg	260	SL-9	11900 J	254 J	96.5	865	1370 J	3300 J	8300 J
Volatile Organic Compounds											
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	18.7	SL-7	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
1,1,1-Trichloroethane	71-55-6	mg/kg	21.1	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00011	SL-6	< 0.0063 U	--	--	--	--	< 0.0066 U	< 0.076 U
1,1,2-Trichloroethane	79-00-5	mg/kg	0.000326	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg	812000	SL-7	--	--	--	--	--	--	--
1,1-Dichloroethane	75-34-3	mg/kg	108	SL-7	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
1,1-Dichloroethene	75-35-4	mg/kg	1.41	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
1,1-Dichloropropene	563-58-6	mg/kg	--	--	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
1,2,3-Trichlorobenzene	87-61-6	mg/kg	12.1	SL-7	< 0.025 U	--	--	--	--	< 0.066 U	< 0.76 U
1,2,3-Trichloropropane	96-18-4	mg/kg	0.00273	SL-7	< 0.0063 U	--	--	--	--	< 0.066 U	< 0.76 U
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00188	SL-7	< 0.025 U	--	--	--	--	< 0.066 U	< 0.76 U
1,2,4-Trimethylbenzene	95-63-6	mg/kg	179	SL-7	< 0.025 U	--	--	--	--	< 0.066 U	< 0.76 U
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.102	SL-7	< 0.025 U	--	--	--	--	< 0.33 U	< 0.38 U
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	0.277	SL-7	< 0.025 U	--	--	--	--	< 0.0011 U	< 0.076 U
1,2-Dichlorobenzene	95-50-1	mg/kg	0.00299	SL-7	< 0.0063 U	--	--	--	--	< 0.066 U	0.11
1,2-Dichloroethane (EDC)	107-06-2	mg/kg	0.0237	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
1,2-Dichloropropane	78-87-5	mg/kg	0.00103	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
1,3,5-Trimethylbenzene	108-67-8	mg/kg	180	SL-7	< 0.025 U	--	--	--	--	< 0.066 U	< 0.76 U
1,3-Dichlorobenzene	541-73-1	mg/kg	0.00132	SL-6	< 0.0063 U	--	--	--	--	< 0.066 U	< 0.76 U
1,3-Dichloropropane	142-28-9	mg/kg	884	SL-7	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.76 U
1,4-Dichloro-2-Butene	110-57-6	mg/kg	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	106-46-7	mg/kg	0.00807	SL-7	< 0.0063 U	--	--	--	--	< 0.066 U	< 0.76 U
2,2-Dichloropropane	594-20-7	mg/kg	--	--	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.76 U
2-Butanone	78-93-3	mg/kg	48000	SL-1	< 0.025 U	--	--	--	--	0.017	< 0.38 U
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg	--	--	--	--	--	--	--	< 0.0057 U	< 0.38 U
2-Chlorotoluene	95-49-8	mg/kg	414	SL-7	< 0.025 U	--	--	--	--	< 0.066 U	< 0.76 U
2-Hexanone	591-78-6	mg/kg	400	SL-1	< 0.025 U	--	--	--	--	< 0.0057 U	< 0.38 U
2-Pentanone	107-87-9	mg/kg	--	--	--	--	--	--	--	--	--

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date	Sample Depth	SB-22 07/27/2011 SB22-14.0-072711 14 - 14 ft	SB-23 07/28/2011 SB23-8.0-072811 8 - 8 ft	SB-24 07/28/2011 SB24-7.0-072811 7 - 7 ft	SB-25 07/28/2011 SB25-10.0-072811 10 - 10 ft	SB-26 03/04/2021 SB-26-5.5-6.5 5.5 - 6.5 ft	SB-26 03/04/2021 SB-26-12.5 12.5 ft	SB-26 03/04/2021 SB-26-18-20 18 - 20 ft	
Alpha-BHC	319-84-6	mg/kg	9.82E-08	SL-6	--	--	--	< 0.00249 U	< 0.0005 U	--
Beta-BHC	319-85-7	mg/kg	3.4E-06	SL-6	--	--	--	< 0.00249 U	< 0.006 U	--
cis-Chlordane	5103-71-9	mg/kg	5.29E-06	SL-7	--	--	--	< 0.00249 U	< 0.0005 U	--
cis-Nonachlor	5103-73-1	mg/kg		--	--	--	--	< 0.00498 U	< 0.001 U	--
Delta-BHC	319-86-8	mg/kg	6	SL-9	--	--	--	< 0.00249 U	< 0.0005 U	--
Dieldrin	60-57-1	mg/kg	3.09E-08	SL-6	--	--	--	< 0.00498 U	< 0.001 U	--
Endosulfan I	959-98-8	mg/kg	6.13E-05	SL-6	--	--	--	< 0.00249 U	< 0.0005 U	--
Endosulfan II	33213-65-9	mg/kg	6.13E-05	SL-6	--	--	--	< 0.00498 U	< 0.001 U	--
Endosulfan Sulfate	1031-07-8	mg/kg	0.101	SL-6	--	--	--	< 0.00498 U	< 0.001 U	--
Endrin	72-20-8	mg/kg	2.22E-05	SL-6	--	--	--	< 0.00498 U	< 0.001 U	--
Endrin Aldehyde	7421-93-4	mg/kg	0.000124	SL-6	--	--	--	< 0.00498 U	< 0.001 U	--
Endrin ketone	53494-70-5	mg/kg		--	--	--	--	< 0.00498 U	< 0.001 U	--
Heptachlor	76-44-8	mg/kg	3.34E-09	SL-6	--	--	--	< 0.00249 U	< 0.0005 U	--
Heptachlor Epoxide	1024-57-3	mg/kg	2.49E-08	SL-6	--	--	--	< 0.00249 U	< 0.003 U	--
Lindane	58-89-9	mg/kg	0.000205	SL-6	--	--	--	< 0.00249 U	< 0.0005 U	--
Methoxychlor	72-43-5	mg/kg	0.00161	SL-6	--	--	--	< 0.0249 U	< 0.005 U	--
Mirex	2385-85-5	mg/kg	0.000357	SL-6	--	--	--	< 0.00498 U	< 0.001 U	--
Oxychlorodane	27304-13-8	mg/kg		--	--	--	--	< 0.00498 U	< 0.001 U	--
Total Chlordane	57-74-9	mg/kg	1.13E-06	SL-6	--	--	--	--	--	--
Toxaphene	8001-35-2	mg/kg	3.07E-06	SL-6	--	--	--	--	--	--
trans-Chlordane	5103-74-2	mg/kg	5.29E-06	SL-7	--	--	--	< 0.00249 U	< 0.0005 U	--
trans-Nonachlor	39765-80-5	mg/kg		--	--	--	--	< 0.00498 U	< 0.001 U	--
Total Petroleum Hydrocarbons										
Gasoline Range Organics	TPH-GRO	mg/kg	30	SL-6	--	--	--	< 6.33 U	< 7.48 U	--
Diesel Range Organics	TPH-DRO	mg/kg	260	SL-9	< 32 U	< 27 U	< 28 U	< 59.1 U	< 65.1 U	--
Motor Oil Range Organics	TPH-ORO	mg/kg	260	SL-9	< 63 U	< 54 U	< 55 U	< 56 U	< 130 U	--
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg	260	SL-9	< 63 U	< 54 U	< 55 U	< 56 U	< 130 U	--
Volatile Organic Compounds										
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	18.7	SL-7	--	--	--	< 0.00107 U	< 0.00113 U	--
1,1,1-Trichloroethane	71-55-6	mg/kg	21.1	SL-6	--	--	--	< 0.00107 U	< 0.00113 U	--
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00011	SL-6	--	--	--	< 0.00107 U	< 0.00113 U	--
1,1,2-Trichloroethane	79-00-5	mg/kg	0.000326	SL-6	--	--	--	< 0.00107 U	< 0.00113 U	--
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg	812000	SL-7	--	--	--	< 0.00214 U	< 0.00226 U	--
1,1-Dichloroethane	75-34-3	mg/kg	108	SL-7	--	--	--	< 0.00107 U	< 0.00113 U	--
1,1-Dichloroethene	75-35-4	mg/kg	1.41	SL-6	--	--	--	< 0.00107 U	< 0.00113 U	--
1,1-Dichloropropene	563-58-6	mg/kg		--	--	--	--	< 0.00107 U	< 0.00113 U	--
1,2,3-Trichlorobenzene	87-61-6	mg/kg	12.1	SL-7	--	--	--	< 0.00536 U	< 0.00565 U	--
1,2,3-Trichloropropane	96-18-4	mg/kg	0.00273	SL-7	--	--	--	< 0.00214 U	< 0.00226 U	--
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00188	SL-7	--	--	--	< 0.00536 U	< 0.00565 U	--
1,2,4-Trimethylbenzene	95-63-6	mg/kg	179	SL-7	--	--	--	0.00039 J	< 0.00113 U	--
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.102	SL-7	--	--	--	< 0.00536 U	< 0.00565 U	--
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	0.277	SL-7	--	--	--	< 0.00107 U	< 0.00113 U	--
1,2-Dichlorobenzene	95-50-1	mg/kg	0.00299	SL-7	--	--	--	< 0.00107 U	< 0.00113 U	--
1,2-Dichloroethane (EDC)	107-06-2	mg/kg	0.0237	SL-6	--	--	--	< 0.00107 U	< 0.00113 U	--
1,2-Dichloropropane	78-87-5	mg/kg	0.00103	SL-6	--	--	--	< 0.00107 U	< 0.00113 U	--
1,3,5-Trimethylbenzene	108-67-8	mg/kg	180	SL-7	--	--	--	0.00035 J	< 0.00113 U	--
1,3-Dichlorobenzene	541-73-1	mg/kg	0.00132	SL-6	--	--	--	< 0.00107 U	< 0.00113 U	--
1,3-Dichloropropane	142-28-9	mg/kg	884	SL-7	--	--	--	< 0.00107 U	< 0.00113 U	--
1,4-Dichloro-2-Butene	110-57-6	mg/kg		--	--	--	--	< 0.00536 U	< 0.00565 U	--
1,4-Dichlorobenzene	106-46-7	mg/kg	0.00807	SL-7	--	--	--	< 0.00107 U	< 0.00113 U	--
2,2-Dichloropropane	594-20-7	mg/kg		--	--	--	--	< 0.00107 U	< 0.00113 U	--
2-Butanone	78-93-3	mg/kg	48000	SL-1	--	--	--	0.00493 J	0.00972	--
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg		--	--	--	--	< 0.00536 U	< 0.00565 U	--
2-Chlorotoluene	95-49-8	mg/kg	414	SL-7	--	--	--	< 0.00107 U	< 0.00113 U	--
2-Hexanone	591-78-6	mg/kg	400	SL-1	--	--	--	< 0.00536 U	< 0.00565 U	--
2-Pentanone	107-87-9	mg/kg		--	--	--	--	< 0.00536 U	< 0.00565 U	--

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date Sample Depth				SB-27	SB-27	SB-28	SB-30	SB-30	SB-30	SB-31
					03/09/2021 SB-27-8-9 8 - 9 ft	03/09/2021 SB-27-18-20 18 - 20 ft	03/01/2021 SB-28-14.5-15.5 14.5 - 15.5 ft	03/01/2021 SB-30-11.5-12.5 11.5 - 12.5 ft	03/01/2021 SB-30-12.5-14.5 12.5 - 14.5 ft	03/01/2021 SB-30-23-25 23 - 25 ft	03/01/2021 SB-31-10-11 10 - 11 ft
Alpha-BHC	319-84-6	mg/kg	9.82E-08	SL-6	--	--	--	--	--	--	--
Beta-BHC	319-85-7	mg/kg	3.4E-06	SL-6	--	--	--	--	--	--	--
cis-Chlordane	5103-71-9	mg/kg	5.29E-06	SL-7	--	--	--	--	--	--	--
cis-Nonachlor	5103-73-1	mg/kg			--	--	--	--	--	--	--
Delta-BHC	319-86-8	mg/kg	6	SL-9	--	--	--	--	--	--	--
Dieldrin	60-57-1	mg/kg	3.09E-08	SL-6	--	--	--	--	--	--	--
Endosulfan I	959-98-8	mg/kg	6.13E-05	SL-6	--	--	--	--	--	--	--
Endosulfan II	33213-65-9	mg/kg	6.13E-05	SL-6	--	--	--	--	--	--	--
Endosulfan Sulfate	1031-07-8	mg/kg	0.101	SL-6	--	--	--	--	--	--	--
Endrin	72-20-8	mg/kg	2.22E-05	SL-6	--	--	--	--	--	--	--
Endrin Aldehyde	7421-93-4	mg/kg	0.000124	SL-6	--	--	--	--	--	--	--
Endrin ketone	53494-70-5	mg/kg			--	--	--	--	--	--	--
Heptachlor	76-44-8	mg/kg	3.34E-09	SL-6	--	--	--	--	--	--	--
Heptachlor Epoxide	1024-57-3	mg/kg	2.49E-08	SL-6	--	--	--	--	--	--	--
Lindane	58-89-9	mg/kg	0.000205	SL-6	--	--	--	--	--	--	--
Methoxychlor	72-43-5	mg/kg	0.00161	SL-6	--	--	--	--	--	--	--
Mirex	2385-85-5	mg/kg	0.000357	SL-6	--	--	--	--	--	--	--
Oxychlorodane	27304-13-8	mg/kg			--	--	--	--	--	--	--
Total Chlordane	57-74-9	mg/kg	1.13E-06	SL-6	--	--	--	--	--	--	--
Toxaphene	8001-35-2	mg/kg	3.07E-06	SL-6	--	--	--	--	--	--	--
trans-Chlordane	5103-74-2	mg/kg	5.29E-06	SL-7	--	--	--	--	--	--	--
trans-Nonachlor	39765-80-5	mg/kg			--	--	--	--	--	--	--
Total Petroleum Hydrocarbons											
Gasoline Range Organics	TPH-GRO	mg/kg	30	SL-6	7.64	--	< 7.46 U	--	< 7 U	< 8.2 U	--
Diesel Range Organics	TPH-DRO	mg/kg	260	SL-9	< 60.2 U	--	< 62.1 U	< 67.7 U	< 64.7 U	< 69.6 U	--
Motor Oil Range Organics	TPH-ORO	mg/kg	260	SL-9	284	--	< 124 U	< 135 U	< 129 U	< 139 U	--
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg	260	SL-9	284	--	< 124 U	< 135 U	< 129 U	< 139 U	--
Volatile Organic Compounds											
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	18.7	SL-7	< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
1,1,1-Trichloroethane	71-55-6	mg/kg	21.1	SL-6	< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00011	SL-6	< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
1,1,2-Trichloroethane	79-00-5	mg/kg	0.000326	SL-6	< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg	812000	SL-7	< 0.00189 U	--	< 0.00283 U	--	< 0.00257 UJ	< 0.00299 U	--
1,1-Dichloroethane	75-34-3	mg/kg	108	SL-7	< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
1,1-Dichloroethene	75-35-4	mg/kg	1.41	SL-6	< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
1,1-Dichloropropene	563-58-6	mg/kg			< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
1,2,3-Trichlorobenzene	87-61-6	mg/kg	12.1	SL-7	< 0.00472 U	--	< 0.00707 U	--	< 0.00642 UJ	< 0.00747 U	--
1,2,3-Trichloropropane	96-18-4	mg/kg	0.00273	SL-7	< 0.00189 U	--	< 0.00283 U	--	< 0.00257 UJ	< 0.00299 U	--
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00188	SL-7	< 0.00472 U	--	< 0.00707 U	--	< 0.00642 UJ	< 0.00747 U	--
1,2,4-Trimethylbenzene	95-63-6	mg/kg	179	SL-7	< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.102	SL-7	< 0.00472 U	--	< 0.00707 U	--	< 0.00642 UJ	< 0.00747 U	--
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	0.277	SL-7	< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
1,2-Dichlorobenzene	95-50-1	mg/kg	0.00299	SL-7	< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
1,2-Dichloroethane (EDC)	107-06-2	mg/kg	0.0237	SL-6	< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
1,2-Dichloropropane	78-87-5	mg/kg	0.00103	SL-6	< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
1,3,5-Trimethylbenzene	108-67-8	mg/kg	180	SL-7	< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
1,3-Dichlorobenzene	541-73-1	mg/kg	0.00132	SL-6	< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
1,3-Dichloropropane	142-28-9	mg/kg	884	SL-7	< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
1,4-Dichloro-2-Butene	110-57-6	mg/kg			< 0.00472 U	--	< 0.00707 U	--	< 0.00642 UJ	< 0.00747 U	--
1,4-Dichlorobenzene	106-46-7	mg/kg	0.00807	SL-7	0.0005 J	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
2,2-Dichloropropane	594-20-7	mg/kg			< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
2-Butanone	78-93-3	mg/kg	48000	SL-1	< 0.00472 U	--	< 0.00707 U	--	< 0.00642 UJ	< 0.00747 U	--
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg			< 0.00472 UJ	--	< 0.00707 UJ	--	< 0.00642 UJ	< 0.00747 UJ	--
2-Chlorotoluene	95-49-8	mg/kg	414	SL-7	< 0.00094 U	--	< 0.00141 U	--	< 0.00128 UJ	< 0.00149 U	--
2-Hexanone	591-78-6	mg/kg	400	SL-1	< 0.00472 U	--	< 0.00707 U	--	< 0.00642 UJ	< 0.00747 U	--
2-Pentanone	107-87-9	mg/kg			< 0.00472 U	--	< 0.00707 UJ	--	< 0.00642 UJ	< 0.00747 UJ	--

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date Sample Depth	mg/kg	mg/kg	SL-6	SB-31	SB-31	SB-32	SB-33	SB-34
					03/01/2021 SB-31-13-14.5 13 - 14.5 ft	03/01/2021 SB-31-19-20 19 - 20 ft	03/08/2021 SB-32-7-8 7 - 8 ft	03/03/2021 SB-33-5.5-6.5 5.5 - 6.5 ft	03/01/2021 SB-34-5.5-6.5 5.5 - 6.5 ft
Alpha-BHC	319-84-6	mg/kg	9.82E-08	SL-6	--	--	--	--	--
Beta-BHC	319-85-7	mg/kg	3.4E-06	SL-6	--	--	--	--	--
cis-Chlordane	5103-71-9	mg/kg	5.29E-06	SL-7	--	--	--	--	--
cis-Nonachlor	5103-73-1	mg/kg			--	--	--	--	--
Delta-BHC	319-86-8	mg/kg	6	SL-9	--	--	--	--	--
Dieldrin	60-57-1	mg/kg	3.09E-08	SL-6	--	--	--	--	--
Endosulfan I	959-98-8	mg/kg	6.13E-05	SL-6	--	--	--	--	--
Endosulfan II	33213-65-9	mg/kg	6.13E-05	SL-6	--	--	--	--	--
Endosulfan Sulfate	1031-07-8	mg/kg	0.101	SL-6	--	--	--	--	--
Endrin	72-20-8	mg/kg	2.22E-05	SL-6	--	--	--	--	--
Endrin Aldehyde	7421-93-4	mg/kg	0.000124	SL-6	--	--	--	--	--
Endrin ketone	53494-70-5	mg/kg			--	--	--	--	--
Heptachlor	76-44-8	mg/kg	3.34E-09	SL-6	--	--	--	--	--
Heptachlor Epoxide	1024-57-3	mg/kg	2.49E-08	SL-6	--	--	--	--	--
Lindane	58-89-9	mg/kg	0.000205	SL-6	--	--	--	--	--
Methoxychlor	72-43-5	mg/kg	0.00161	SL-6	--	--	--	--	--
Mirex	2385-85-5	mg/kg	0.000357	SL-6	--	--	--	--	--
Oxychlorodane	27304-13-8	mg/kg			--	--	--	--	--
Total Chlordane	57-74-9	mg/kg	1.13E-06	SL-6	--	--	--	--	--
Toxaphene	8001-35-2	mg/kg	3.07E-06	SL-6	--	--	--	--	--
trans-Chlordane	5103-74-2	mg/kg	5.29E-06	SL-7	--	--	--	--	--
trans-Nonachlor	39765-80-5	mg/kg			--	--	--	--	--
Total Petroleum Hydrocarbons									
Gasoline Range Organics	TPH-GRO	mg/kg	30	SL-6	5440	81.6	--	--	< 8.06 U
Diesel Range Organics	TPH-DRO	mg/kg	260	SL-9	< 67.8 U	< 62.8 U	--	--	< 62.8 U
Motor Oil Range Organics	TPH-ORO	mg/kg	260	SL-9	< 136 U	< 126 U	--	--	< 126 U
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg	260	SL-9	< 136 U	< 126 U	--	--	< 126 U
Volatile Organic Compounds									
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg	18.7	SL-7	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
1,1,1-Trichloroethane	71-55-6	mg/kg	21.1	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg	0.00011	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
1,1,2-Trichloroethane	79-00-5	mg/kg	0.000326	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg	812000	SL-7	< 15.9 U	< 0.0028 U	--	--	< 0.00245 U
1,1-Dichloroethane	75-34-3	mg/kg	108	SL-7	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
1,1-Dichloroethene	75-35-4	mg/kg	1.41	SL-6	< 7.93 U	0.00575	--	--	< 0.00122 U
1,1-Dichloropropene	563-58-6	mg/kg			< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
1,2,3-Trichlorobenzene	87-61-6	mg/kg	12.1	SL-7	< 39.7 U	< 0.00699 U	--	--	< 0.00612 U
1,2,3-Trichloropropane	96-18-4	mg/kg	0.00273	SL-7	< 15.9 U	< 0.0028 U	--	--	< 0.00245 U
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.00188	SL-7	< 39.7 U	< 0.00699 U	--	--	< 0.00612 U
1,2,4-Trimethylbenzene	95-63-6	mg/kg	179	SL-7	84.2	< 0.0014 U	--	--	< 0.00122 U
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg	0.102	SL-7	< 39.7 U	< 0.00699 U	--	--	< 0.00612 U
1,2-Dibromoethane (EDB)	106-93-4	mg/kg	0.277	SL-7	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
1,2-Dichlorobenzene	95-50-1	mg/kg	0.00299	SL-7	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
1,2-Dichloroethane (EDC)	107-06-2	mg/kg	0.0237	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
1,2-Dichloropropane	78-87-5	mg/kg	0.00103	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
1,3,5-Trimethylbenzene	108-67-8	mg/kg	180	SL-7	125	0.00047 J	--	--	< 0.00122 U
1,3-Dichlorobenzene	541-73-1	mg/kg	0.00132	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
1,3-Dichloropropane	142-28-9	mg/kg	884	SL-7	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
1,4-Dichloro-2-Butene	110-57-6	mg/kg			< 39.7 U	< 0.00699 U	--	--	< 0.00612 U
1,4-Dichlorobenzene	106-46-7	mg/kg	0.00807	SL-7	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
2,2-Dichloropropane	594-20-7	mg/kg			< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
2-Butanone	78-93-3	mg/kg	48000	SL-1	< 39.7 U	< 0.00699 U	--	--	< 0.00612 U
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg			< 39.7 UJ	< 0.00699 UJ	--	--	< 0.00612 UJ
2-Chlorotoluene	95-49-8	mg/kg	414	SL-7	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
2-Hexanone	591-78-6	mg/kg	400	SL-1	< 39.7 U	< 0.00699 U	--	--	< 0.00612 U
2-Pentanone	107-87-9	mg/kg			< 39.7 UJ	< 0.00699 UJ	--	--	< 0.00612 UJ

Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location	Date	Sample	Depth	B-01	B-02	B-03	B-04	MW-04	MW-04	MW-04
					11/17/2017 B-01-8.5-9.5 8.5 - 9.5 ft	11/17/2017 B-02-6.5-7 6.5 - 7 ft	11/17/2017 B-03-6.5-7 6.5 - 7 ft	11/17/2017 B-04-6.5-7 6.5 - 7 ft	03/04/2021 MW-4-7-8 7 - 8 ft	03/04/2021 MW-4-10.5-11.5 10.5 - 11.5 ft	03/04/2021 MW-4-13.5-14.5 13.5 - 14.5 ft
4-Chlorotoluene	106-43-4	mg/kg			--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
4-Methyl-2-pentanone	108-10-1	mg/kg	6400	SL-1	--	--	--	--	< 0.285 U	< 0.00917 U	< 0.00667 U
Acetone	67-64-1	mg/kg	72000	SL-1	--	--	--	--	< 0.285 U	0.121	0.0839 J
Acrolein	107-02-8	mg/kg	0.000316	SL-6	--	--	--	--	< 0.285 U	< 0.00917 U	< 0.00667 U
Acrylonitrile	107-13-1	mg/kg	8.26E-06	SL-6	--	--	--	--	< 0.285 U	< 0.00917 U	< 0.00667 U
Benzene	71-43-2	mg/kg	0.000558	SL-6	--	--	--	--	< 0.057 U	0.00356	< 0.00133 U
Bromobenzene	108-86-1	mg/kg	201	SL-7	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Bromochloromethane	74-97-5	mg/kg			--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Bromodichloromethane	75-27-4	mg/kg	0.000892	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Bromoform	75-25-2	mg/kg	0.00495	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Bromomethane	74-83-9	mg/kg	0.0792	SL-6	--	--	--	--	0.115	< 0.00183 U	< 0.00133 U
Carbon Disulfide	75-15-0	mg/kg	7390	SL-7	--	--	--	--	< 0.057 U	0.00325	< 0.00133 U
Carbon Tetrachloride	56-23-5	mg/kg	0.000154	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Chlorobenzene	108-90-7	mg/kg	0.102	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Chloroethane	75-00-3	mg/kg			--	--	--	--	< 0.057 U	< 0.00367 U	< 0.00267 U
Chloroform	67-66-3	mg/kg	0.0524	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Chloromethane	74-87-3	mg/kg			--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg	117	SL-7	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.000376	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Dibromochloromethane	124-48-1	mg/kg	0.000701	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Dibromomethane	74-95-3	mg/kg	472	SL-7	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Dichlorodifluoromethane	75-71-8	mg/kg	11200	SL-7	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Ethylbenzene	100-41-4	mg/kg	0.0103	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Isopropylbenzene	98-82-8	mg/kg	1730	SL-7	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
m,p-Xylenes	179601-23-1	mg/kg			--	--	--	--	< 0.114 U	0.00323 J	< 0.00267 U
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Methylene Chloride	75-09-2	mg/kg	0.0297	SL-6	--	--	--	--	0.114 J	< 0.00917 U	< 0.00667 U
Methylolide	74-88-4	mg/kg			--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
n-Butylbenzene	104-51-8	mg/kg	748	SL-7	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
n-Propylbenzene	103-65-1	mg/kg	1670	SL-7	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
o-Xylene	95-47-6	mg/kg			--	--	--	--	< 0.057 U	0.00512	< 0.00133 U
p-Isopropyltoluene	99-87-6	mg/kg			--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
sec-Butylbenzene	135-98-8	mg/kg	1520	SL-7	--	--	--	--	< 0.057 U	0.00431	< 0.00133 U
Styrene	100-42-5	mg/kg	300	SL-9	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
tert-Butylbenzene	98-06-6	mg/kg	1600	SL-7	--	--	--	--	< 0.057 U	0.0008 J	< 0.00133 U
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0016	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Toluene	108-88-3	mg/kg	0.0435	SL-6	--	--	--	--	< 0.057 U	0.00116 J	0.00035 J
Total Xylenes	1330-20-7	mg/kg	0.0551	SL-6	--	--	--	--	< 0.114 U	0.00836	< 0.00267 U
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.325	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.000376	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Trichloroethene (TCE)	79-01-6	mg/kg	0.000266	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Trichlorofluoromethane	75-69-4	mg/kg	16800	SL-7	--	--	--	--	< 0.057 U	< 0.00367 U	< 0.00267 U
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1	--	--	--	--	< 0.285 U	< 0.00917 U	< 0.00667 U
Vinyl Chloride	75-01-4	mg/kg	5.55E-05	SL-6	--	--	--	--	< 0.057 U	< 0.00183 U	< 0.00133 U
Conventionals											
Total Organic Carbon	TOC	%			--	--	--	--	2.28	1.49	1.05
Total Solids	TS	%			--	--	--	--	79.75	63.22	76.83

Saturated soil is defined as being greater than 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

"-" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

SL-1	Direct Contact Unrestricted
SL-6	Protect Surface Water via Ground Water Saturated Zone
SL-7	Protect Sediment via Groundwater Saturated Zone
SL-9	Site-Specific TEE Unrestricted
SL-10	Natural Background

Aspect Consulting

6/22/2022

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Table B.2

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Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location	Date	Sample Depth	Concentration							
				MW-04	MW-05	MW-05	MW-05	MW-05	MW-05	MW-06	
				03/04/2021 MW-4-18-20 18 - 20 ft	03/05/2021 MW-5-6-7 6 - 7 ft	03/05/2021 MW-5-8-9.5 8 - 9.5 ft	03/05/2021 MW-5-15-16 15 - 16 ft	03/05/2021 MW-5-20-22.5 20 - 22.5 ft	03/05/2021 MW-5-26.5-28 26.5 - 28 ft	03/05/2021 MW-6-9 9 ft	
4-Chlorotoluene	106-43-4	mg/kg	< 0.00138 U	< 0.00119 UJ	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U		
4-Methyl-2-pentanone	108-10-1	mg/kg	6400	< 0.00688 U	< 0.00596 U	< 0.00504 U	< 0.00638 U	< 0.00629 U	< 0.00736 U	< 0.00653 U	
Acetone	67-64-1	mg/kg	72000	0.0551	0.204	0.07	0.07	0.0612	0.0786	0.0559	
Acrolein	107-02-8	mg/kg	0.000316	< 0.00688 U	< 0.00596 U	< 0.00504 U	< 0.00638 U	< 0.00629 U	< 0.00736 U	< 0.00653 U	
Acrylonitrile	107-13-1	mg/kg	8.26E-06	< 0.00688 U	< 0.00596 U	< 0.00504 U	< 0.00638 U	< 0.00629 U	< 0.00736 U	< 0.00653 U	
Benzene	71-43-2	mg/kg	0.000558	< 0.00138 U	0.00079 J	0.00055 J	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Bromobenzene	108-86-1	mg/kg	201	< 0.00138 U	< 0.00119 UJ	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Bromochloromethane	74-97-5	mg/kg		< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Bromodichloromethane	75-27-4	mg/kg	0.000892	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Bromoform	75-25-2	mg/kg	0.00495	< 0.00138 U	< 0.00119 UJ	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Bromomethane	74-83-9	mg/kg	0.0792	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Carbon Disulfide	75-15-0	mg/kg	7390	0.00231	0.00414	0.0132 J	0.00161	0.00489	< 0.00147 U	< 0.00131 U	
Carbon Tetrachloride	56-23-5	mg/kg	0.000154	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Chlorobenzene	108-90-7	mg/kg	0.102	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Chloroethane	75-00-3	mg/kg		< 0.00275 U	< 0.00238 U	< 0.00202 U	< 0.00255 U	< 0.00252 U	< 0.00294 U	< 0.00261 U	
Chloroform	67-66-3	mg/kg	0.0524	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Chloromethane	74-87-3	mg/kg		< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg	117	< 0.00138 UJ	0.00081 J	0.00037 J	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 UJ	
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.000376	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Dibromochloromethane	124-48-1	mg/kg	0.000701	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Dibromomethane	74-95-3	mg/kg	472	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Dichlorodifluoromethane	75-71-8	mg/kg	11200	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Ethylbenzene	100-41-4	mg/kg	0.0103	< 0.00138 U	0.0105	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Isopropylbenzene	98-82-8	mg/kg	1730	< 0.00138 U	0.206 J	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
m,p-Xylenes	179601-23-1	mg/kg		< 0.00275 U	0.0571	< 0.00202 U	< 0.00255 U	< 0.00252 U	< 0.00294 U	< 0.00261 U	
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Methylene Chloride	75-09-2	mg/kg	0.0297	< 0.00688 U	< 0.00596 U	< 0.00504 U	< 0.00638 U	< 0.00629 U	< 0.00736 U	< 0.00653 U	
Methylolide	74-88-4	mg/kg		< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
n-Butylbenzene	104-51-8	mg/kg	748	< 0.00138 U	0.333	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
n-Propylbenzene	103-65-1	mg/kg	1670	< 0.00138 U	0.259	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
o-Xylene	95-47-6	mg/kg		< 0.00138 U	0.0656	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
p-Isopropyltoluene	99-87-6	mg/kg		< 0.00138 U	0.0183	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
sec-Butylbenzene	135-98-8	mg/kg	1520	< 0.00138 U	0.195	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Styrene	100-42-5	mg/kg	300	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
tert-Butylbenzene	98-06-6	mg/kg	1600	< 0.00138 U	< 0.00119 UJ	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0016	< 0.00138 U	< 0.00119 U	0.00307 J	< 0.00128 U	< 0.00126 U	< 0.00147 U	0.00381	
Toluene	108-88-3	mg/kg	0.0435	< 0.00138 U	0.00444	0.00037 J	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Total Xylenes	1330-20-7	mg/kg	0.0551	< 0.00275 U	0.123	< 0.00202 U	< 0.00255 U	< 0.00252 U	< 0.00294 U	< 0.00261 U	
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.325	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.000376	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Trichloroethene (TCE)	79-01-6	mg/kg	0.000266	< 0.00138 U	0.0007 J	0.00063 J	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Trichlorofluoromethane	75-69-4	mg/kg	16800	< 0.00275 U	< 0.00238 U	< 0.00202 U	< 0.00255 U	< 0.00252 U	< 0.00294 U	< 0.00261 U	
Vinyl Acetate	108-05-4	mg/kg	80000	< 0.00688 U	< 0.00596 U	< 0.00504 U	< 0.00638 U	< 0.00629 U	< 0.00736 U	< 0.00653 U	
Vinyl Chloride	75-01-4	mg/kg	5.55E-05	< 0.00138 U	< 0.00119 U	< 0.00101 U	< 0.00128 U	< 0.00126 U	< 0.00147 U	< 0.00131 U	
Conventionals											
Total Organic Carbon	TOC	%		--	--	0.21	0.1	< 0.02 U	0.38	0.07	
Total Solids	TS	%		--	--	73.26	77.46	82.32	79.26	75.25	

Saturated soil is defined as being greater than 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

“-” - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

SL-1	Direct Contact Unrestricted
SL-6	Protect Surface Water via Ground Water Saturated Zone
SL-7	Protect Sediment via Groundwater Saturated Zone
SL-9	Site-Specific TEE Unrestricted
SL-10	Natural Background

Aspect Consulting

6/22/2022

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Table B.2

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Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date Sample Depth	MW-06 03/05/2021 MW-6-18-20 18 - 20 ft	MW-07 03/09/2021 MW-7-17-19 17 - 19 ft	MW-08 03/09/2021 MW-8-8-9 8 - 9 ft	MW-08 03/09/2021 MW-8-18-20 18 - 20 ft	MW-10 03/08/2021 MW-10-5.5-6.5 5.5 - 6.5 ft	MW-11 03/08/2021 MW-11-6-7 6 - 9 ft	MW-12 03/03/2021 MW-12-9.5-10.5 9.5 - 10.5 ft
4-Chlorotoluene	106-43-4	mg/kg						
4-Methyl-2-pentanone	108-10-1	mg/kg	6400	SL-1	< 0.00116 U	--	< 0.00115 U	--
Acetone	67-64-1	mg/kg	72000	SL-1	< 0.00582 U	--	< 0.00574 U	--
Acrolein	107-02-8	mg/kg	0.000316	SL-6	0.0136	--	0.0763	0.126
Acrylonitrile	107-13-1	mg/kg	8.26E-06	SL-6	< 0.00582 U	--	< 0.00574 UJ	--
Benzene	71-43-2	mg/kg	0.000558	SL-6	< 0.00582 U	--	< 0.00508 U	< 0.00563 U
Bromobenzene	108-86-1	mg/kg	201	SL-7	0.00118	--	0.0006 J	0.00075 J
Bromochloromethane	74-97-5	mg/kg			< 0.00116 U	--	< 0.00115 U	--
Bromodichloromethane	75-27-4	mg/kg	0.000892	SL-6	< 0.00116 U	--	< 0.00115 U	--
Bromoform	75-25-2	mg/kg	0.00495	SL-6	< 0.00116 U	--	< 0.00115 U	--
Bromomethane	74-83-9	mg/kg	0.0792	SL-6	< 0.00116 U	--	< 0.00115 U	--
Carbon Disulfide	75-15-0	mg/kg	7390	SL-7	< 0.00116 U	--	< 0.00115 U	--
Carbon Tetrachloride	56-23-5	mg/kg	0.000154	SL-6	< 0.00116 U	--	< 0.00115 U	--
Chlorobenzene	108-90-7	mg/kg	0.102	SL-6	< 0.00116 U	--	< 0.00115 U	--
Chloroethane	75-00-3	mg/kg			< 0.00233 U	--	< 0.0023 U	--
Chloroform	67-66-3	mg/kg	0.0524	SL-6	< 0.00116 U	--	< 0.00115 U	--
Chloromethane	74-87-3	mg/kg			< 0.00116 U	--	< 0.00115 U	--
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg	117	SL-7	< 0.00116 UJ	--	< 0.00115 U	--
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.000376	SL-6	< 0.00116 U	--	< 0.00115 U	--
Dibromochloromethane	124-48-1	mg/kg	0.000701	SL-6	< 0.00116 U	--	< 0.00115 U	--
Dibromomethane	74-95-3	mg/kg	472	SL-7	< 0.00116 U	--	< 0.00115 U	--
Dichlorodifluoromethane	75-71-8	mg/kg	11200	SL-7	< 0.00116 U	--	< 0.00115 U	--
Ethylbenzene	100-41-4	mg/kg	0.0103	SL-6	< 0.00116 U	--	< 0.00115 U	--
Isopropylbenzene	98-82-8	mg/kg	1730	SL-7	< 0.00116 U	--	< 0.00115 U	--
m,p-Xylenes	179601-23-1	mg/kg			< 0.00233 U	--	< 0.0023 U	--
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1	< 0.00116 U	--	< 0.00115 U	--
Methylene Chloride	75-09-2	mg/kg	0.0297	SL-6	< 0.00582 U	--	< 0.00574 U	--
Methylolide	74-88-4	mg/kg			< 0.00116 U	--	< 0.00115 U	--
n-Butylbenzene	104-51-8	mg/kg	748	SL-7	< 0.00116 U	--	< 0.00115 U	--
n-Propylbenzene	103-65-1	mg/kg	1670	SL-7	< 0.00116 U	--	< 0.00115 U	--
o-Xylene	95-47-6	mg/kg			< 0.00116 U	--	< 0.00115 U	--
p-Isopropyltoluene	99-87-6	mg/kg			< 0.00116 U	--	< 0.00115 U	--
sec-Butylbenzene	135-98-8	mg/kg	1520	SL-7	< 0.00116 U	--	< 0.00115 U	--
Styrene	100-42-5	mg/kg	300	SL-9	< 0.00116 U	--	< 0.00115 U	--
tert-Butylbenzene	98-06-6	mg/kg	1600	SL-7	< 0.00116 U	--	< 0.00115 U	--
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0016	SL-6	< 0.00116 U	--	< 0.00115 U	--
Toluene	108-88-3	mg/kg	0.0435	SL-6	< 0.00116 U	--	< 0.00115 U	--
Total Xylenes	1330-20-7	mg/kg	0.0551	SL-6	< 0.00233 U	--	< 0.0023 U	--
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.325	SL-6	< 0.00116 U	--	< 0.00115 U	--
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.000376	SL-6	< 0.00116 U	--	< 0.00115 U	--
Trichloroethene (TCE)	79-01-6	mg/kg	0.000266	SL-6	< 0.00116 U	--	< 0.00115 U	--
Trichlorofluoromethane	75-69-4	mg/kg	16800	SL-7	< 0.00233 U	--	< 0.0023 U	--
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1	< 0.00582 U	--	< 0.00574 U	--
Vinyl Chloride	75-01-4	mg/kg	5.55E-05	SL-6	< 0.00116 U	--	< 0.00115 U	--
Conventionals								
Total Organic Carbon	TOC	%			< 0.02 U	--	< 0.02 U	--
Total Solids	TS	%			77.91	--	77.46	--

Saturated soil is defined as being greater than 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

"-" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

SL-1	Direct Contact Unrestricted
SL-6	Protect Surface Water via Ground Water Saturated Zone
SL-7	Protect Sediment via Groundwater Saturated Zone
SL-9	Site-Specific TEE Unrestricted
SL-10	Natural Background

Aspect Consulting

6/22/2022

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Table B.2

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Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location	Date	Sample	Depth	MW-13	MW-13	SB-01	SB-02	SB-03	SB-03	SB-04
					03/01/2021	03/01/2021	09/27/2007	09/28/2007	09/27/2007	09/27/2007	09/27/2007
					MW-13-9.5-10.5	MW-13-18-19.5	SB-01-9	SB-02-9	SB-03-7	SB-03-13.5	SB-04-8
					9.5 - 10.5 ft	18 - 19.5 ft	9 - 11 ft	9 - 11 ft	7 - 9 ft	14 - 16 ft	8 - 10 ft
4-Chlorotoluene	106-43-4	mg/kg			< 0.00125 U	< 0.00131 U	--	--	--	--	--
4-Methyl-2-pentanone	108-10-1	mg/kg	6400	SL-1	< 0.00627 U	< 0.00653 U	--	--	--	--	--
Acetone	67-64-1	mg/kg	72000	SL-1	0.0771 J	0.075	--	--	--	--	--
Acrolein	107-02-8	mg/kg	0.000316	SL-6	< 0.00627 U	< 0.00653 U	--	--	--	--	--
Acrylonitrile	107-13-1	mg/kg	8.26E-06	SL-6	< 0.00627 U	< 0.00653 U	--	--	--	--	--
Benzene	71-43-2	mg/kg	0.000558	SL-6	0.00064 J	0.00071 J	--	--	--	--	--
Bromobenzene	108-86-1	mg/kg	201	SL-7	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Bromochloromethane	74-97-5	mg/kg			< 0.00125 U	< 0.00131 U	--	--	--	--	--
Bromodichloromethane	75-27-4	mg/kg	0.000892	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Bromoform	75-25-2	mg/kg	0.00495	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Bromomethane	74-83-9	mg/kg	0.0792	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Carbon Disulfide	75-15-0	mg/kg	7390	SL-7	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Carbon Tetrachloride	56-23-5	mg/kg	0.000154	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Chlorobenzene	108-90-7	mg/kg	0.102	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Chloroethane	75-00-3	mg/kg			< 0.00251 U	< 0.00261 U	--	--	--	--	--
Chloroform	67-66-3	mg/kg	0.0524	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Chloromethane	74-87-3	mg/kg			< 0.00125 U	< 0.00131 U	--	--	--	--	--
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg	117	SL-7	0.00812	0.00468 J	--	--	--	--	--
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.000376	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Dibromochloromethane	124-48-1	mg/kg	0.000701	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Dibromomethane	74-95-3	mg/kg	472	SL-7	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Dichlorodifluoromethane	75-71-8	mg/kg	11200	SL-7	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Ethylbenzene	100-41-4	mg/kg	0.0103	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Isopropylbenzene	98-82-8	mg/kg	1730	SL-7	< 0.00125 U	< 0.00131 U	--	--	--	--	--
m,p-Xylenes	179601-23-1	mg/kg			< 0.00251 U	< 0.00261 U	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Methylene Chloride	75-09-2	mg/kg	0.0297	SL-6	0.0277	0.00729	--	--	--	--	--
Methylolide	74-88-4	mg/kg			< 0.00125 U	< 0.00131 U	--	--	--	--	--
n-Butylbenzene	104-51-8	mg/kg	748	SL-7	< 0.00125 U	< 0.00131 U	--	--	--	--	--
n-Propylbenzene	103-65-1	mg/kg	1670	SL-7	< 0.00125 U	< 0.00131 U	--	--	--	--	--
o-Xylene	95-47-6	mg/kg			< 0.00125 U	< 0.00131 U	--	--	--	--	--
p-Isopropyltoluene	99-87-6	mg/kg			< 0.00125 U	< 0.00131 U	--	--	--	--	--
sec-Butylbenzene	135-98-8	mg/kg	1520	SL-7	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Styrene	100-42-5	mg/kg	300	SL-9	< 0.00125 U	< 0.00131 U	--	--	--	--	--
tert-Butylbenzene	98-06-6	mg/kg	1600	SL-7	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0016	SL-6	3.28	7.44	--	--	--	--	--
Toluene	108-88-3	mg/kg	0.0435	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Total Xylenes	1330-20-7	mg/kg	0.0551	SL-6	< 0.00251 U	< 0.00261 U	--	--	--	--	--
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.325	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.000376	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Trichloroethene (TCE)	79-01-6	mg/kg	0.000266	SL-6	0.0189	0.00654	--	--	--	--	--
Trichlorofluoromethane	75-69-4	mg/kg	16800	SL-7	< 0.00251 U	< 0.00261 U	--	--	--	--	--
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1	< 0.00627 U	< 0.00653 U	--	--	--	--	--
Vinyl Chloride	75-01-4	mg/kg	5.55E-05	SL-6	< 0.00125 U	< 0.00131 U	--	--	--	--	--
Conventionals											
Total Organic Carbon	TOC	%			0.13	0.2	--	--	--	--	--
Total Solids	TS	%			80.04	71.36	84.3	82.7	81.5	84.2	71.8

Saturated soil is defined as being greater than 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

"-" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

SL-1	Direct Contact Unrestricted
SL-6	Protect Surface Water via Ground Water Saturated Zone
SL-7	Protect Sediment via Groundwater Saturated Zone
SL-9	Site-Specific TEE Unrestricted
SL-10	Natural Background

Aspect Consulting

6/22/2022

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Table B.2

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Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date Sample Depth				SB-05	SB-06	SB-07	SB-08	SB-09	SB-10	SB-13
					09/27/2007 SB-05-8 8 - 10 ft	09/28/2007 SB-06-8 8 - 10 ft	09/28/2007 SB-07-9 9 - 11 ft	09/27/2007 SB-08-9 9 - 11 ft	09/27/2007 SB-09-10 10 - 12 ft	09/28/2007 SB-10-14 14 - 16 ft	10/01/2007 SB-13-7 7 - 9 ft
4-Chlorotoluene	106-43-4	mg/kg			--	--	--	--	--	--	--
4-Methyl-2-pentanone	108-10-1	mg/kg	6400	SL-1	--	--	--	--	--	--	--
Acetone	67-64-1	mg/kg	72000	SL-1	--	--	--	--	--	--	--
Acrolein	107-02-8	mg/kg	0.000316	SL-6	--	--	--	--	--	--	--
Acrylonitrile	107-13-1	mg/kg	8.26E-06	SL-6	--	--	--	--	--	--	--
Benzene	71-43-2	mg/kg	0.000558	SL-6	--	--	--	--	--	--	--
Bromobenzene	108-86-1	mg/kg	201	SL-7	--	--	--	--	--	--	--
Bromochloromethane	74-97-5	mg/kg			--	--	--	--	--	--	--
Bromodichloromethane	75-27-4	mg/kg	0.000892	SL-6	--	--	--	--	--	--	--
Bromoform	75-25-2	mg/kg	0.00495	SL-6	--	--	--	--	--	--	--
Bromomethane	74-83-9	mg/kg	0.0792	SL-6	--	--	--	--	--	--	--
Carbon Disulfide	75-15-0	mg/kg	7390	SL-7	--	--	--	--	--	--	--
Carbon Tetrachloride	56-23-5	mg/kg	0.000154	SL-6	--	--	--	--	--	--	--
Chlorobenzene	108-90-7	mg/kg	0.102	SL-6	--	--	--	--	--	--	--
Chloroethane	75-00-3	mg/kg			--	--	--	--	--	--	--
Chloroform	67-66-3	mg/kg	0.0524	SL-6	--	--	--	--	--	--	--
Chloromethane	74-87-3	mg/kg			--	--	--	--	--	--	--
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg	117	SL-7	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.000376	SL-6	--	--	--	--	--	--	--
Dibromochloromethane	124-48-1	mg/kg	0.000701	SL-6	--	--	--	--	--	--	--
Dibromomethane	74-95-3	mg/kg	472	SL-7	--	--	--	--	--	--	--
Dichlorodifluoromethane	75-71-8	mg/kg	11200	SL-7	--	--	--	--	--	--	--
Ethylbenzene	100-41-4	mg/kg	0.0103	SL-6	--	--	--	--	--	--	--
Isopropylbenzene	98-82-8	mg/kg	1730	SL-7	--	--	--	--	--	--	--
m,p-Xylenes	179601-23-1	mg/kg			--	--	--	--	--	--	--
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1	--	--	--	--	--	--	--
Methylene Chloride	75-09-2	mg/kg	0.0297	SL-6	--	--	--	--	--	--	--
Methylolide	74-88-4	mg/kg			--	--	--	--	--	--	--
n-Butylbenzene	104-51-8	mg/kg	748	SL-7	--	--	--	--	--	--	--
n-Propylbenzene	103-65-1	mg/kg	1670	SL-7	--	--	--	--	--	--	--
o-Xylene	95-47-6	mg/kg			--	--	--	--	--	--	--
p-Isopropyltoluene	99-87-6	mg/kg			--	--	--	--	--	--	--
sec-Butylbenzene	135-98-8	mg/kg	1520	SL-7	--	--	--	--	--	--	--
Styrene	100-42-5	mg/kg	300	SL-9	--	--	--	--	--	--	--
tert-Butylbenzene	98-06-6	mg/kg	1600	SL-7	--	--	--	--	--	--	--
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0016	SL-6	--	--	--	--	--	--	--
Toluene	108-88-3	mg/kg	0.0435	SL-6	--	--	--	--	--	--	--
Total Xylenes	1330-20-7	mg/kg	0.0551	SL-6	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.325	SL-6	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.000376	SL-6	--	--	--	--	--	--	--
Trichloroethene (TCE)	79-01-6	mg/kg	0.000266	SL-6	--	--	--	--	--	--	--
Trichlorofluoromethane	75-69-4	mg/kg	16800	SL-7	--	--	--	--	--	--	--
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1	--	--	--	--	--	--	--
Vinyl Chloride	75-01-4	mg/kg	5.55E-05	SL-6	--	--	--	--	--	--	--
Conventionals											
Total Organic Carbon	TOC	%			--	--	--	--	--	--	--
Total Solids	TS	%			60.5	81.1	87.5	76.4	78.6	85.9	77.4

Saturated soil is defined as being greater than 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

J - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

"-" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

SL-1	Direct Contact Unrestricted
SL-6	Protect Surface Water via Ground Water Saturated Zone
SL-7	Protect Sediment via Groundwater Saturated Zone
SL-9	Site-Specific TEE Unrestricted
SL-10	Natural Background

Aspect Consulting

6/22/2022

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Table B.2

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Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date Sample Depth				SB-14	SB-17	SB-18A	SB-19	SB-20A	SB-21	SB-22
					10/01/2007 SB-14-7.5 8 - 10 ft	07/27/2011 SB17-10.0-072711 10 - 10 ft	07/27/2011 SB18A-9.0-072711 9 - 9 ft	07/28/2011 SB19-8.0-072811 8 - 8 ft	07/27/2011 SB20A-8.5-072711 8.5 - 8.5 ft	07/27/2011 SB21-9.0-072711 9 - 9 ft	07/27/2011 SB22-10.0-072711 10 - 10 ft
4-Chlorotoluene	106-43-4	mg/kg			< 0.025 U	--	--	--	--	< 0.066 U	< 0.076 U
4-Methyl-2-pentanone	108-10-1	mg/kg	6400	SL-1	< 0.025 U	--	--	--	--	< 0.0057 U	< 0.38 U
Acetone	67-64-1	mg/kg	72000	SL-1	< 0.014 U	--	--	--	--	0.11	< 0.38 U
Acrolein	107-02-8	mg/kg	0.000316	SL-6	--	--	--	--	--	--	--
Acrylonitrile	107-13-1	mg/kg	8.26E-06	SL-6	--	--	--	--	--	--	--
Benzene	71-43-2	mg/kg	0.000558	SL-6	< 0.0063 U	--	--	--	< 0.02 U	< 0.0011 U	< 0.076 U
Bromobenzene	108-86-1	mg/kg	201	SL-7	< 0.0063 U	--	--	--	--	< 0.066 U	< 0.076 U
Bromochloromethane	74-97-5	mg/kg			< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
Bromodichloromethane	75-27-4	mg/kg	0.000892	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
Bromoform	75-25-2	mg/kg	0.00495	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
Bromomethane	74-83-9	mg/kg	0.0792	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
Carbon Disulfide	75-15-0	mg/kg	7390	SL-7	< 0.0063 U	--	--	--	--	0.0093	< 0.076 U
Carbon Tetrachloride	56-23-5	mg/kg	0.000154	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
Chlorobenzene	108-90-7	mg/kg	0.102	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
Chloroethane	75-00-3	mg/kg			< 0.0063 U	--	--	--	--	< 0.0057 U	< 0.38 U
Chloroform	67-66-3	mg/kg	0.0524	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
Chloromethane	74-87-3	mg/kg			< 0.0063 U	--	--	--	--	< 0.0057 U	< 0.38 U
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg	117	SL-7	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.000376	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
Dibromochloromethane	124-48-1	mg/kg	0.000701	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
Dibromomethane	74-95-3	mg/kg	472	SL-7	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
Dichlorodifluoromethane	75-71-8	mg/kg	11200	SL-7	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
Ethylbenzene	100-41-4	mg/kg	0.0103	SL-6	< 0.0063 U	--	--	--	< 0.06 U	< 0.0011 U	< 0.076 U
Isopropylbenzene	98-82-8	mg/kg	1730	SL-7	< 0.025 U	--	--	--	--	< 0.0011 U	< 0.076 U
m,p-Xylenes	179601-23-1	mg/kg			< 0.0063 U	--	--	--	< 0.06 U	< 0.0023 U	< 0.15 U
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1	--	--	--	--	--	< 0.0011 U	< 0.076 U
Methylene Chloride	75-09-2	mg/kg	0.0297	SL-6	< 0.001 U	--	--	--	--	< 0.011 U	< 0.76 U
Methylolide	74-88-4	mg/kg			--	--	--	--	--	< 0.0057 U	< 0.38 U
n-Butylbenzene	104-51-8	mg/kg	748	SL-7	< 0.025 U	--	--	--	--	< 0.066 U	0.17
n-Propylbenzene	103-65-1	mg/kg	1670	SL-7	< 0.025 U	--	--	--	--	< 0.066 U	< 0.076 U
o-Xylene	95-47-6	mg/kg			< 0.0063 U	--	--	--	< 0.06 U	< 0.0011 U	< 0.076 U
p-Isopropyltoluene	99-87-6	mg/kg			< 0.025 U	--	--	--	--	< 0.066 U	< 0.076 U
sec-Butylbenzene	135-98-8	mg/kg	1520	SL-7	< 0.025 U	--	--	--	--	< 0.066 U	0.14
Styrene	100-42-5	mg/kg	300	SL-9	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
tert-Butylbenzene	98-06-6	mg/kg	1600	SL-7	< 0.025 U	--	--	--	--	< 0.066 U	< 0.076 U
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0016	SL-6	0.002	--	--	--	--	0.002	< 0.076 U
Toluene	108-88-3	mg/kg	0.0435	SL-6	0.00089 J	--	--	--	< 0.06 U	< 0.0057 U	< 0.38 U
Total Xylenes	1330-20-7	mg/kg	0.0551	SL-6	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.325	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.000376	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
Trichloroethene (TCE)	79-01-6	mg/kg	0.000266	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
Trichlorofluoromethane	75-69-4	mg/kg	16800	SL-7	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1	--	--	--	--	--	< 0.0057 U	< 0.38 U
Vinyl Chloride	75-01-4	mg/kg	5.55E-05	SL-6	< 0.0063 U	--	--	--	--	< 0.0011 U	< 0.076 U
Conventionals											
Total Organic Carbon	TOC	%			--	--	--	--	--	--	--
Total Solids	TS	%			76.6	--	--	--	--	--	--

Saturated soil is defined as being greater than 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

J - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

"--" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

SL-1	Direct Contact Unrestricted
SL-6	Protect Surface Water via Ground Water Saturated Zone
SL-7	Protect Sediment via Groundwater Saturated Zone
SL-9	Site-Specific TEE Unrestricted
SL-10	Natural Background

Aspect Consulting

6/22/2022

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Table B.2

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Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date Sample Depth				SB-22	SB-23	SB-24	SB-25	SB-26	SB-26	SB-26
					07/27/2011 SB22-14.0-072711 14 - 14 ft	07/28/2011 SB23-8.0-072811 8 - 8 ft	07/28/2011 SB24-7.0-072811 7 - 7 ft	07/28/2011 SB25-10.0-072811 10 - 10 ft	03/04/2021 SB-26-5.5-6.5 5.5 - 6.5 ft	03/04/2021 SB-26-12.5 12.5 ft	03/04/2021 SB-26-18-20 18 - 20 ft
4-Chlorotoluene	106-43-4	mg/kg			--	--	--	--	< 0.00107 U	< 0.00113 U	--
4-Methyl-2-pentanone	108-10-1	mg/kg	6400	SL-1	--	--	--	--	< 0.00536 U	< 0.00565 U	--
Acetone	67-64-1	mg/kg	72000	SL-1	--	--	--	--	0.0658	0.0684	--
Acrolein	107-02-8	mg/kg	0.000316	SL-6	--	--	--	--	< 0.00536 U	< 0.00565 U	--
Acrylonitrile	107-13-1	mg/kg	8.26E-06	SL-6	--	--	--	--	< 0.00536 U	< 0.00565 U	--
Benzene	71-43-2	mg/kg	0.000558	SL-6	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Bromobenzene	108-86-1	mg/kg	201	SL-7	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Bromochloromethane	74-97-5	mg/kg			--	--	--	--	< 0.00107 U	< 0.00113 U	--
Bromodichloromethane	75-27-4	mg/kg	0.000892	SL-6	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Bromoform	75-25-2	mg/kg	0.00495	SL-6	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Bromomethane	74-83-9	mg/kg	0.0792	SL-6	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Carbon Disulfide	75-15-0	mg/kg	7390	SL-7	--	--	--	--	< 0.00107 U	0.00095 J	--
Carbon Tetrachloride	56-23-5	mg/kg	0.000154	SL-6	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Chlorobenzene	108-90-7	mg/kg	0.102	SL-6	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Chloroethane	75-00-3	mg/kg			--	--	--	--	< 0.00214 U	< 0.00226 U	--
Chloroform	67-66-3	mg/kg	0.0524	SL-6	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Chloromethane	74-87-3	mg/kg			--	--	--	--	< 0.00107 U	< 0.00113 U	--
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg	117	SL-7	--	--	--	--	< 0.00107 U	< 0.00113 UJ	--
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.000376	SL-6	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Dibromochloromethane	124-48-1	mg/kg	0.000701	SL-6	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Dibromomethane	74-95-3	mg/kg	472	SL-7	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Dichlorodifluoromethane	75-71-8	mg/kg	11200	SL-7	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Ethylbenzene	100-41-4	mg/kg	0.0103	SL-6	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Isopropylbenzene	98-82-8	mg/kg	1730	SL-7	--	--	--	--	< 0.00107 U	< 0.00113 U	--
m,p-Xylenes	179601-23-1	mg/kg			--	--	--	--	< 0.00214 U	< 0.00226 U	--
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Methylene Chloride	75-09-2	mg/kg	0.0297	SL-6	--	--	--	--	< 0.00536 U	< 0.00565 U	--
Methylolide	74-88-4	mg/kg			--	--	--	--	< 0.00107 U	< 0.00113 U	--
n-Butylbenzene	104-51-8	mg/kg	748	SL-7	--	--	--	--	< 0.00107 U	< 0.00113 U	--
n-Propylbenzene	103-65-1	mg/kg	1670	SL-7	--	--	--	--	< 0.00107 U	< 0.00113 U	--
o-Xylene	95-47-6	mg/kg			--	--	--	--	< 0.00107 U	< 0.00113 U	--
p-Isopropyltoluene	99-87-6	mg/kg			--	--	--	--	< 0.00107 U	< 0.00113 U	--
sec-Butylbenzene	135-98-8	mg/kg	1520	SL-7	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Styrene	100-42-5	mg/kg	300	SL-9	--	--	--	--	< 0.00107 U	< 0.00113 U	--
tert-Butylbenzene	98-06-6	mg/kg	1600	SL-7	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0016	SL-6	--	--	--	--	0.00108	0.00192	--
Toluene	108-88-3	mg/kg	0.0435	SL-6	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Total Xylenes	1330-20-7	mg/kg	0.0551	SL-6	--	--	--	--	< 0.00214 U	< 0.00226 U	--
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.325	SL-6	--	--	--	--	< 0.00107 U	< 0.00113 U	--
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.000376	SL-6	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Trichloroethene (TCE)	79-01-6	mg/kg	0.000266	SL-6	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Trichlorofluoromethane	75-69-4	mg/kg	16800	SL-7	--	--	--	--	< 0.00214 U	< 0.00226 U	--
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1	--	--	--	--	< 0.00536 U	< 0.00565 U	--
Vinyl Chloride	75-01-4	mg/kg	5.55E-05	SL-6	--	--	--	--	< 0.00107 U	< 0.00113 U	--
Conventionals											
Total Organic Carbon	TOC	%			--	--	--	--	< 0.02 U	0.52	--
Total Solids	TS	%			--	--	--	--	82.18	77.36	--

Saturated soil is defined as being greater than 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

"-" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

SL-1	Direct Contact Unrestricted
SL-6	Protect Surface Water via Ground Water Saturated Zone
SL-7	Protect Sediment via Groundwater Saturated Zone
SL-9	Site-Specific TEE Unrestricted
SL-10	Natural Background

Aspect Consulting

6/22/2022

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Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date Sample Depth	SB-27 03/09/2021 SB-27-8-9 8 - 9 ft	SB-27 03/09/2021 SB-27-18-20 18 - 20 ft	SB-28 03/01/2021 SB-28-14.5-15.5 14.5 - 15.5 ft	SB-30 03/01/2021 SB-30-11.5-12.5 11.5 - 12.5 ft	SB-30 03/01/2021 SB-30-12.5-14.5 12.5 - 14.5 ft	SB-30 03/01/2021 SB-30-23-25 23 - 25 ft	SB-31 03/01/2021 SB-31-10-11 10 - 11 ft
4-Chlorotoluene	106-43-4	mg/kg						
4-Methyl-2-pentanone	108-10-1	mg/kg	6400	SL-1	< 0.00094 U	--	< 0.00141 U	--
Acetone	67-64-1	mg/kg	72000	SL-1	< 0.00472 U	--	< 0.00707 U	--
Acrolein	107-02-8	mg/kg	0.000316	SL-6	0.0833	--	0.0735 J	--
Acrylonitrile	107-13-1	mg/kg	8.26E-06	SL-6	< 0.00472 U	--	< 0.00707 U	--
Benzene	71-43-2	mg/kg	0.000558	SL-6	< 0.00094 U	--	< 0.00141 U	--
Bromobenzene	108-86-1	mg/kg	201	SL-7	< 0.00094 U	--	< 0.00141 U	--
Bromochloromethane	74-97-5	mg/kg			< 0.00094 U	--	< 0.00141 U	--
Bromodichloromethane	75-27-4	mg/kg	0.000892	SL-6	< 0.00094 U	--	< 0.00141 U	--
Bromoform	75-25-2	mg/kg	0.00495	SL-6	< 0.00094 U	--	< 0.00141 U	--
Bromomethane	74-83-9	mg/kg	0.0792	SL-6	< 0.00094 U	--	< 0.00141 U	--
Carbon Disulfide	75-15-0	mg/kg	7390	SL-7	< 0.00094 U	--	< 0.00141 U	--
Carbon Tetrachloride	56-23-5	mg/kg	0.000154	SL-6	< 0.00094 U	--	< 0.00141 U	--
Chlorobenzene	108-90-7	mg/kg	0.102	SL-6	< 0.00094 U	--	< 0.00141 U	--
Chloroethane	75-00-3	mg/kg			< 0.00189 U	--	< 0.00283 U	--
Chloroform	67-66-3	mg/kg	0.0524	SL-6	< 0.00094 U	--	< 0.00141 U	--
Chloromethane	74-87-3	mg/kg			< 0.00094 U	--	< 0.00141 U	--
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg	117	SL-7	< 0.00094 U	--	< 0.00141 U	--
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.000376	SL-6	< 0.00094 U	--	< 0.00141 U	--
Dibromochloromethane	124-48-1	mg/kg	0.000701	SL-6	< 0.00094 U	--	< 0.00141 U	--
Dibromomethane	74-95-3	mg/kg	472	SL-7	< 0.00094 U	--	< 0.00141 U	--
Dichlorodifluoromethane	75-71-8	mg/kg	11200	SL-7	< 0.00094 U	--	< 0.00141 U	--
Ethylbenzene	100-41-4	mg/kg	0.0103	SL-6	< 0.00094 U	--	< 0.00141 U	--
Isopropylbenzene	98-82-8	mg/kg	1730	SL-7	< 0.00094 U	--	< 0.00141 U	--
m,p-Xylenes	179601-23-1	mg/kg			< 0.00189 U	--	< 0.00283 U	--
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1	< 0.00094 U	--	< 0.00141 U	--
Methylene Chloride	75-09-2	mg/kg	0.0297	SL-6	< 0.00472 U	--	< 0.00707 U	--
Methylolide	74-88-4	mg/kg			< 0.00094 U	--	< 0.00141 U	--
n-Butylbenzene	104-51-8	mg/kg	748	SL-7	< 0.00094 U	--	< 0.00141 U	--
n-Propylbenzene	103-65-1	mg/kg	1670	SL-7	< 0.00094 U	--	< 0.00141 U	--
o-Xylene	95-47-6	mg/kg			< 0.00094 U	--	< 0.00141 U	--
p-Isopropyltoluene	99-87-6	mg/kg			< 0.00094 U	--	< 0.00141 U	--
sec-Butylbenzene	135-98-8	mg/kg	1520	SL-7	< 0.00094 U	--	< 0.00141 U	--
Styrene	100-42-5	mg/kg	300	SL-9	< 0.00094 U	--	< 0.00141 U	--
tert-Butylbenzene	98-06-6	mg/kg	1600	SL-7	< 0.00094 U	--	< 0.00141 U	--
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0016	SL-6	< 0.00094 U	--	< 0.00141 U	--
Toluene	108-88-3	mg/kg	0.0435	SL-6	< 0.00094 U	--	< 0.00141 U	--
Total Xylenes	1330-20-7	mg/kg	0.0551	SL-6	< 0.00189 U	--	< 0.00283 U	--
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.325	SL-6	< 0.00094 U	--	< 0.00141 U	--
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.000376	SL-6	< 0.00094 U	--	< 0.00141 U	--
Trichloroethene (TCE)	79-01-6	mg/kg	0.000266	SL-6	< 0.00094 U	--	< 0.00141 U	--
Trichlorofluoromethane	75-69-4	mg/kg	16800	SL-7	< 0.00189 U	--	< 0.00283 U	--
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1	< 0.00472 U	--	< 0.00707 U	--
Vinyl Chloride	75-01-4	mg/kg	5.55E-05	SL-6	< 0.00094 U	--	< 0.00141 U	--
Conventionals								
Total Organic Carbon	TOC	%			0.38	--	< 0.05 U	--
Total Solids	TS	%			74.3	--	77.71	--

Saturated soil is defined as being greater than 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

"-" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

SL-1	Direct Contact Unrestricted
SL-6	Protect Surface Water via Ground Water Saturated Zone
SL-7	Protect Sediment via Groundwater Saturated Zone
SL-9	Site-Specific TEE Unrestricted
SL-10	Natural Background

Aspect Consulting

6/22/2022

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Table B.2. Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

	Location Date Sample Depth				SB-31	SB-31	SB-32	SB-33	SB-34
					03/01/2021 SB-31-13-14.5 13 - 14.5 ft	03/01/2021 SB-31-19-20 19 - 20 ft	03/08/2021 SB-32-7-8 7 - 8 ft	03/03/2021 SB-33-5.5-6.5 5.5 - 6.5 ft	03/01/2021 SB-34-5.5-6.5 5.5 - 6.5 ft
4-Chlorotoluene	106-43-4	mg/kg			< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
4-Methyl-2-pentanone	108-10-1	mg/kg	6400	SL-1	< 39.7 U	< 0.00699 U	--	--	< 0.00612 U
Acetone	67-64-1	mg/kg	72000	SL-1	< 39.7 U	0.0769 J	--	--	0.0589
Acrolein	107-02-8	mg/kg	0.000316	SL-6	< 39.7 U	< 0.00699 U	--	--	< 0.00612 U
Acrylonitrile	107-13-1	mg/kg	8.26E-06	SL-6	< 39.7 U	< 0.00699 U	--	--	< 0.00612 U
Benzene	71-43-2	mg/kg	0.000558	SL-6	< 7.93 U	< 0.0014 U	--	--	0.00048 J
Bromobenzene	108-86-1	mg/kg	201	SL-7	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Bromochloromethane	74-97-5	mg/kg			< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Bromodichloromethane	75-27-4	mg/kg	0.000892	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Bromoform	75-25-2	mg/kg	0.00495	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Bromomethane	74-83-9	mg/kg	0.0792	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Carbon Disulfide	75-15-0	mg/kg	7390	SL-7	< 7.93 U	0.00915	--	--	< 0.00122 U
Carbon Tetrachloride	56-23-5	mg/kg	0.000154	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Chlorobenzene	108-90-7	mg/kg	0.102	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Chloroethane	75-00-3	mg/kg			< 7.93 U	< 0.0028 U	--	--	< 0.00245 U
Chloroform	67-66-3	mg/kg	0.0524	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Chloromethane	74-87-3	mg/kg			< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg	117	SL-7	< 7.93 U	0.689	--	--	< 0.00122 UJ
cis-1,3-Dichloropropene	10061-01-5	mg/kg	0.000376	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Dibromochloromethane	124-48-1	mg/kg	0.000701	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Dibromomethane	74-95-3	mg/kg	472	SL-7	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Dichlorodifluoromethane	75-71-8	mg/kg	11200	SL-7	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Ethylbenzene	100-41-4	mg/kg	0.0103	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Isopropylbenzene	98-82-8	mg/kg	1730	SL-7	0.0025	< 0.0014 U	--	--	< 0.00122 U
m,p-Xylenes	179601-23-1	mg/kg			< 15.9 U	< 0.0028 U	--	--	< 0.00245 U
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg	556	SL-1	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Methylene Chloride	75-09-2	mg/kg	0.0297	SL-6	10.7 J	< 0.00699 U	--	--	< 0.00612 U
Methyl iodide	74-88-4	mg/kg			< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
n-Butylbenzene	104-51-8	mg/kg	748	SL-7	79.6	< 0.0014 U	--	--	< 0.00122 U
n-Propylbenzene	103-65-1	mg/kg	1670	SL-7	72.5	0.00049 J	--	--	< 0.00122 U
o-Xylene	95-47-6	mg/kg			< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
p-Isopropyltoluene	99-87-6	mg/kg			12.4	< 0.0014 U	--	--	< 0.00122 U
sec-Butylbenzene	135-98-8	mg/kg	1520	SL-7	13.6	< 0.0014 U	--	--	< 0.00122 U
Styrene	100-42-5	mg/kg	300	SL-9	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
tert-Butylbenzene	98-06-6	mg/kg	1600	SL-7	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Tetrachloroethene (PCE)	127-18-4	mg/kg	0.0016	SL-6	18.7	7.07	--	--	0.0006 J
Toluene	108-88-3	mg/kg	0.0435	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Total Xylenes	1330-20-7	mg/kg	0.0551	SL-6	< 15.9 U	< 0.0028 U	--	--	< 0.00245 U
trans-1,2-Dichloroethene	156-60-5	mg/kg	0.325	SL-6	< 7.93 U	0.00234	--	--	< 0.00122 U
trans-1,3-Dichloropropene	10061-02-6	mg/kg	0.000376	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Trichloroethene (TCE)	79-01-6	mg/kg	0.000266	SL-6	< 7.93 U	0.672	--	--	< 0.00122 U
Trichlorofluoromethane	75-69-4	mg/kg	16800	SL-7	< 7.93 U	< 0.0028 U	--	--	< 0.00245 U
Vinyl Acetate	108-05-4	mg/kg	80000	SL-1	< 39.7 U	< 0.00699 U	--	--	< 0.00612 U
Vinyl Chloride	75-01-4	mg/kg	5.55E-05	SL-6	< 7.93 U	< 0.0014 U	--	--	< 0.00122 U
Conventionals									
Total Organic Carbon	TOC	%			0.48	< 0.06 U	--	--	< 0.03 U
Total Solids	TS	%			72.21	78.01	--	--	78.43

Saturated soil is defined as being greater than 6 feet below ground surface (bgs).

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

"-" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

SL-1	Direct Contact Unrestricted
SL-6	Protect Surface Water via Ground Water Saturated Zone
SL-7	Protect Sediment via Groundwater Saturated Zone
SL-9	Site-Specific TEE Unrestricted
SL-10	Natural Background

Aspect Consulting

6/22/2022

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Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_level	Screening Level Source	Location	MW-04	MW-04	MW-05	MW-05	MW-06	MW-07
						Date Sample	03/31/2021	05/27/2021	03/31/2021	05/27/2021	03/29/2021	03/29/2021
						MW-04-210331	MW-04-210527	MW-05-210331	MW-05-210527	MW-06-210329	MW-07-210329	
Metals												
Arsenic	7440-38-2	D	ug/L	8	GW-5		0.567	--	0.798	--	0.288	--
Arsenic	7440-38-2	T	ug/L	8	GW-5		0.575	--	0.833	--	0.267	--
Barium	7440-39-3	T	ug/L	200	GW-2		--	--	--	--	--	--
Cadmium	7440-43-9	D	ug/L	1.19	GW-3		0.076 J	--	< 0.1 U	--	< 0.1 U	--
Cadmium	7440-43-9	T	ug/L	1.19	GW-3		< 0.1 J	--	< 0.1 U	--	< 0.1 U	--
Chromium	7440-47-3	D	ug/L	27.4	GW-2		1.05	--	2.34	--	0.465 J	--
Chromium	7440-47-3	T	ug/L	27.4	GW-2		< 0.5	--	2.37	--	0.444 J	--
Copper	7440-50-8	D	ug/L	3.1	GW-2		1.84	--	0.297 J	--	2.73	--
Copper	7440-50-8	T	ug/L	3.1	GW-2		< 0.5	--	< 0.5 J	--	3.06	--
Lead	7439-92-1	D	ug/L	5.6	GW-2		0.183	--	0.226	--	0.068 J	--
Lead	7439-92-1	T	ug/L	5.6	GW-2		< 0.1	--	2.44	--	0.13	--
Mercury	7439-97-6	D	ug/L	0.025	GW-2		< 0.02 U	--	< 0.02 U	--	< 0.02 U	--
Mercury	7439-97-6	T	ug/L	0.025	GW-2		< 0.02 U	--	< 0.02 U	--	< 0.02 U	--
Nickel	7440-02-0	D	ug/L	8.2	GW-2		11.2	--	22.2	--	0.41 J	--
Nickel	7440-02-0	T	ug/L	8.2	GW-2		11.5	--	25.1	--	0.463 J	--
Selenium	7782-49-2	T	ug/L	71	GW-2		--	--	--	--	--	--
Silver	7440-22-4	D	ug/L	1.9	GW-2		--	--	--	--	--	--
Silver	7440-22-4	T	ug/L	1.9	GW-2		--	--	--	--	--	--
Zinc	7440-66-6	D	ug/L	81	GW-2		26.2	--	1490 D	--	5.71	--
Zinc	7440-66-6	T	ug/L	81	GW-2		< 6	--	1830 D	--	6.01	--
Butyl Tin Ions												
Dibutyltin Ion	14488-53-0	T	ug/L				< 0.289 U	--	< 0.289 U	--	< 0.289 U	< 0.289 U
Monobutyltin	78763-54-9	T	ug/L				< 0.204 U	--	< 0.204 U	--	< 0.204 U	< 0.204 U
Tetrabutyltin	1461-25-2	T	ug/L				< 0.3 U	--	< 0.3 U	--	< 0.3 U	< 0.3 U
Tributyltin Ion	36643-28-4	T	ug/L	4.27E-06	GW-3		< 0.193 U	--	< 0.193 U	--	< 0.193 U	< 0.193 U
Polychlorinated Biphenyl Aroclors												
Aroclor 1016	12674-11-2	T	ug/L				< 0.01 U	--	< 0.01 U	--	< 0.01 U	< 0.011 U
Aroclor 1221	11104-28-2	T	ug/L				< 0.01 U	--	< 0.01 U	--	< 0.01 U	< 0.011 U
Aroclor 1232	11141-16-5	T	ug/L				< 0.01 U	--	0.386 P1	--	< 0.01 U	< 0.011 U
Aroclor 1242	53469-21-9	T	ug/L				0.063	--	< 0.01 U	--	< 0.01 U	< 0.011 U
Aroclor 1248	12672-29-6	T	ug/L				< 0.01 U	--	< 0.01 U	--	< 0.01 U	< 0.011 U
Aroclor 1254	11097-69-1	T	ug/L				0.035	--	0.252	--	0.014	0.004 J
Aroclor 1260	11096-82-5	T	ug/L				0.005 J	--	0.041	--	0.006 J	0.006 J
Aroclor 1262	37324-23-5	T	ug/L				< 0.01 U	--	< 0.01 U	--	< 0.01 U	< 0.011 U
Aroclor 1268	11100-14-4	T	ug/L				< 0.01 U	--	< 0.01 U	--	< 0.01 U	< 0.011 U
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2		0.133	--	0.709	--	0.0550	0.0485
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2		0.103	--	0.679	--	0.0200	0.0100
Polychlorinated Biphenyl Congeners												
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2		--	0.153 B	--	0.304 B	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2		--	0.0000278	--	0.0000509	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2		--	0.0000286	--	0.0000516	--	--
Polycyclic Aromatic Hydrocarbons												
1-Methylnaphthalene	90-12-0	T	ug/L	804	GW-3		0.024	--	2.63 D	--	0.002 J	0.002 J
2-Methylnaphthalene	91-57-6	T	ug/L	14	GW-3		< 0.01 J	--	0.441	--	0.003 J	0.003 J
Acenaphthene	83-32-9	T	ug/L	5.34	GW-3		0.054	--	0.436	--	< 0.01 U	< 0.01 U
Acenaphthylene	208-96-8	T	ug/L				0.003 J	--	0.024	--	< 0.01 U	< 0.01 U
Anthracene	120-12-7	T	ug/L	2.15	GW-3		0.01	--	0.182	--	< 0.01 U	< 0.01 U
Benzo(a,h,i)perylene	191-24-2	T	ug/L				0.002 J	--	0.002 J	--	< 0.01 U	< 0.01 U
Fluoranthene	206-44-0	T	ug/L	1.82	GW-3		0.021	--	0.06	--	< 0.01 U	0.002 J
Fluorene	86-73-7	T	ug/L	3.67	GW-3		0.041	--	0.562	--	< 0.01 U	< 0.01 U
Naphthalene	91-20-3	T	ug/L	1.4	GW-2		< 0.01 J	--	0.036	--	< 0.01 J	0.01
Phenanthrene	85-01-8	T	ug/L				< 0.01 U	--	0.062	--	< 0.01 U	0.002 J
Pyrene	129-00-0	T	ug/L	2.01	GW-3		0.021	--	0.051	--	< 0.01 U	< 0.01 J
Benzo(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2		< 0.01 U	--	0.007 J	--	< 0.01 U	< 0.01 U
Benzo(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2		< 0.01 U	--	0.003 J	--	< 0.01 U	< 0.01 U
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2		< 0.01 U	--	0.003 J	--	< 0.01 U	< 0.01 U
Benzo(i)fluoranthene	205-82-3	T	ug/L				< 0.01 U	--	< 0.01 U	--	< 0.01 U	< 0.01 U
Benzo(k)fluoranthene	Benz-ik-fluor	T	ug/L				< 0.01 U	--	< 0.01 U	--	< 0.01 U	< 0.01 U
Benzo(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2		< 0.01 U	--	< 0.01 U	--	< 0.01 U	< 0.01 U
Chrysene	218-01-9	T	ug/L	0.016	GW-2		0.002 J	--	0.011	--	< 0.01 U	0.002 J
Dibenz(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2		< 0.01 U	--	< 0.01 U	--	< 0.01 U	< 0.01 U
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2		< 0.01 U	--	0.001 J	--	< 0.01 U	< 0.01 U
Total Benzofluoranthenes	TOTBFA	T	ug/L				< 0.01 U	--	0.006 J	--	< 0.01 U	< 0.01 U
Total HPAHs	T-HPAH	T	ug/L				0.0460	--	0.138	--	< 0.01	0.00400
Total LPAHs	T-LPAH	T	ug/L				0.108	--	1.30	--	< 0.01	0.0120
Total PAHs (ND=0)	T-PAH	T	ug/L				0.154	--	1.44	--	< 0.01	0.0160
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2		0.0000200	--	0.00421	--	< 0	0.0000200
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2		0.00752	--	0.00521	--	< 0.00755	0.00752

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_level	Screening Level Source	Location	MW-08	MW-08	MW-09	MW-10	MW-11	MW-12
						Date Sample	03/29/2021	05/27/2021	03/29/2021	03/30/2021	03/30/2021	03/30/2021
							MW-08-210329	MW-08-210527	MW-09-210329	MW-10-210330	MW-11-210330	MW-12-210330
Metals												
Arsenic	7440-38-2	D	ug/L	8	GW-5		0.592	--	--	--	0.552	0.749
Arsenic	7440-38-2	T	ug/L	8	GW-5		0.666	--	--	--	0.734	0.765
Barium	7440-39-3	T	ug/L	200	GW-2		--	--	--	--	--	--
Cadmium	7440-43-9	D	ug/L	1.19	GW-3		< 0.1 U	--	--	--	< 0.1 U	0.114
Cadmium	7440-43-9	T	ug/L	1.19	GW-3		< 0.1 U	--	--	--	0.036 J	0.104
Chromium	7440-47-3	D	ug/L	27.4	GW-2		0.443 J	--	--	--	0.596	< 0.5 U
Chromium	7440-47-3	T	ug/L	27.4	GW-2		0.816	--	--	--	1.93	0.342 J
Copper	7440-50-8	D	ug/L	3.1	GW-2		2	--	--	--	1.77	10.1
Copper	7440-50-8	T	ug/L	3.1	GW-2		2.17	--	--	--	3.34	10.4
Lead	7439-92-1	D	ug/L	5.6	GW-2		0.073 J	--	--	--	0.115	0.065 J
Lead	7439-92-1	T	ug/L	5.6	GW-2		0.924	--	--	--	0.505	0.163
Mercury	7439-97-6	D	ug/L	0.025	GW-2		< 0.02 U	--	--	--	< 0.02 U	< 0.02 U
Mercury	7439-97-6	T	ug/L	0.025	GW-2		< 0.02 U	--	--	--	< 0.02 U	< 0.02 U
Nickel	7440-02-0	D	ug/L	8.2	GW-2		0.272 J	--	--	--	0.534	7.07
Nickel	7440-02-0	T	ug/L	8.2	GW-2		0.366 J	--	--	--	0.873	7.11
Selenium	7782-49-2	T	ug/L	71	GW-2		--	--	--	--	--	--
Silver	7440-22-4	D	ug/L	1.9	GW-2		--	--	--	--	--	--
Silver	7440-22-4	T	ug/L	1.9	GW-2		--	--	--	--	--	--
Zinc	7440-66-6	D	ug/L	81	GW-2		< 5 U	--	--	--	< 5 U	5.88
Zinc	7440-66-6	T	ug/L	81	GW-2		< 6 U	--	--	--	< 6 U	5.66 J
Butyl Tin Ions												
Dibutyltin Ion	14488-53-0	T	ug/L				< 0.289 U	--	--	--	< 0.289 U	--
Monobutyltin	78763-54-9	T	ug/L				< 0.204 U	--	--	--	< 0.204 U	--
Tetrabutyltin	1461-25-2	T	ug/L				< 0.3 U	--	--	--	< 0.3 U	--
Tributyltin Ion	36643-28-4	T	ug/L	4.27E-06	GW-3		< 0.193 U	--	--	--	< 0.193 U	--
Polychlorinated Biphenyl Aroclors												
Aroclor 1016	12674-11-2	T	ug/L				< 0.01 U	--	--	--	< 0.01 U	< 0.01 U
Aroclor 1221	11104-28-2	T	ug/L				< 0.01 U	--	--	--	< 0.01 U	< 0.01 U
Aroclor 1232	11141-16-5	T	ug/L				< 0.01 U	--	--	--	< 0.01 U	< 0.01 U
Aroclor 1242	53469-21-9	T	ug/L				< 0.01 U	--	--	--	< 0.01 U	< 0.01 U
Aroclor 1248	12672-29-6	T	ug/L				< 0.01 U	--	--	--	< 0.01 U	< 0.01 U
Aroclor 1254	11097-69-1	T	ug/L				0.003 J	--	--	--	0.006 J	< 0.01 U
Aroclor 1260	11096-82-5	T	ug/L				< 0.01 U	--	--	--	< 0.01 U	< 0.01 U
Aroclor 1262	37324-23-5	T	ug/L				< 0.01 U	--	--	--	< 0.01 U	< 0.01 U
Aroclor 1268	11100-14-4	T	ug/L				< 0.01 U	--	--	--	< 0.01 U	< 0.01 U
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2		0.0430	--	--	--	0.0460	< 0.045
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2		0.00300	--	--	--	0.00600	< 0
Polychlorinated Biphenyl Congeners												
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2		--	0.0029 B	--	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2		--	0.0000000411	--	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2		--	0.000000333	--	--	--	--
Polycyclic Aromatic Hydrocarbons												
1-Methylnaphthalene	90-12-0	T	ug/L	804	GW-3		< 0.013 U	--	--	--	0.002 J	0.002 J
2-Methylnaphthalene	91-57-6	T	ug/L	14	GW-3		0.003 J	--	--	--	0.003 J	0.003 J
Acenaphthene	83-32-9	T	ug/L	5.34	GW-3		< 0.013 U	--	--	--	< 0.01 U	< 0.01 U
Acenaphthylene	208-96-8	T	ug/L				< 0.013 U	--	--	--	< 0.01 U	< 0.01 U
Anthracene	120-12-7	T	ug/L	2.15	GW-3		< 0.013 U	--	--	--	< 0.01 U	< 0.01 U
Benzo(a,h)perylene	191-24-2	T	ug/L				< 0.013 U	--	--	--	< 0.01 U	< 0.01 U
Fluoranthene	206-44-0	T	ug/L	1.82	GW-3		< 0.013 U	--	--	--	0.003 J	< 0.01 U
Fluorene	86-73-7	T	ug/L	3.67	GW-3		< 0.013 U	--	--	--	< 0.01 U	< 0.01 U
Naphthalene	91-20-3	T	ug/L	1.4	GW-2		< 0.013 J	--	< 0.5 U	< 0.5 U	< 0.01 J	< 0.01 J
Phenanthrene	85-01-8	T	ug/L				0.002 J	--	--	--	0.003 J	< 0.01 U
Pyrene	129-00-0	T	ug/L	2.01	GW-3		< 0.013 U	--	--	--	< 0.01 J	< 0.01 J
Benzo(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2		< 0.013 U	--	--	--	< 0.01 U	< 0.01 U
Benzo(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2		< 0.013 U	--	--	--	< 0.01 U	< 0.01 U
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2		< 0.013 U	--	--	--	< 0.01 U	< 0.01 U
Benzo(i)fluoranthene	205-82-3	T	ug/L				< 0.013 U	--	--	--	< 0.01 U	< 0.01 U
Benzo(k)fluoranthene	Benz-ik-fluor	T	ug/L				< 0.013 U	--	--	--	< 0.01 U	< 0.01 U
Benzo(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2		< 0.013 U	--	--	--	< 0.01 U	< 0.01 U
Chrysene	218-01-9	T	ug/L	0.016	GW-2		< 0.013 U	--	--	--	0.002 J	< 0.01 U
Dibenzo(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2		< 0.013 U	--	--	--	< 0.01 U	< 0.01 U
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2		< 0.013 U	--	--	--	< 0.01 U	< 0.01 U
Total Benzofluoranthenes	TOTBFA	T	ug/L				< 0.013 U	--	--	--	< 0.01 U	< 0.01 U
Total HPAHs	T-HPAH	T	ug/L				< 0.013	--	--	--	0.00500	0.00200
Total LPAHs	T-LPAH	T	ug/L				0.00200	--	--	--	0.00300	< 0.01
Total PAHs (ND=0)	T-PAH	T	ug/L				0.00200	--	--	--	0.00800	0.00200
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2		< 0	--	--	--	0.000200	< 0
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2		< 0.009815	--	--	--	0.00752	< 0.00755

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_level	Screening Level Source	Location Date Sample	MW-13 03/31/2021	MW-13 05/27/2021	MW-14 03/31/2021	MW-15 03/30/2021	MW-15 05/27/2021	MW-01 10/09/2007
							MW-13-210331	MW-13-210527	MW-14-210331	MW-15-210330	MW-15-210527	MW-1-100907
Metals												
Arsenic	7440-38-2	D	ug/L	8	GW-5		1.72	--	0.254	0.698	--	4.46
Arsenic	7440-38-2	T	ug/L	8	GW-5		1.51	--	< 0.2	0.832	--	4.68
Barium	7440-39-3	T	ug/L	200	GW-2		--	--	--	--	--	--
Cadmium	7440-43-9	D	ug/L	1.19	GW-3		0.053 J	--	< 0.1 U	0.076 J	--	0.026
Cadmium	7440-43-9	T	ug/L	1.19	GW-3		< 0.1 J	--	< 0.1 U	0.083 J	--	0.022
Chromium	7440-47-3	D	ug/L	27.4	GW-2		0.385 J	--	< 0.5 U	0.289 J	--	1.61
Chromium	7440-47-3	T	ug/L	27.4	GW-2		< 0.5 J	--	< 0.5 U	0.769 J	--	2.93
Copper	7440-50-8	D	ug/L	3.1	GW-2		4.43	--	3.28	6.42	--	2.77
Copper	7440-50-8	T	ug/L	3.1	GW-2		< 0.5	--	< 0.5	9.53	--	2.83
Lead	7439-92-1	D	ug/L	5.6	GW-2		0.061 J	--	0.052 J	1.99	--	0.057
Lead	7439-92-1	T	ug/L	5.6	GW-2		< 0.1	--	< 0.1	4.67	--	0.07
Mercury	7439-97-6	D	ug/L	0.025	GW-2		< 0.02 U	--	< 0.02 U	< 0.02 U	--	< 0.2 U
Mercury	7439-97-6	T	ug/L	0.025	GW-2		< 0.02 U	--	< 0.02 U	< 0.02 U	--	< 0.2 U
Nickel	7440-02-0	D	ug/L	8.2	GW-2		6.23	--	1.34	2.23	--	--
Nickel	7440-02-0	T	ug/L	8.2	GW-2		5.86	--	< 0.5	2.48	--	--
Selenium	7782-49-2	T	ug/L	71	GW-2		--	--	--	--	--	--
Silver	7440-22-4	D	ug/L	1.9	GW-2		--	--	--	--	--	< 0.02 U
Silver	7440-22-4	T	ug/L	1.9	GW-2		--	--	--	--	--	< 0.02 U
Zinc	7440-66-6	D	ug/L	81	GW-2		8.69	--	5.1	10.9	--	2.1
Zinc	7440-66-6	T	ug/L	81	GW-2		< 6	--	< 6 J	13.8	--	4.7
Butyl Tin Ions												
Dibutyltin Ion	14488-53-0	T	ug/L	--	--		--	--	< 0.289 U	< 0.289 U	--	--
Monobutyltin	78763-54-9	T	ug/L	--	--		--	--	< 0.204 U	< 0.204 U	--	--
Tetrabutyltin	1461-25-2	T	ug/L	--	--		--	--	< 0.3 U	< 0.3 U	--	--
Tributyltin Ion	36643-28-4	T	ug/L	4.27E-06	GW-3		--	--	< 0.193 U	< 0.193 U	--	--
Polychlorinated Biphenyl Aroclors												
Aroclor 1016	12674-11-2	T	ug/L	--	--		< 0.01 U	--	< 0.012 U	< 0.01 U	--	< 0.21 U
Aroclor 1221	11104-28-2	T	ug/L	--	--		< 0.01 U	--	< 0.012 U	< 0.01 U	--	--
Aroclor 1232	11141-16-5	T	ug/L	--	--		< 0.01 U	--	< 0.012 U	< 0.01 U	--	--
Aroclor 1242	53469-21-9	T	ug/L	--	--		< 0.01 U	--	< 0.012 U	< 0.01 U	--	--
Aroclor 1248	12672-29-6	T	ug/L	--	--		< 0.01 U	--	< 0.012 U	< 0.01 U	--	< 0.21 U
Aroclor 1254	11097-69-1	T	ug/L	--	--		< 0.01 U	--	< 0.012 U	0.003 J	--	< 0.21 U
Aroclor 1260	11096-82-5	T	ug/L	--	--		< 0.01 U	--	< 0.012 U	0.004 J	--	< 0.21 U
Aroclor 1262	37324-23-5	T	ug/L	--	--		< 0.01 U	--	< 0.012 U	< 0.01 U	--	--
Aroclor 1268	11100-14-4	T	ug/L	--	--		< 0.01 U	--	< 0.012 U	< 0.01 U	--	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2		< 0.045	--	< 0.054	0.0420	--	< 0.21
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2		< 0	--	< 0	0.00700	--	< 0.21 UJ
Polychlorinated Biphenyl Congeners												
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2		--	0.0000547 B	--	--	0.00125 B	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2		--	< 0	--	--	0.0000000303	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2		--	< 0.000000324715	--	--	0.000000339	--
Polycyclic Aromatic Hydrocarbons												
1-Methylnaphthalene	90-12-0	T	ug/L	804	GW-3		0.011	--	< 0.01 J	0.003 J	--	--
2-Methylnaphthalene	91-57-6	T	ug/L	14	GW-3		< 0.01	--	< 0.01 J	0.005 J	--	< 0.21 U
Acenaphthene	83-32-9	T	ug/L	5.34	GW-3		0.003 J	--	< 0.01 U	< 0.01 U	--	< 0.21 U
Acenaphthylene	208-96-8	T	ug/L	--	--		< 0.01 U	--	< 0.01 U	< 0.01 U	--	< 0.21 U
Anthracene	120-12-7	T	ug/L	2.15	GW-3		< 0.01 U	--	< 0.01 U	< 0.01 U	--	< 0.21 U
Benzo(a,h,i)perylene	191-24-2	T	ug/L	--	--		< 0.01 U	--	< 0.01 U	< 0.01 U	--	< 0.21 U
Fluoranthene	206-44-0	T	ug/L	1.82	GW-3		0.003 J	--	< 0.01 U	0.002 J	--	< 0.21 U
Fluorene	86-73-7	T	ug/L	3.67	GW-3		0.002 J	--	< 0.01 U	< 0.01 U	--	< 0.21 U
Naphthalene	91-20-3	T	ug/L	1.4	GW-2		0.023	--	< 0.01 J	< 0.01 J	--	< 0.21 U
Phenanthrene	85-01-8	T	ug/L	--	--		0.01 J	--	0.002 J	0.003 J	--	< 0.21 U
Pyrene	129-00-0	T	ug/L	2.01	GW-3		0.002 J	--	< 0.01 U	< 0.01 J	--	< 0.21 U
Benzo(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2		< 0.01 U	--	< 0.01 U	< 0.01 U	--	< 0.21 U
Benzo(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2		< 0.01 U	--	< 0.01 U	< 0.01 U	--	< 0.21 U
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2		< 0.01 U	--	< 0.01 U	< 0.01 U	--	< 0.21 U
Benzo(i)fluoranthene	205-82-3	T	ug/L	--	--		< 0.01 U	--	< 0.01 U	< 0.01 U	--	--
Benzo(k)fluoranthene	Benz-ik-fluor	T	ug/L	--	--		< 0.01 U	--	< 0.01 U	< 0.01 U	--	--
Benzo(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2		< 0.01 U	--	< 0.01 U	< 0.01 U	--	< 0.21 U
Chrysene	218-01-9	T	ug/L	0.016	GW-2		< 0.01 U	--	< 0.01 U	< 0.01 U	--	< 0.21 U
Dibenz(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2		< 0.01 U	--	< 0.01 U	< 0.01 U	--	< 0.21 U
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2		< 0.01 U	--	< 0.01 U	< 0.01 U	--	< 0.21 U
Total Benzofluoranthenes	TOTBFA	T	ug/L	--	--		< 0.01 U	--	< 0.01 U	< 0.01 U	--	--
Total HPAHs	T-HPAH	T	ug/L	0.00500	--		0.00500	--	< 0.01	0.00200	--	< 0.21
Total LPAHs	T-LPAH	T	ug/L	0.0380	--		0.0380	--	0.00200	0.00300	--	< 0.21
Total PAHs (ND=0)	T-PAH	T	ug/L	0.0430	--		0.0430	--	0.00200	0.00500	--	< 0.21
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2		< 0	--	< 0	< 0	--	< 0
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2		< 0.00755	--	< 0.00755	< 0.00755	--	< 0.15855

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_level	Screening Level Source	Location	MW-01	MW-02	MW-02	MW-03	MW-03	SB-21
						Date Sample	03/12/2008	10/09/2007	03/12/2008	10/08/2007	03/12/2008	07/27/2011
							MW-1-031208	MW-2-100907	MW-2-031208	MW-3-100807	MW-3-031208	SB21-WATER-072711
Metals												
Arsenic	7440-38-2	D	ug/L	8	GW-5	--	8.08	--	--	3.26	--	--
Arsenic	7440-38-2	T	ug/L	8	GW-5	2.91	8.07	1.56	3.13	1.59	< 3.3 U	47
Barium	7440-39-3	T	ug/L	200	GW-2	--	--	--	--	--	--	--
Cadmium	7440-43-9	D	ug/L	1.19	GW-3	--	0.105	--	0.032	--	--	--
Cadmium	7440-43-9	T	ug/L	1.19	GW-3	0.013 B	0.091	0.015 B	0.04	0.017 B	< 4.4 U	--
Chromium	7440-47-3	D	ug/L	27.4	GW-2	--	25.2	--	1.25	--	--	--
Chromium	7440-47-3	T	ug/L	27.4	GW-2	27.3	40.4	15.7	1.52	19.4	< 11 U	--
Copper	7440-50-8	D	ug/L	3.1	GW-2	--	6.27	--	5.11	--	--	--
Copper	7440-50-8	T	ug/L	3.1	GW-2	6.63	9.7	5.81	5.23	9.83	--	--
Lead	7439-92-1	D	ug/L	5.6	GW-2	--	0.021	--	0.055	--	--	--
Lead	7439-92-1	T	ug/L	5.6	GW-2	0.128	0.046	0.189	0.191	0.519	< 1.1 U	--
Mercury	7439-97-6	D	ug/L	0.025	GW-2	--	< 0.2 U	--	< 0.2 U	--	--	--
Mercury	7439-97-6	T	ug/L	0.025	GW-2	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U	< 0.5 U	--
Nickel	7440-02-0	D	ug/L	8.2	GW-2	--	--	--	--	--	--	--
Nickel	7440-02-0	T	ug/L	8.2	GW-2	--	--	--	--	--	--	--
Selenium	7782-49-2	T	ug/L	71	GW-2	--	--	--	--	--	--	< 5.6 U
Silver	7440-22-4	D	ug/L	1.9	GW-2	--	< 0.02 U	--	< 0.02 U	--	--	--
Silver	7440-22-4	T	ug/L	1.9	GW-2	< 0.012 U	0.005 B	< 0.005 U	0.01 B	< 0.011 U	< 11 U	--
Zinc	7440-66-6	D	ug/L	81	GW-2	--	4.1	--	5.2	--	--	--
Zinc	7440-66-6	T	ug/L	81	GW-2	2.93	4.9	3.5	4.5	3.84	--	--
Butyl Tin Ions												
Dibutyltin Ion	14488-53-0	T	ug/L	--	--	--	--	--	--	--	--	--
Monobutyltin	78763-54-9	T	ug/L	--	--	--	--	--	--	--	--	--
Tetrabutyltin	1461-25-2	T	ug/L	--	--	--	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	T	ug/L	4.27E-06	GW-3	--	--	--	--	--	--	--
Polychlorinated Biphenyl Aroclors												
Aroclor 1016	12674-11-2	T	ug/L	--	--	--	< 0.21 U	--	< 0.2 U	--	< 0.053 U	--
Aroclor 1221	11104-28-2	T	ug/L	--	--	--	--	--	--	--	< 0.053 U	--
Aroclor 1232	11141-16-5	T	ug/L	--	--	--	--	--	--	--	< 0.053 U	--
Aroclor 1242	53469-21-9	T	ug/L	--	--	--	--	--	--	--	< 0.053 U	--
Aroclor 1248	12672-29-6	T	ug/L	--	--	--	< 0.21 U	--	< 0.2 U	--	< 0.053 U	--
Aroclor 1254	11097-69-1	T	ug/L	--	--	--	< 0.21 U	--	< 0.2 U	--	0.059	--
Aroclor 1260	11096-82-5	T	ug/L	--	--	--	< 0.21 U	--	< 0.2 U	--	< 0.053 U	--
Aroclor 1262	37324-23-5	T	ug/L	--	--	--	--	--	--	--	--	--
Aroclor 1268	11100-14-4	T	ug/L	--	--	--	--	--	--	--	--	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2	--	< 0.21	--	< 0.2	--	0.218	--
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2	--	< 0.21 UJ	--	< 0.2 UJ	--	0.0590	--
Polychlorinated Biphenyl Congeners												
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2	--	--	--	--	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2	--	--	--	--	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2	--	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons												
1-Methylnaphthalene	90-12-0	T	ug/L	804	GW-3	--	--	--	--	--	--	< 0.1 U
2-Methylnaphthalene	91-57-6	T	ug/L	14	GW-3	--	< 0.21 U	--	< 0.21 U	--	--	--
Acenaphthene	83-32-9	T	ug/L	5.34	GW-3	--	< 0.21 U	--	< 0.21 U	--	< 0.1 U	--
Acenaphthylene	208-96-8	T	ug/L	--	--	--	< 0.21 U	--	< 0.21 U	--	< 0.1 U	--
Anthracene	120-12-7	T	ug/L	2.15	GW-3	--	< 0.21 U	--	< 0.21 U	--	< 0.1 U	--
Benzo(a,h,i)perylene	191-24-2	T	ug/L	--	--	--	< 0.21 U	--	< 0.21 U	--	< 0.01 U	--
Fluoranthene	206-44-0	T	ug/L	1.82	GW-3	--	< 0.21 U	--	< 0.21 U	--	< 0.1 U	--
Fluorene	86-73-7	T	ug/L	3.67	GW-3	--	< 0.21 U	--	< 0.21 U	--	< 0.1 U	--
Naphthalene	91-20-3	T	ug/L	1.4	GW-2	< 2 U	< 0.21 U	< 2 U	< 0.21 U	< 2 U	< 0.1 U	--
Phenanthrene	85-01-8	T	ug/L	--	--	--	< 0.21 U	--	< 0.21 U	--	< 0.1 U	--
Pyrene	129-00-0	T	ug/L	2.01	GW-3	--	< 0.21 U	--	< 0.21 U	--	< 0.1 U	--
Benz(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2	--	< 0.21 U	--	< 0.21 U	--	< 0.01 U	--
Benzo(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2	--	< 0.21 U	--	< 0.21 U	--	< 0.01 U	--
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2	--	< 0.21 U	--	< 0.21 U	--	< 0.01 U	--
Benzo(i)fluoranthene	205-82-3	T	ug/L	--	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	Benzo-ik-fluor	T	ug/L	--	--	--	--	--	--	--	< 0.01 U	--
Benzo(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2	--	< 0.21 U	--	< 0.21 U	--	< 0.01 U	--
Chrysene	218-01-9	T	ug/L	0.016	GW-2	--	< 0.21 U	--	< 0.21 U	--	< 0.01 U	--
Dibenzo(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2	--	< 0.21 U	--	< 0.21 U	--	< 0.01 U	--
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2	--	< 0.21 U	--	< 0.21 U	--	< 0.01 U	--
Total Benzofluoranthenes	TOTBFA	T	ug/L	--	--	--	--	--	--	--	--	--
Total HPAHs	T-HPAH	T	ug/L	--	--	--	< 0.21	--	< 0.21	--	< 0.1	--
Total LPAHs	T-LPAH	T	ug/L	--	--	--	< 0.21	--	< 0.21	--	< 0.1	--
Total PAHs (ND=0)	T-PAH	T	ug/L	--	--	--	< 0.21	--	< 0.21	--	< 0.1	--
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2	--	< 0	--	< 0	--	< 0	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2	--	< 0.15855	--	< 0.15855	--	< 0.00755	--

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

						Location Date Sample	SB-22 07/27/2011 SB22-WATER-072711
Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_level	Screening Level Source		
Metals							
Arsenic	7440-38-2	D	ug/L	8	GW-5	--	
Arsenic	7440-38-2	T	ug/L	8	GW-5	< 3.3 U	
Barium	7440-39-3	T	ug/L	200	GW-2	< 28 U	
Cadmium	7440-43-9	D	ug/L	1.19	GW-3	--	
Cadmium	7440-43-9	T	ug/L	1.19	GW-3	< 4.4 U	
Chromium	7440-47-3	D	ug/L	27.4	GW-2	--	
Chromium	7440-47-3	T	ug/L	27.4	GW-2	< 11 U	
Copper	7440-50-8	D	ug/L	3.1	GW-2	--	
Copper	7440-50-8	T	ug/L	3.1	GW-2	--	
Lead	7439-92-1	D	ug/L	5.6	GW-2	--	
Lead	7439-92-1	T	ug/L	5.6	GW-2	< 1.1 U	
Mercury	7439-97-6	D	ug/L	0.025	GW-2	--	
Mercury	7439-97-6	T	ug/L	0.025	GW-2	< 0.5 U	
Nickel	7440-02-0	D	ug/L	8.2	GW-2	--	
Nickel	7440-02-0	T	ug/L	8.2	GW-2	--	
Selenium	7782-49-2	T	ug/L	71	GW-2	< 5.6 U	
Silver	7440-22-4	D	ug/L	1.9	GW-2	--	
Silver	7440-22-4	T	ug/L	1.9	GW-2	< 11 U	
Zinc	7440-66-6	D	ug/L	81	GW-2	--	
Zinc	7440-66-6	T	ug/L	81	GW-2	--	
Butyl Tin Ions							
Dibutyltin Ion	14488-53-0	T	ug/L			--	
Monobutyltin	78763-54-9	T	ug/L			--	
Tetrabutyltin	1461-25-2	T	ug/L			--	
Tributyltin Ion	36643-28-4	T	ug/L	4.27E-06	GW-3	--	
Polychlorinated Biphenyl Aroclors							
Aroclor 1016	12674-11-2	T	ug/L			< 0.05 U	
Aroclor 1221	11104-28-2	T	ug/L			< 0.05 U	
Aroclor 1232	11141-16-5	T	ug/L			< 0.05 U	
Aroclor 1242	53469-21-9	T	ug/L			< 0.05 U	
Aroclor 1248	12672-29-6	T	ug/L			< 0.05 U	
Aroclor 1254	11097-69-1	T	ug/L			0.1	
Aroclor 1260	11096-82-5	T	ug/L			< 0.05 U	
Aroclor 1262	37324-23-5	T	ug/L			--	
Aroclor 1268	11100-14-4	T	ug/L			--	
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2	0.250	
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2	0.100	
Polychlorinated Biphenyl Congeners							
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2	--	
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2	--	
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2	--	
Polycyclic Aromatic Hydrocarbons							
1-Methylnaphthalene	90-12-0	T	ug/L	804	GW-3	< 0.1 U	
2-Methylnaphthalene	91-57-6	T	ug/L	14	GW-3	--	
Acenaphthene	83-32-9	T	ug/L	5.34	GW-3	< 0.1 U	
Acenaphthylene	208-96-8	T	ug/L			< 0.1 U	
Anthracene	120-12-7	T	ug/L	2.15	GW-3	< 0.1 U	
Benzo(a,h,i)perylene	191-24-2	T	ug/L			< 0.01 U	
Fluoranthene	206-44-0	T	ug/L	1.82	GW-3	< 0.1 U	
Fluorene	86-73-7	T	ug/L	3.67	GW-3	< 0.1 U	
Naphthalene	91-20-3	T	ug/L	1.4	GW-2	< 0.1 U	
Phenanthrene	85-01-8	T	ug/L			< 0.1 U	
Pyrene	129-00-0	T	ug/L	2.01	GW-3	< 0.1 U	
Benz(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2	< 0.01 U	
Benzo(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2	< 0.01 U	
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2	< 0.01 U	
Benzo(i)fluoranthene	205-82-3	T	ug/L			--	
Benzo(k)fluoranthene	Benz-ik-fluor	T	ug/L			< 0.01 U	
Benzo(j)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2	--	
Benzo(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2	< 0.01 U	
Chrysene	218-01-9	T	ug/L	0.016	GW-2	< 0.01 U	
Dibenz(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2	< 0.01 U	
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2	< 0.01 U	
Total Benzofluoranthenes	T-OTBFA	T	ug/L			--	
Total HPAHs	T-HPAH	T	ug/L			< 0.1	
Total LPAHs	T-LPAH	T	ug/L			< 0.1	
Total PAHs (ND=0)	T-PAH	T	ug/L			< 0.1	
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2	< 0	
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2	< 0.00755	

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_level	Screening Level Source	Location Date Sample	MW-04 03/31/2021	MW-04 05/27/2021	MW-05 03/29/2021	MW-05 05/27/2021	MW-06 03/29/2021	MW-07 03/29/2021
						MW-04-210331	MW-04-210527	MW-05-210331	MW-05-210527	MW-06-210329	MW-07-210329	
Semivolatile Organic Compounds												
2,4,5-Trichlorophenol	95-95-4	T	ug/L	0.037	GW-2		< 1 U	--	< 1 U	--	< 1.1 U	< 1 U
2,4,6-Trichlorophenol	88-06-2	T	ug/L	600	GW-2		< 1 U	--	< 1 U	--	< 1.1 U	< 1 U
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2		< 1 U	--	< 1 U	--	< 1.1 U	< 1 U
2,4-Dimethylphenol	105-67-9	T	ug/L	2.91	GW-3		< 1 U	--	< 1 U	--	< 1.1 U	< 1 U
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2		< 2 U	--	< 2 U	--	< 2.1 U	< 2 U
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2		< 1 U	--	< 1 U	--	< 1.1 U	< 1 U
2,6-Dinitrotoluene	606-20-2	T	ug/L	74.9	GW-3		< 1 U	--	< 1 U	--	< 1.1 U	< 1 U
2-Chloronaphthalene	91-59-7	T	ug/L	100	GW-2		< 0.01 U	--	< 0.01 U	--	< 0.01 U	< 0.01 U
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
2-Methylphenol	95-48-7	T	ug/L	10.7	GW-3		< 0.2 U	--	0.06 J	--	< 0.2 U	< 0.2 U
2-Nitroaniline	88-74-4	T	ug/L	735000	GW-3		< 1 U	--	< 1 U	--	< 1.1 U	< 1 U
2-Nitrophenol	88-75-5	T	ug/L				< 1 U	--	< 1 U	--	< 1.1 U	< 1 U
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2		< 1 U	--	< 1 U	--	< 1.1 U	< 1 U
3-Nitroaniline	99-09-2	T	ug/L				< 1 U	--	< 1 U	--	< 1.1 U	< 1 U
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2		< 2 U	--	< 2 U	--	< 2.1 U	< 2 U
4-Bromophenyl phenyl ether	101-55-3	T	ug/L				< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2		< 1 U	--	< 1 U	--	< 1.1 U	< 1 U
4-Chloroaniline	106-47-8	T	ug/L	2400	GW-3		< 1 U	--	< 1 U	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L				< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
4-Methylphenol	106-44-5	T	ug/L	106	GW-3		< 0.2 U	--	0.1 J	--	< 0.2 U	< 0.2 U
4-Nitroaniline	100-01-6	T	ug/L	106000	GW-3		< 1 U	--	< 1 U	--	< 1.1 U	< 1 U
4-Nitrophenol	100-02-7	T	ug/L				< 1 U	--	< 1 U	--	< 1.1 U	< 1 U
Benzoic acid	65-85-0	T	ug/L	589	GW-3		0.4 J	--	< 2 U	--	< 2.1 U	< 2 U
Benzyl alcohol	100-51-6	T	ug/L	56.4	GW-3		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L				< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2		0.6	--	0.6	--	< 0.2 U	< 0.2 U
Carbazole	86-74-8	T	ug/L				0.007 J	--	1.2	--	< 0.01 U	< 0.01 U
Dibenzofuran	132-64-9	T	ug/L	3.09	GW-3		0.023 Q	--	0.322	--	< 0.01 U	< 0.01 U
Diethyl phthalate	84-66-2	T	ug/L	92.6	GW-3		1.4	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Dimethyl phthalate	131-11-3	T	ug/L	59	GW-3		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2		< 0.2 U	--	0.5	--	< 0.2 U	0.05 J
Di-n-octyl phthalate	117-84-0	T	ug/L	2.31	GW-3		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2		< 0.0013 U	--	< 0.0013 U	--	< 0.0013 U	< 0.0013 U
Hexachlorobutadiene	87-68-3	T	ug/L	0.01	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.0013 U	< 0.0013 U
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2		< 1 U	--	< 1 U	--	< 1.1 U	< 1 U
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Isophorone	78-59-1	T	ug/L	110	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Nitrobenzene	98-95-3	T	ug/L	100	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.554	GW-3		< 0.2 U	--	0.3	--	< 0.2 U	< 0.2 U
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2		< 1 U	--	< 1 U	--	< 1.1 U	< 1 U
Pervlene	198-55-0	T	ug/L				< 0.01 U	--	< 0.01 U	--	< 0.01 U	< 0.01 U
Phenol	108-95-2	T	ug/L	101	GW-3		< 0.2 U	--	0.1 J	--	< 0.2 U	< 0.2 U
Pesticides and Herbicides												
2,4'-DDD	53-19-0	T	ug/L				< 0.0013 U	--	< 1 Y1, U	--	< 0.0013 U	< 0.0013 U
2,4'-DDE	3424-82-6	T	ug/L				< 0.0013 U	--	< 0.0013 U	--	< 0.0013 U	< 0.0013 U
2,4'-DDT	789-02-6	T	ug/L				< 0.0013 U	--	< 0.0013 U	--	< 0.0013 U	< 0.0013 U
4,4'-DDD	72-54-8	T	ug/L	7.9E-06	GW-2		< 0.0013 U	--	< 0.0013 U	--	< 0.0013 U	< 0.0013 U
4,4'-DDE	72-55-9	T	ug/L	8.8E-07	GW-2		< 0.0013 U	--	< 0.0013 U	--	< 0.0013 U	< 0.0013 U
4,4'-DDT	50-29-3	T	ug/L	1.2E-06	GW-2		< 0.0013 U	--	< 0.0013 U	--	< 1 U	< 0.0013 U
Aldrin	309-00-2	T	ug/L	4.1E-08	GW-2		0.0364	--	0.0663 D	--	< 1 U	< 0.0006 U
Alpha-BHC	319-84-6	T	ug/L	4.8E-05	GW-2		< 0.0006 U	--	< 1 Y1, U	--	0.0031	< 0.0006 U
Beta-BHC	319-85-7	T	ug/L	0.0014	GW-2		< 0.0006 U	--	< 0.0006 U	--	< 0.0006 U	< 0.0006 U
cis-Chlordane	5103-71-9	T	ug/L	0.000103	GW-3		< 0.0006 U	--	< 0.0006 U	--	< 0.0006 U	< 0.0006 U
cis-Nonachlor	5103-73-1	T	ug/L				< 0.0013 U	--	< 0.0013 U	--	< 0.0013 U	< 0.0013 U
Delta-BHC	319-86-8	T	ug/L				< 0.0006 U	--	< 0.0006 U	--	< 0.0006 U	< 0.0006 U
Dieldrin	60-57-1	T	ug/L	1.2E-06	GW-2		0.037	--	0.0159	--	0.0265	< 0.0013 U
Endosulfan I	959-98-8	T	ug/L	0.0087	GW-2		< 0.0006 U	--	< 0.0006 U	--	< 0.0006 U	< 0.0006 U
Endosulfan II	33213-65-9	T	ug/L	0.0087	GW-2		< 0.0013 U	--	< 0.0013 U	--	< 0.0013 U	< 0.0013 U
Endosulfan Sulfate	1031-07-8	T	ug/L	10	GW-2		< 0.0013 U	--	< 0.0013 U	--	< 0.0013 U	< 0.0013 U
Endrin	72-20-8	T	ug/L	0.002	GW-2		< 0.0013 U	--	< 0.0013 U	--	< 0.0013 U	< 0.0013 U
Endrin Aldehyde	7421-93-4	T	ug/L	0.035	GW-2		< 0.0013 U	--	< 0.0013 U	--	< 0.0013 U	< 0.0013 U
Endrin ketone	53494-70-5	T	ug/L				< 0.0013 U	--	< 0.0013 U	--	< 0.0013 U	< 0.0013 U
Heptachlor	78-44-8	T	ug/L	3.4E-07	GW-2		< 0.0006 U	--	< 1 Y1, U	--	< 0.0006 U	< 0.0006 U
Heptachlor Epoxide	1024-57-3	T	ug/L	2.4E-06	GW-2		< 0.0006 U	--	< 0.0006 U	--	< 0.0006 U	< 0.0006 U

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_level	Screening Level Source	Location	MW-08	MW-08	MW-09	MW-10	MW-11	MW-12
						Date Sample	03/29/2021	05/27/2021	03/29/2021	03/30/2021	03/30/2021	03/30/2021
						MW-08-210329	MW-08-210527	MW-09-210329	MW-10-210330	MW-11-210330	MW-12-210330	
Semivolatile Organic Compounds												
2,4,5-Trichlorophenol	95-95-4	T	ug/L	0.037	GW-2	--	--	--	--	< 1.1 U	--	--
2,4,6-Trichlorophenol	88-06-2	T	ug/L	600	GW-2	--	--	--	--	< 1.1 U	--	--
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2	--	--	--	--	< 1.1 U	--	--
2,4-Dimethylphenol	105-67-9	T	ug/L	2.91	GW-3	--	--	--	--	< 1.1 U	--	--
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2	--	--	--	--	< 2.1 U	--	--
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2	--	--	--	--	< 1.1 U	--	--
2,6-Dinitrotoluene	606-20-2	T	ug/L	74.9	GW-3	--	--	--	--	< 1.1 U	--	--
2-Chloronaphthalene	91-59-7	T	ug/L	100	GW-2	< 0.013 U	--	--	--	< 0.01 U	< 0.01 U	--
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2	--	--	--	--	< 0.2 U	--	--
2-Methylphenol	95-48-7	T	ug/L	10.7	GW-3	--	--	--	--	< 0.2 U	--	--
2-Nitroaniline	88-74-4	T	ug/L	735000	GW-3	--	--	--	--	< 1.1 U	--	--
2-Nitrophenol	88-75-5	T	ug/L	--	--	--	--	--	--	< 1.1 U	--	--
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2	--	--	--	--	< 1.1 U	--	--
3-Nitroaniline	99-09-2	T	ug/L	--	--	--	--	--	--	< 1.1 U	--	--
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2	--	--	--	--	< 2.1 U	--	--
4-Bromophenyl phenyl ether	101-55-3	T	ug/L	--	--	--	--	--	--	< 0.2 U	--	--
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2	--	--	--	--	< 1.1 U	--	--
4-Chloroaniline	106-47-8	T	ug/L	2400	GW-3	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L	--	--	--	--	--	--	< 0.2 U	--	--
4-Methylphenol	106-44-5	T	ug/L	106	GW-3	--	--	--	--	< 0.2 U	--	--
4-Nitroaniline	100-01-6	T	ug/L	106000	GW-3	--	--	--	--	< 1.1 U	--	--
4-Nitrophenol	100-02-7	T	ug/L	--	--	--	--	--	--	< 1.1 U	--	--
Benzoic acid	65-85-0	T	ug/L	589	GW-3	--	--	--	--	< 2.1 U	--	--
Benzyl alcohol	100-51-6	T	ug/L	56.4	GW-3	--	--	--	--	< 0.2 U	--	--
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2	--	--	--	--	< 0.2 U	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2	--	--	--	--	< 0.2 U	--	--
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L	--	--	--	--	--	--	< 0.2 U	--	--
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2	--	--	--	--	< 0.2 U	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2	--	--	--	--	< 0.2 U	--	--
Carbazole	86-74-8	T	ug/L	--	--	< 0.013 U	--	--	--	< 0.01 U	< 0.01 U	--
Dibenzofuran	132-64-9	T	ug/L	3.09	GW-3	< 0.013 U	--	--	--	0.002 J	0.002 J	--
Diethyl phthalate	84-66-2	T	ug/L	92.6	GW-3	--	--	--	--	0.1 J	--	--
Dimethyl phthalate	131-11-3	T	ug/L	59	GW-3	--	--	--	--	< 0.2 U	--	--
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2	--	--	--	--	< 0.2 U	--	--
Di-n-octyl phthalate	117-84-0	T	ug/L	2.31	GW-3	--	--	--	--	< 0.2 U	--	--
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2	< 0.0013 U	--	--	--	< 0.0013 U	--	--
Hexachlorobutadiene	87-68-3	T	ug/L	0.01	GW-2	< 0.0013 U	--	< 0.5 U	< 0.5 U	< 0.0013 U	< 0.5 U	--
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2	--	--	--	--	< 1.1 U	--	--
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2	--	--	--	--	< 0.2 U	--	--
Isophorone	78-59-1	T	ug/L	110	GW-2	--	--	--	--	< 0.2 U	--	--
Nitrobenzene	98-95-3	T	ug/L	100	GW-2	--	--	--	--	< 0.2 U	--	--
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2	--	--	--	--	< 0.2 U	--	--
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.554	GW-3	--	--	--	--	< 0.2 U	--	--
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2	--	--	--	--	< 1.1 U	--	--
Pervlene	198-55-0	T	ug/L	--	--	< 0.013 U	--	--	--	< 0.01 U	< 0.01 U	--
Phenol	108-95-2	T	ug/L	101	GW-3	--	--	--	--	< 0.2 U	--	--
Pesticides and Herbicides												
2,4'-DDD	53-19-0	T	ug/L	--	--	< 0.0013 U	--	--	--	< 0.0013 U	--	--
2,4'-DDE	3424-82-6	T	ug/L	--	--	< 0.0013 U	--	--	--	< 0.0013 U	--	--
2,4'-DDT	789-02-6	T	ug/L	--	--	< 0.0013 U	--	--	--	< 0.0013 U	--	--
4,4'-DDD	72-54-8	T	ug/L	7.9E-06	GW-2	< 0.0013 U	--	--	--	< 0.0013 U	--	--
4,4'-DDE	72-55-9	T	ug/L	8.8E-07	GW-2	< 0.0013 U	--	--	--	< 0.0013 U	--	--
4,4'-DDT	50-29-3	T	ug/L	1.2E-06	GW-2	< 0.0013 U	--	--	--	< 0.0013 U	--	--
Aldrin	309-00-2	T	ug/L	4.1E-08	GW-2	0.0027	--	--	--	0.0032	--	--
Alpha-BHC	319-84-6	T	ug/L	4.8E-05	GW-2	0.0027	--	--	--	0.0033	--	--
Beta-BHC	319-85-7	T	ug/L	0.0014	GW-2	< 0.0006 U	--	--	--	< 0.0006 U	--	--
cis-Chlordane	5103-71-9	T	ug/L	0.000103	GW-3	< 0.0006 U	--	--	--	< 0.0006 U	--	--
cis-Nonachlor	5103-73-1	T	ug/L	--	--	< 0.0013 U	--	--	--	< 0.0013 U	--	--
Delta-BHC	319-86-8	T	ug/L	--	--	< 0.0006 U	--	--	--	< 0.0006 U	--	--
Dieldrin	60-57-1	T	ug/L	1.2E-06	GW-2	< 0.0013 U	--	--	--	< 0.0013 U	--	--
Endosulfan I	959-98-8	T	ug/L	0.0087	GW-2	< 0.0006 U	--	--	--	< 0.0006 U	--	--
Endosulfan II	33213-65-9	T	ug/L	0.0087	GW-2	< 0.0013 U	--	--	--	< 0.0013 U	--	--
Endosulfan Sulfate	1031-07-8	T	ug/L	10	GW-2	< 0.0013 U	--	--	--	< 0.0013 U	--	--
Endrin	72-20-8	T	ug/L	0.002	GW-2	< 0.0013 U	--	--	--	< 0.0013 U	--	--
Endrin Aldehyde	7421-93-4	T	ug/L	0.035	GW-2	< 0.0013 U	--	--	--	< 0.0013 U	--	--
Endrin ketone	53494-70-5	T	ug/L	--	--	< 0.0013 U	--	--	--	< 0.0013 U	--	--
Heptachlor	76-44-8	T	ug/L	3.4E-07	GW-2	< 0.0006 U	--	--	--	< 0.0006 U	--	--
Heptachlor Epoxide	1024-57-3	T	ug/L	2.4E-06	GW-2	< 0.0006 U	--	--	--	< 0.0006 U	--	--

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_level	Screening Level Source	Location	MW-13	MW-13	MW-14	MW-15	MW-15	MW-01
						Date Sample	03/31/2021	05/27/2021	03/31/2021	03/30/2021	05/27/2021	10/09/2007
						MW-13-210331	MW-13-210527	MW-14-210331	MW-15-210330	MW-15-210527	MW-1-100907	
Semivolatile Organic Compounds												
2,4,5-Trichlorophenol	95-95-4	T	ug/L	0.037	GW-2	--	--	< 1 U	< 1 U	--	--	--
2,4,6-Trichlorophenol	88-06-2	T	ug/L	600	GW-2	--	--	< 1 U	< 1 U	--	--	--
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2	--	--	< 1 U	< 1 U	--	--	--
2,4-Dimethylphenol	105-67-9	T	ug/L	2.91	GW-3	--	--	< 1 U	< 1 U	--	--	< 4.1 U
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2	--	--	< 2 U	< 2 U	--	--	--
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2	--	--	< 1 U	< 1 U	--	--	--
2,6-Dinitrotoluene	606-20-2	T	ug/L	74.9	GW-3	--	--	< 1 U	< 1 U	--	--	--
2-Chloronaphthalene	91-59-7	T	ug/L	100	GW-2	< 0.01 U	--	< 0.01 U	< 0.01 U	--	--	--
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2	--	--	< 0.2 U	< 0.2 U	--	--	--
2-Methylphenol	95-48-7	T	ug/L	10.7	GW-3	--	--	< 0.2 U	< 0.2 U	--	--	< 0.51 U
2-Nitroaniline	88-74-4	T	ug/L	735000	GW-3	--	--	< 1 U	< 1 U	--	--	--
2-Nitrophenol	88-75-5	T	ug/L	--	--	--	--	< 1 U	< 1 U	--	--	--
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2	--	--	< 1 U	< 1 U	--	--	--
3-Nitroaniline	99-09-2	T	ug/L	--	--	--	--	< 1 U	< 1 U	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2	--	--	< 2 U	< 2 U	--	--	--
4-Bromophenyl phenyl ether	101-55-3	T	ug/L	--	--	--	--	< 0.2 U	< 0.2 U	--	--	--
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2	--	--	< 1 U	< 1 U	--	--	--
4-Chloroaniline	106-47-8	T	ug/L	2400	GW-3	--	--	< 1 U	--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L	--	--	--	--	< 0.2 U	< 0.2 U	--	--	--
4-Methylphenol	106-44-5	T	ug/L	106	GW-3	--	--	< 0.2 U	< 0.2 U	--	--	< 0.51 U
4-Nitroaniline	100-01-6	T	ug/L	106000	GW-3	--	--	< 1 U	< 1 U	--	--	--
4-Nitrophenol	100-02-7	T	ug/L	--	--	--	--	< 1 U	< 1 U	--	--	--
Benzoic acid	65-85-0	T	ug/L	589	GW-3	--	--	< 2 U	< 2 U	--	--	< 5.1 U
Benzyl alcohol	100-51-6	T	ug/L	56.4	GW-3	--	--	< 0.2 U	< 0.2 U	--	--	< 5.1 U
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2	--	--	< 0.2 U	< 0.2 U	--	--	< 0.21 U
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2	--	--	< 0.2 U	< 0.2 U	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L	--	--	--	--	< 0.2 U	< 0.2 U	--	--	--
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2	--	--	< 0.2 U	< 0.2 U	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2	--	--	< 0.2 U	< 0.2 U	--	--	< 1.1 U
Carbazole	86-74-8	T	ug/L	--	--	0.001 J	--	< 0.01 U	< 0.01 U	--	--	--
Dibenzofuran	132-64-9	T	ug/L	3.09	GW-3	0.003 J	--	0.002 J	0.002 J	--	--	< 0.21 U
Diethyl phthalate	84-66-2	T	ug/L	92.6	GW-3	--	--	0.07 J	< 0.2 U	--	--	0.036 T
Dimethyl phthalate	131-11-3	T	ug/L	59	GW-3	--	--	< 0.2 U	< 0.2 U	--	--	< 0.21 U
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2	--	--	< 0.2 U	< 0.2 U	--	--	0.065 T
Di-n-octyl phthalate	117-84-0	T	ug/L	2.31	GW-3	--	--	< 0.2 U	< 0.2 U	--	--	< 0.21 U
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2	--	--	< 0.2 U	< 0.0013 U	--	--	< 0.21 U
Hexachlorobutadiene	87-68-3	T	ug/L	0.01	GW-2	< 0.5 U	--	< 0.2 U	< 0.0013 U	--	--	< 0.21 U
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2	--	--	< 1 U	< 1 U	--	--	--
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2	--	--	< 0.2 U	< 0.2 U	--	--	--
Isophorone	78-59-1	T	ug/L	110	GW-2	--	--	< 0.2 U	< 0.2 U	--	--	--
Nitrobenzene	98-95-3	T	ug/L	100	GW-2	--	--	< 0.2 U	< 0.2 U	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2	--	--	< 0.2 U	< 0.2 U	--	--	--
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.554	GW-3	--	--	< 0.2 U	< 0.2 U	--	--	< 0.21 U
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2	--	--	< 1 U	< 1 U	--	--	< 1.1 U
Pervlene	198-55-0	T	ug/L	--	--	< 0.01 U	--	< 0.01 U	< 0.01 U	--	--	--
Phenol	108-95-2	T	ug/L	101	GW-3	--	--	< 0.2 U	< 0.2 U	--	--	< 0.51 U
Pesticides and Herbicides												
2,4'-DDD	53-19-0	T	ug/L	--	--	--	--	--	< 0.0013 U	--	--	< 0.011 U
2,4'-DDE	3424-82-6	T	ug/L	--	--	--	--	--	< 0.0013 U	--	--	< 0.011 U
2,4'-DDT	789-02-6	T	ug/L	--	--	--	--	--	< 0.0013 U	--	--	< 0.011 U
4,4'-DDD	72-54-8	T	ug/L	7.9E-06	GW-2	--	--	--	< 0.0013 U	--	--	< 0.011 U
4,4'-DDE	72-55-9	T	ug/L	8.8E-07	GW-2	--	--	--	< 0.0013 U	--	--	< 0.011 U
4,4'-DDT	50-29-3	T	ug/L	1.2E-06	GW-2	--	--	--	< 0.0013 U	--	--	< 0.011 U
Aldrin	309-00-2	T	ug/L	4.1E-08	GW-2	--	--	--	< 0.0006 U	--	--	< 0.011 U
Alpha-BHC	319-84-6	T	ug/L	4.8E-05	GW-2	--	--	--	0.0038	--	--	--
Beta-BHC	319-85-7	T	ug/L	0.0014	GW-2	--	--	--	< 0.0006 U	--	--	--
cis-Chlordane	5103-71-9	T	ug/L	0.000103	GW-3	--	--	--	< 0.0006 U	--	--	--
cis-Nonachlor	5103-73-1	T	ug/L	--	--	--	--	--	< 0.0013 U	--	--	--
Delta-BHC	319-86-8	T	ug/L	--	--	--	--	--	< 0.0006 U	--	--	--
Dieldrin	60-57-1	T	ug/L	1.2E-06	GW-2	--	--	--	< 0.0013 U	--	--	< 0.011 U
Endosulfan I	959-98-8	T	ug/L	0.0087	GW-2	--	--	--	< 0.0006 U	--	--	--
Endosulfan II	33213-65-9	T	ug/L	0.0087	GW-2	--	--	--	< 0.0013 U	--	--	--
Endosulfan Sulfate	1031-07-8	T	ug/L	10	GW-2	--	--	--	< 0.0013 U	--	--	--
Endrin	72-20-8	T	ug/L	0.002	GW-2	--	--	--	< 0.0013 U	--	--	--
Endrin Aldehyde	7421-93-4	T	ug/L	0.035	GW-2	--	--	--	< 0.0013 U	--	--	--
Endrin ketone	53494-70-5	T	ug/L	--	--	--	--	--	< 0.0013 U	--	--	--
Heptachlor	76-44-8	T	ug/L	3.4E-07	GW-2	--	--	--	< 0.0006 U	--	--	< 0.011 U
Heptachlor Epoxide	1024-57-3	T	ug/L	2.4E-06	GW-2	--	--	--	< 0.0006 U	--	--	--

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_level	Screening Level Source	Location	MW-01	MW-02	MW-02	MW-03	MW-03	SB-21
						Date Sample	03/12/2008	10/09/2007	03/12/2008	10/08/2007	03/12/2008	07/27/2011
						MW-1-031208	MW-2-100907	MW-2-031208	MW-3-100807	MW-3-031208	SB21-WATER-072711	
Semivolatile Organic Compounds												
2,4,5-Trichlorophenol	95-95-4	T	ug/L	0.037	GW-2	--	--	--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	T	ug/L	600	GW-2	--	--	--	--	--	--	--
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2	--	--	--	--	--	--	--
2,4-Dimethylphenol	105-67-9	T	ug/L	2.91	GW-3	--	< 4.1 U	--	< 4.1 U	--	--	--
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2	--	--	--	--	--	--	< 5 U
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2	--	--	--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	T	ug/L	74.9	GW-3	--	--	--	--	--	--	--
2-Chloronaphthalene	91-59-7	T	ug/L	100	GW-2	--	--	--	--	--	--	--
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2	--	--	--	--	--	--	--
2-Methylphenol	95-48-7	T	ug/L	10.7	GW-3	--	< 0.51 U	--	< 0.51 U	--	--	--
2-Nitroaniline	88-74-4	T	ug/L	735000	GW-3	--	--	--	--	--	--	--
2-Nitrophenol	88-75-5	T	ug/L	--	--	--	--	--	--	--	--	--
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2	--	--	--	--	--	--	--
3-Nitroaniline	99-09-2	T	ug/L	--	--	--	--	--	--	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2	--	--	--	--	--	--	--
4-Bromophenyl phenyl ether	101-55-3	T	ug/L	--	--	--	--	--	--	--	--	--
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2	--	--	--	--	--	--	--
4-Chloroaniline	106-47-8	T	ug/L	2400	GW-3	--	--	--	--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L	--	--	--	--	--	--	--	--	--
4-Methylphenol	106-44-5	T	ug/L	106	GW-3	--	< 0.51 U	--	< 0.51 U	--	--	--
4-Nitroaniline	100-01-6	T	ug/L	106000	GW-3	--	--	--	--	--	--	--
4-Nitrophenol	100-02-7	T	ug/L	--	--	--	--	--	--	--	--	--
Benzoic acid	65-85-0	T	ug/L	589	GW-3	--	< 5.1 U	--	< 5.1 U	--	--	--
Benzyl alcohol	100-51-6	T	ug/L	56.4	GW-3	--	< 5.1 U	--	< 5.1 U	--	--	--
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2	--	< 0.21 U	--	< 0.21 U	--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2	--	--	--	--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L	--	--	--	--	--	--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2	--	--	--	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2	--	< 1.1 U	--	< 1.1 U	--	--	< 1 U
Carbazole	86-74-8	T	ug/L	--	--	--	--	--	--	--	--	--
Dibenzofuran	132-64-9	T	ug/L	3.09	GW-3	--	< 0.21 U	--	< 0.21 U	--	--	--
Diethyl phthalate	84-66-2	T	ug/L	92.6	GW-3	--	0.059 T	--	0.047 T	--	--	--
Dimethyl phthalate	131-11-3	T	ug/L	59	GW-3	--	< 0.21 U	--	< 0.21 U	--	--	--
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2	--	0.08 T	--	0.08 T	--	--	--
Di-n-octyl phthalate	117-84-0	T	ug/L	2.31	GW-3	--	< 0.21 U	--	< 0.21 U	--	--	--
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2	--	< 0.21 U	--	< 0.21 U	--	--	--
Hexachlorobutadiene	87-68-3	T	ug/L	0.01	GW-2	--	< 2 U	< 0.21 U	< 2 U	< 0.21 U	< 2 U	--
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2	--	--	--	--	--	--	--
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2	--	--	--	--	--	--	--
Isophorone	78-59-1	T	ug/L	110	GW-2	--	--	--	--	--	--	--
Nitrobenzene	98-95-3	T	ug/L	100	GW-2	--	--	--	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2	--	--	--	--	--	--	--
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.554	GW-3	--	< 0.21 U	--	< 0.21 U	--	--	--
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2	--	< 1.1 U	--	< 1.1 U	--	--	--
Pervlene	198-55-0	T	ug/L	--	--	--	--	--	--	--	--	--
Phenol	108-95-2	T	ug/L	101	GW-3	--	< 0.51 U	--	< 0.51 U	--	--	--
Pesticides and Herbicides												
2,4'-DDD	53-19-0	T	ug/L	--	--	--	< 0.0005 U	< 0.011 U	< 0.00049 U	< 0.01 U	< 0.0005 U	--
2,4'-DDE	3424-82-6	T	ug/L	--	--	--	< 0.0005 U	< 0.011 U	< 0.00049 U	< 0.01 U	< 0.0005 U	--
2,4'-DDT	789-02-6	T	ug/L	--	--	--	< 0.0005 U	< 0.011 U	< 0.00049 U	0.001 T	< 0.0005 U	--
4,4'-DDD	72-54-8	T	ug/L	7.9E-06	GW-2	--	< 0.0005 U	< 0.011 U	< 0.00049 U	< 0.01 U	< 0.00097 U	< 0.0052 U
4,4'-DDE	72-55-9	T	ug/L	8.8E-07	GW-2	--	< 0.0005 U	< 0.011 U	< 0.00049 U	< 0.01 U	< 0.0005 U	< 0.0052 U
4,4'-DDT	50-29-3	T	ug/L	1.2E-06	GW-2	--	< 0.0005 U	0.0022 JP	0.00082 P	< 0.01 U	0.0014	< 0.0052 U
Aldrin	309-00-2	T	ug/L	4.1E-08	GW-2	--	< 0.0005 U	< 0.011 U	< 0.00049 U	0.0012 T	0.0012 J	< 0.0052 U
Alpha-BHC	319-84-6	T	ug/L	4.8E-05	GW-2	--	--	--	--	--	--	< 0.0052 U
Beta-BHC	319-85-7	T	ug/L	0.0014	GW-2	--	--	--	--	--	--	< 0.0052 U
cis-Chlordane	5103-71-9	T	ug/L	0.000103	GW-3	--	< 0.0005 U	--	< 0.00049 U	--	< 0.0005 U	< 0.0052 U
cis-Nonachlor	5103-73-1	T	ug/L	--	--	--	--	--	--	--	--	< 0.0052 U
Delta-BHC	319-86-8	T	ug/L	--	--	--	--	--	--	--	--	< 0.0052 U
Dieldrin	60-57-1	T	ug/L	1.2E-06	GW-2	--	< 0.0005 U	0.0015 T	0.00071	0.021	0.041 D	< 0.0052 U
Endosulfan I	959-98-8	T	ug/L	0.0087	GW-2	--	--	--	--	--	--	< 0.0052 U
Endosulfan II	33213-65-9	T	ug/L	0.0087	GW-2	--	--	--	--	--	--	< 0.0052 U
Endosulfan Sulfate	1031-07-8	T	ug/L	10	GW-2	--	--	--	--	--	--	< 0.0052 U
Endrin	72-20-8	T	ug/L	0.002	GW-2	--	--	--	--	--	--	< 0.0052 U
Endrin Aldehyde	7421-93-4	T	ug/L	0.035	GW-2	--	--	--	--	--	--	< 0.0052 U
Endrin ketone	53494-70-5	T	ug/L	--	--	--	--	--	--	--	--	< 0.021 U
Heptachlor	78-44-8	T	ug/L	3.4E-07	GW-2	--	< 0.0005 U	< 0.011 U	< 0.00049 U	< 0.01 U	< 0.0005 U	< 0.0052 U
Heptachlor Epoxide	1024-57-3	T	ug/L	2.4E-06	GW-2	--	--	--	--	--	--	< 0.0052 U

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

						Location Date Sample	SB-22 07/27/2011 SB22-WATER-072711
Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_le vel	Screening Level Source		
Semivolatile Organic Compounds							
2,4,5-Trichlorophenol	95-95-4	T	ug/L	0.037	GW-2	--	--
2,4,6-Trichlorophenol	88-06-2	T	ug/L	600	GW-2	--	--
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2	--	--
2,4-Dimethylphenol	105-67-9	T	ug/L	2.91	GW-3	--	--
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2	--	< 5.2 U
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2	--	--
2,6-Dinitrotoluene	606-20-2	T	ug/L	74.9	GW-3	--	--
2-Chloronaphthalene	91-59-7	T	ug/L	100	GW-2	--	--
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2	--	--
2-Methylphenol	95-48-7	T	ug/L	10.7	GW-3	--	--
2-Nitroaniline	88-74-4	T	ug/L	735000	GW-3	--	--
2-Nitrophenol	88-75-5	T	ug/L			--	--
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2	--	--
3-Nitroaniline	99-09-2	T	ug/L			--	--
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2	--	--
4-Bromophenyl phenyl ether	101-55-3	T	ug/L			--	--
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2	--	--
4-Chloroaniline	106-47-8	T	ug/L	2400	GW-3	--	--
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L			--	--
4-Methylphenol	106-44-5	T	ug/L	106	GW-3	--	--
4-Nitroaniline	100-01-6	T	ug/L	106000	GW-3	--	--
4-Nitrophenol	100-02-7	T	ug/L			--	--
Benzoic acid	65-85-0	T	ug/L	589	GW-3	--	--
Benzyl alcohol	100-51-6	T	ug/L	56.4	GW-3	--	--
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2	--	--
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L			--	--
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2	--	< 1 U
Carbazole	86-74-8	T	ug/L			--	--
Dibenzofuran	132-64-9	T	ug/L	3.09	GW-3	--	--
Diethyl phthalate	84-66-2	T	ug/L	92.6	GW-3	--	--
Dimethyl phthalate	131-11-3	T	ug/L	59	GW-3	--	--
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2	--	--
Di-n-octyl phthalate	117-84-0	T	ug/L	2.31	GW-3	--	--
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2	--	--
Hexachlorobutadiene	87-68-3	T	ug/L	0.01	GW-2	--	--
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2	--	--
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2	--	--
Isophorone	78-59-1	T	ug/L	110	GW-2	--	--
Nitrobenzene	98-95-3	T	ug/L	100	GW-2	--	--
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2	--	--
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.554	GW-3	--	--
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2	--	--
Pervlene	198-55-0	T	ug/L			--	--
Phenol	108-95-2	T	ug/L	101	GW-3	--	--
Pesticides and Herbicides							
2,4'-DDD	53-19-0	T	ug/L			--	--
2,4'-DDE	3424-82-6	T	ug/L			--	--
2,4'-DDT	789-02-6	T	ug/L			--	--
4,4'-DDD	72-54-8	T	ug/L	7.9E-06	GW-2	--	< 0.005 U
4,4'-DDE	72-55-9	T	ug/L	8.8E-07	GW-2	--	< 0.005 U
4,4'-DDT	50-29-3	T	ug/L	1.2E-06	GW-2	--	< 0.005 U
Aldrin	309-00-2	T	ug/L	4.1E-08	GW-2	--	0.01
Alpha-BHC	319-84-6	T	ug/L	4.8E-05	GW-2	--	< 0.005 U
Beta-BHC	319-85-7	T	ug/L	0.0014	GW-2	--	< 0.005 U
cis-Chlordane	5103-71-9	T	ug/L	0.000103	GW-3	--	< 0.005 U
cis-Nonachlor	5103-73-1	T	ug/L			--	--
Delta-BHC	319-86-8	T	ug/L			--	< 0.005 U
Diieldrin	60-57-1	T	ug/L	1.2E-06	GW-2	--	< 0.005 U
Endosulfan I	959-98-8	T	ug/L	0.0087	GW-2	--	< 0.005 U
Endosulfan II	33213-65-9	T	ug/L	0.0087	GW-2	--	< 0.005 U
Endosulfan Sulfate	1031-07-8	T	ug/L	10	GW-2	--	< 0.005 U
Endrin	72-20-8	T	ug/L	0.002	GW-2	--	< 0.005 U
Endrin Aldehyde	7421-93-4	T	ug/L	0.035	GW-2	--	< 0.005 U
Endrin ketone	53494-70-5	T	ug/L			--	< 0.02 U
Heptachlor	76-44-8	T	ug/L	3.4E-07	GW-2	--	< 0.005 U
Heptachlor Epoxide	1024-57-3	T	ug/L	2.4E-06	GW-2	--	< 0.005 U

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_level	Screening Level Source	Location	MW-04	MW-04	MW-05	MW-05	MW-06	MW-07
						Date Sample	03/31/2021	05/27/2021	03/31/2021	05/27/2021	03/29/2021	03/29/2021
						MW-04-210331	MW-04-210527	MW-05-210331	MW-05-210527	MW-06-210329	MW-07-210329	
Lindane	58-89-9	T	ug/L	0.126	GW-2		< 0.0006 U	--	< 0.0006 U	--	< 0.0006 U	< 0.0006 U
Methoxychlor	72-43-5	T	ug/L	0.02	GW-2		< 0.0063 U	--	< 0.0063 U	--	< 0.0063 U	< 0.0063 U
Mirex	2385-85-5	T	ug/L	0.001	GW-2		< 0.0013 U	--	< 0.0013 U	--	< 0.0013 U	< 0.0013 U
Oxychlorodane	27304-13-8	T	ug/L				< 0.0013 U	--	< 0.0013 U	--	< 0.0013 U	< 0.0013 U
Total Chlorodane	57-74-9	T	ug/L	2.2E-05	GW-2		--	--	--	--	--	--
Toxaphene	8001-35-2	T	ug/L	3.2E-05	GW-2		--	--	--	--	--	--
trans-Chlorodane	5103-74-2	T	ug/L	0.000103	GW-3		< 0.0006 U	--	< 0.0006 U	--	< 0.0006 U	< 0.0006 U
trans-Nonachlor	39765-80-5	T	ug/L				< 0.0013 U	--	< 0.0013 U	--	< 0.0013 U	< 0.0013 U
Total Petroleum Hydrocarbons												
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2		< 100 U	--	282	--	< 100 U	< 100 U
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2		744	--	4430	--	< 105 U	< 125 U
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2		630	--	923	--	< 211 U	< 250 U
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2		1370	--	5350	--	< 211	< 250
Volatile Organic Compounds												
1,1,1,2-Tetrachloroethane	630-20-6	T	ug/L	7.11	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
1,1,1-Trichloroethane	71-55-6	T	ug/L	5450	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
1,1,2,2-Tetrachloroethane	79-34-5	T	ug/L	0.3	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
1,1,2-Trichloroethane	79-00-5	T	ug/L	0.9	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
1,1,2-Trichlorotrifluoroethane	76-13-1	T	ug/L	167	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
1,1-Dichloroethane	75-34-3	T	ug/L	11	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
1,1-Dichloroethene	75-35-4	T	ug/L	130	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
1,1-Dichloropropene	563-58-6	T	ug/L				< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
1,2,3-Trichlorobenzene	87-61-6	T	ug/L	7260	GW-3		< 0.5 U	--	< 0.5 U	--	< 0.5 U	< 0.5 U
1,2,3-Trichloropropane	96-18-4	T	ug/L	6.77	GW-3		< 0.5 U	--	< 0.5 U	--	< 0.5 U	< 0.5 U
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.964	GW-3		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
1,2,4-Trimethylbenzene	95-63-6	T	ug/L	239	GW-4		0.13 J	--	< 0.2 U	--	< 0.2 U	< 0.2 U
1,2-Dibromo-3-chloropropane	96-12-8	T	ug/L	0.0423	GW-4		< 0.5 U	--	< 0.5 U	--	< 0.5 U	< 0.5 U
1,2-Dibromoethane (EDB)	106-93-4	T	ug/L	0.296	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
1,2-Dichlorobenzene	95-50-1	T	ug/L	4.48	GW-3		0.11 J	--	3.34	--	< 0.2 U	< 0.2 U
1,2-Dichloroethane (EDC)	107-06-2	T	ug/L	3.48	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
1,2-Dichloropropane	78-87-5	T	ug/L	3.1	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
1,3,5-Trimethylbenzene	108-67-8	T	ug/L	167	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2		< 0.2 U	--	0.08 J	--	< 0.2 U	< 0.2 U
1,3-Dichloropropane	142-28-9	T	ug/L	2460000	GW-3		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
1,4-Dichloro-2-Butene	110-57-6	T	ug/L				< 1 U	--	< 1 U	--	< 1 U	< 1 U
1,4-Dichlorobenzene	106-46-7	T	ug/L	4.96	GW-4		0.04 J	--	0.5	--	< 0.2 U	< 0.2 U
2,2-Dichloropropane	594-20-7	T	ug/L				< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
2-Butanone	78-93-3	T	ug/L	1710000	GW-4		< 5 U	--	< 5 U	--	< 5 U	< 5 U
2-Chlorotoluene	95-49-8	T	ug/L	618000	GW-3		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
2-Hexanone	591-78-6	T	ug/L	7260	GW-4		< 5 U	--	< 5 U	--	< 5 U	< 5 U
2-Pentanone	107-87-9	T	ug/L				< 5 U	--	< 5 U	--	< 5 U	< 5 U
4-Chlorotoluene	106-43-4	T	ug/L				< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
4-Methyl-2-pentanone	108-10-1	T	ug/L	466000	GW-4		< 5 U	--	< 5 U	--	< 5 U	< 5 U
Acetone	67-64-1	T	ug/L	338000000	GW-3		4.99 J	--	5.32	--	< 5 U	< 5 U
Acrolein	107-02-8	T	ug/L	1.1	GW-2		< 5 U	--	< 5 U	--	< 5 U	< 5 U
Acrylonitrile	107-13-1	T	ug/L	0.028	GW-2		< 1 U	--	< 1 U	--	< 1 U	< 1 U
Benzene	71-43-2	T	ug/L	1.6	GW-2		< 0.2 U	--	0.63	--	< 0.2 U	< 0.2 U
Bromobenzene	108-86-1	T	ug/L	633	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Bromochloromethane	74-97-5	T	ug/L				< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Bromodichloromethane	75-27-4	T	ug/L	1.37	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Bromoform	75-25-2	T	ug/L	12	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Bromomethane	74-83-9	T	ug/L	10.9	GW-4		< 1 U	--	< 1 U	--	< 1 U	< 1 U
Carbon Disulfide	75-15-0	T	ug/L	836	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Carbon Tetrachloride	56-23-5	T	ug/L	0.35	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Chlorobenzene	108-90-7	T	ug/L	200	GW-2		< 0.2 U	--	1.44	--	< 0.2 U	< 0.2 U
Chloroethane	75-00-3	T	ug/L	14700	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Chloroform	67-66-3	T	ug/L	1.18	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Chloromethane	74-87-3	T	ug/L	153	GW-4		< 0.5 U	--	< 0.5 U	--	< 0.5 U	< 0.5 U
cis-1,2-Dichloroethene (cDCE)	156-59-2	T	ug/L	359000	GW-3		< 0.2 U	--	0.12 J	--	< 0.2 U	< 0.2 U
cis-1,3-Dichloropropene	10061-01-5	T	ug/L	1.2	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Dibromochloromethane	124-48-1	T	ug/L	2.2	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Dibromomethane	74-95-3	T	ug/L	86.4	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Dichlorodifluoromethane	75-71-8	T	ug/L	4.24	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Ethylbenzene	100-41-4	T	ug/L	21	GW-2		< 0.2 U	--	0.46	--	< 0.2 U	< 0.2 U
Isopropylbenzene	98-82-8	T	ug/L	907	GW-4		< 0.2 U	--	1.74	--	< 0.2 U	< 0.2 U
m,p-Xylenes	179601-23-1	T	ug/L				< 0.4 U	--	1.22	--	< 0.4 U	< 0.4 U
Methyl tert-butyl ether (MTBE)	1634-04-4	T	ug/L	801	GW-4		< 0.5 U	--	< 0.5 U	--	< 0.5 U	< 0.5 U
Methylene Chloride	75-09-2	T	ug/L	100	GW-2		< 1 U	--	< 1 U	--	< 1 U	< 1 U
Methyliodide	74-88-4	T	ug/L				< 1 U	--	< 1 U	--	< 1 U	< 1 U

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_level	Screening Level Source	Location	MW-08	MW-08	MW-09	MW-10	MW-11	MW-12
						Date Sample	03/29/2021	05/27/2021	03/29/2021	03/30/2021	03/30/2021	03/30/2021
						MW-08-210329	MW-08-210527	MW-09-210329	MW-10-210330	MW-11-210330	MW-12-210330	
Lindane	58-89-9	T	ug/L	0.126	GW-2		< 0.0006 U	--	--	--	< 0.0006 U	--
Methoxychlor	72-43-5	T	ug/L	0.02	GW-2		< 0.0063 U	--	--	--	< 0.0063 U	--
Mirex	2385-85-5	T	ug/L	0.001	GW-2		< 0.0013 U	--	--	--	< 0.0013 U	--
Oxychlorodane	27304-13-8	T	ug/L				< 0.0013 U	--	--	--	< 0.0013 U	--
Total Chlorodane	57-74-9	T	ug/L	2.2E-05	GW-2		--	--	--	--	--	--
Toxaphene	8001-35-2	T	ug/L	3.2E-05	GW-2		--	--	--	--	--	--
trans-Chlorodane	5103-74-2	T	ug/L	0.000103	GW-3		< 0.0006 U	--	--	--	< 0.0006 U	--
trans-Nonachlor	39765-80-5	T	ug/L				< 0.0013 U	--	--	--	< 0.0013 U	--
Total Petroleum Hydrocarbons												
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2		< 100 U	--	101	< 100 U	< 100 U	< 100 U
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2		< 123 U	--	--	--	< 105 U	< 105 U
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2		< 247 U	--	--	--	< 211 U	< 211 U
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2		< 247	--	--	--	< 211	< 211
Volatile Organic Compounds												
1,1,1,2-Tetrachloroethane	630-20-6	T	ug/L	7.11	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
1,1,1-Trichloroethane	71-55-6	T	ug/L	5450	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
1,1,2,2-Tetrachloroethane	79-34-5	T	ug/L	0.3	GW-2		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
1,1,2-Trichloroethane	79-00-5	T	ug/L	0.9	GW-2		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
1,1,2-Trichlorotrifluoroethane	76-13-1	T	ug/L	167	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
1,1-Dichloroethane	75-34-3	T	ug/L	11	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
1,1-Dichloroethene	75-35-4	T	ug/L	130	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
1,1-Dichloropropene	563-58-6	T	ug/L				< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
1,2,3-Trichlorobenzene	87-61-6	T	ug/L	7260	GW-3		< 0.5 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2,3-Trichloropropane	96-18-4	T	ug/L	6.77	GW-3		< 0.5 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.964	GW-3		< 0.5 U	--	< 0.5 U	< 0.2 U	< 0.2 U	< 0.5 U
1,2,4-Trimethylbenzene	95-63-6	T	ug/L	239	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
1,2-Dibromo-3-chloropropane	96-12-8	T	ug/L	0.0423	GW-4		< 0.5 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
1,2-Dibromoethane (EDB)	106-93-4	T	ug/L	0.296	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
1,2-Dichlorobenzene	95-50-1	T	ug/L	4.48	GW-3		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
1,2-Dichloroethane (EDC)	107-06-2	T	ug/L	3.48	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
1,2-Dichloropropane	78-87-5	T	ug/L	3.1	GW-2		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
1,3,5-Trimethylbenzene	108-67-8	T	ug/L	167	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
1,3-Dichloropropane	142-28-9	T	ug/L	2460000	GW-3		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
1,4-Dichloro-2-Butene	110-57-6	T	ug/L				< 1 U	--	< 1 U	< 1 U	< 1 U	< 1 U
1,4-Dichlorobenzene	106-46-7	T	ug/L	4.96	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
2,2-Dichloropropane	594-20-7	T	ug/L				< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
2-Butanone	78-93-3	T	ug/L	1710000	GW-4		< 5 U	--	< 5 U	< 5 U	< 5 U	< 5 U
2-Chlorotoluene	95-49-8	T	ug/L	618000	GW-3		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
2-Hexanone	591-78-6	T	ug/L	7260	GW-4		< 5 U	--	< 5 U	< 5 U	< 5 U	< 5 U
2-Pentanone	107-87-9	T	ug/L				< 5 U	--	< 5 U	< 5 U	< 5 U	< 5 U
4-Chlorotoluene	106-43-4	T	ug/L				< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
4-Methyl-2-pentanone	108-10-1	T	ug/L	466000	GW-4		< 5 U	--	< 5 U	< 5 U	< 5 U	< 5 U
Acetone	67-64-1	T	ug/L	338000000	GW-3		< 5 U	--	6.99	< 5 U	4.52 J	< 5 U
Acrolein	107-02-8	T	ug/L	1.1	GW-2		< 5 U	--	< 5 U	< 5 U	< 5 U	< 5 U
Acrylonitrile	107-13-1	T	ug/L	0.028	GW-2		< 1 U	--	< 1 U	< 1 U	< 1 U	< 1 U
Benzene	71-43-2	T	ug/L	1.6	GW-2		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Bromobenzene	108-86-1	T	ug/L	633	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Bromochloromethane	74-97-5	T	ug/L				< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Bromodichloromethane	75-27-4	T	ug/L	1.37	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Bromoform	75-25-2	T	ug/L	12	GW-2		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Bromomethane	74-83-9	T	ug/L	10.9	GW-4		< 1 U	--	< 1 U	< 1 U	< 1 U	< 1 U
Carbon Disulfide	75-15-0	T	ug/L	836	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Carbon Tetrachloride	56-23-5	T	ug/L	0.35	GW-2		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Chlorobenzene	108-90-7	T	ug/L	200	GW-2		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Chloroethane	75-00-3	T	ug/L	14700	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Chloroform	67-66-3	T	ug/L	1.18	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Chloromethane	74-87-3	T	ug/L	153	GW-4		< 0.5 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
cis-1,2-Dichloroethene (cDCE)	156-59-2	T	ug/L	359000	GW-3		< 0.2 U	--	8.42	< 0.2 U	< 0.2 U	< 0.2 U
cis-1,3-Dichloropropene	10061-01-5	T	ug/L	1.2	GW-2		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Dibromochloromethane	124-48-1	T	ug/L	2.2	GW-2		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Dibromomethane	74-95-3	T	ug/L	86.4	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Dichlorodifluoromethane	75-71-8	T	ug/L	4.24	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Ethylbenzene	100-41-4	T	ug/L	21	GW-2		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Isopropylbenzene	98-82-8	T	ug/L	907	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
m,p-Xylenes	179601-23-1	T	ug/L				< 0.4 U	--	< 0.4 U	< 0.4 U	< 0.4 U	< 0.4 U
Methyl tert-butyl ether (MTBE)	1634-04-4	T	ug/L	801	GW-4		< 0.5 U	--	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U
Methylene Chloride	75-09-2	T	ug/L	100	GW-2		< 1 U	--	< 1 U	< 1 U	< 1 U	< 1 U
Methyl iodide	74-88-4	T	ug/L				< 1 U	--	< 1 U	< 1 U	< 1 U	< 1 U

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_level	Screening Level Source	Location	MW-13	MW-13	MW-14	MW-15	MW-15	MW-01
						Date Sample	03/31/2021	05/27/2021	03/31/2021	03/30/2021	05/27/2021	10/09/2007
							MW-13-210331	MW-13-210527	MW-14-210331	MW-15-210330	MW-15-210527	MW-1-100907
Lindane	58-89-9	T	ug/L	0.126	GW-2	--	--	--	--	< 0.0006 U	--	< 0.011 U
Methoxychlor	72-43-5	T	ug/L	0.02	GW-2	--	--	--	--	< 0.0063 U	--	--
Mirex	2385-85-5	T	ug/L	0.001	GW-2	--	--	--	--	< 0.0013 U	--	--
Oxychlorodane	27304-13-8	T	ug/L	--	--	--	--	--	--	< 0.0013 U	--	--
Total Chlorodane	57-74-9	T	ug/L	2.2E-05	GW-2	--	--	--	--	--	--	< 0.21 U
Toxaphene	8001-35-2	T	ug/L	3.2E-05	GW-2	--	--	--	--	--	--	--
trans-Chlorodane	5103-74-2	T	ug/L	0.000103	GW-3	--	--	--	--	< 0.0006 U	--	--
trans-Nonachlor	39765-80-5	T	ug/L	--	--	--	--	--	--	< 0.0013 U	--	--
Total Petroleum Hydrocarbons												
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2	--	2810	--	< 100 U	< 100 U	--	< 250 U
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2	--	< 100 U	--	< 100 U	< 100 U	--	< 630 U
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2	--	< 200 U	--	< 200 U	< 200 U	--	< 630 U
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2	--	< 200	--	< 200	< 200	--	< 630 U
Volatile Organic Compounds												
1,1,1,2-Tetrachloroethane	630-20-6	T	ug/L	7.11	GW-4	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
1,1,1-Trichloroethane	71-55-6	T	ug/L	5450	GW-4	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
1,1,2,2-Tetrachloroethane	79-34-5	T	ug/L	0.3	GW-2	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
1,1,2-Trichloroethane	79-00-5	T	ug/L	0.9	GW-2	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
1,1,2-Trichlorotrifluoroethane	76-13-1	T	ug/L	167	GW-4	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	--
1,1-Dichloroethane	75-34-3	T	ug/L	11	GW-4	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
1,1-Dichloroethene	75-35-4	T	ug/L	130	GW-4	--	3.2	--	< 0.2 U	< 0.2 U	--	< 0.5 U
1,1-Dichloropropene	563-58-6	T	ug/L	--	--	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
1,2,3-Trichlorobenzene	87-61-6	T	ug/L	7260	GW-3	--	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 2 U
1,2,3-Trichloropropane	96-18-4	T	ug/L	6.77	GW-3	--	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.964	GW-3	--	< 0.5 U	--	< 0.2 U	< 0.2 U	--	< 0.21 U
1,2,4-Trimethylbenzene	95-63-6	T	ug/L	239	GW-4	--	0.15 J	--	< 0.2 U	< 0.2 U	--	< 2 U
1,2-Dibromo-3-chloropropane	96-12-8	T	ug/L	0.0423	GW-4	--	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 2 U
1,2-Dibromoethane (EDB)	106-93-4	T	ug/L	0.296	GW-4	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 2 U
1,2-Dichlorobenzene	95-50-1	T	ug/L	4.48	GW-3	--	0.21	--	< 0.2 U	< 0.2 U	--	< 0.21 U
1,2-Dichloroethane (EDC)	107-06-2	T	ug/L	3.48	GW-4	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
1,2-Dichloropropane	78-87-5	T	ug/L	3.1	GW-2	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
1,3,5-Trimethylbenzene	108-67-8	T	ug/L	167	GW-4	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 2 U
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
1,3-Dichloropropane	142-28-9	T	ug/L	2460000	GW-3	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
1,4-Dichloro-2-Butene	110-57-6	T	ug/L	--	--	--	< 1 U	--	< 1 U	< 1 U	--	--
1,4-Dichlorobenzene	106-46-7	T	ug/L	4.96	GW-4	--	0.41	--	< 0.2 U	< 0.2 U	--	< 0.21 U
2,2-Dichloropropane	594-20-7	T	ug/L	--	--	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
2-Butanone	78-93-3	T	ug/L	1710000	GW-4	--	< 5 U	--	< 5 U	< 5 U	--	< 20 U
2-Chlorotoluene	95-49-8	T	ug/L	618000	GW-3	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 2 U
2-Hexanone	591-78-6	T	ug/L	7260	GW-4	--	< 5 U	--	< 5 U	< 5 U	--	< 20 U
2-Pentanone	107-87-9	T	ug/L	--	--	--	< 5 U	--	< 5 U	< 5 U	--	--
4-Chlorotoluene	106-43-4	T	ug/L	--	--	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 2 U
4-Methyl-2-pentanone	108-10-1	T	ug/L	466000	GW-4	--	< 5 U	--	< 5 U	< 5 U	--	< 20 U
Acetone	67-64-1	T	ug/L	338000000	GW-3	--	4.44 J	--	5.6	< 5 U	--	< 20 U
Acrolein	107-02-8	T	ug/L	1.1	GW-2	--	< 5 U	--	< 5 U	< 5 U	--	--
Acrylonitrile	107-13-1	T	ug/L	0.028	GW-2	--	< 1 U	--	< 1 U	< 1 U	--	--
Benzene	71-43-2	T	ug/L	1.6	GW-2	--	0.07 J	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Bromobenzene	108-86-1	T	ug/L	633	GW-4	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 2 U
Bromochloromethane	74-97-5	T	ug/L	--	--	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Bromodichloromethane	75-27-4	T	ug/L	1.37	GW-4	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Bromoform	75-25-2	T	ug/L	12	GW-2	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Bromomethane	74-83-9	T	ug/L	10.9	GW-4	--	< 1 U	--	< 1 U	< 1 U	--	< 0.5 U
Carbon Disulfide	75-15-0	T	ug/L	836	GW-4	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Carbon Tetrachloride	56-23-5	T	ug/L	0.35	GW-2	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Chlorobenzene	108-90-7	T	ug/L	200	GW-2	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Chloroethane	75-00-3	T	ug/L	14700	GW-4	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Chloroform	67-66-3	T	ug/L	1.18	GW-4	--	0.69	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Chloromethane	74-87-3	T	ug/L	153	GW-4	--	< 0.5 U	--	< 0.5 U	< 0.5 U	--	< 0.5 U
cis-1,2-Dichloroethene (cDCE)	156-59-2	T	ug/L	359000	GW-3	--	555	--	< 0.2 U	< 0.2 U	--	< 0.5 U
cis-1,3-Dichloropropene	10061-01-5	T	ug/L	1.2	GW-2	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Dibromochloromethane	124-48-1	T	ug/L	2.2	GW-2	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Dibromomethane	74-95-3	T	ug/L	86.4	GW-4	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Dichlorodifluoromethane	75-71-8	T	ug/L	4.24	GW-4	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Ethylbenzene	100-41-4	T	ug/L	21	GW-2	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Isopropylbenzene	98-82-8	T	ug/L	907	GW-4	--	< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 2 U
m,p-Xylenes	179601-23-1	T	ug/L	--	--	--	< 0.4 U	--	< 0.4 U	< 0.4 U	--	< 0.5 U
Methyl tert-butyl ether (MTBE)	1634-04-4	T	ug/L	801	GW-4	--	< 0.5 U	--	< 0.5 U	< 0.5 U	--	--
Methylene Chloride	75-09-2	T	ug/L	100	GW-2	--	< 1 U	--	< 1 U	< 1 U	--	< 2 U
Methyl iodide	74-88-4	T	ug/L	--	--	--	< 1 U	--	< 1 U	< 1 U	--	--

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_level	Screening Level Source	Location	MW-01	MW-02	MW-02	MW-03	MW-03	SB-21
						Date Sample	03/12/2008	10/09/2007	03/12/2008	10/08/2007	03/12/2008	07/27/2011
						MW-1-031208	MW-2-100907	MW-2-031208	MW-3-100807	MW-3-031208	SB21-WATER-072711	
Lindane	58-89-9	T	ug/L	0.126	GW-2		< 0.0005 U	< 0.011 U	< 0.00049 U	< 0.01 U	< 0.0005 U	< 0.0052 U
Methoxychlor	72-43-5	T	ug/L	0.02	GW-2		--	--	--	--	--	< 0.01 U
Mirex	2385-85-5	T	ug/L	0.001	GW-2		--	--	--	--	--	--
Oxychlorodane	27304-13-8	T	ug/L	--	--		--	--	--	--	--	--
Total Chlorodane	57-74-9	T	ug/L	2,2E-05	GW-2		< 0.0099 U	< 0.21 U	< 0.0097 U	< 0.2 U	< 0.01 U	--
Toxaphene	8001-35-2	T	ug/L	3,2E-05	GW-2		--	--	--	--	--	< 0.052 U
trans-Chlorodane	5103-74-2	T	ug/L	0.000103	GW-3		< 0.0005 U	--	< 0.00049 U	--	< 0.0005 U	0.015
trans-Nonachlor	39765-80-5	T	ug/L	--	--		--	--	--	--	--	--
Total Petroleum Hydrocarbons												
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2		--	< 250 U	--	< 250 U	--	< 100 U
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2		--	< 630 U	--	< 630 U	--	< 270 U
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2		--	< 630 U	--	< 630 U	--	< 440 U
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2		--	< 630 U	--	< 630 U	--	< 440 U
Volatile Organic Compounds												
1,1,1,2-Tetrachloroethane	630-20-6	T	ug/L	7.11	GW-4		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
1,1,1-Trichloroethane	71-55-6	T	ug/L	5450	GW-4		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
1,1,2,2-Tetrachloroethane	79-34-5	T	ug/L	0.3	GW-2		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
1,1,2-Trichloroethane	79-00-5	T	ug/L	0.9	GW-2		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
1,1,2-Trichlorotrifluoroethane	76-13-1	T	ug/L	167	GW-4		--	--	--	--	--	--
1,1-Dichloroethane	75-34-3	T	ug/L	11	GW-4		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
1,1-Dichloroethene	75-35-4	T	ug/L	130	GW-4		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
1,1-Dichloropropene	563-58-6	T	ug/L	563	GW-4		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
1,2,3-Trichlorobenzene	87-61-6	T	ug/L	7260	GW-3		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	--
1,2,3-Trichloropropane	96-18-4	T	ug/L	6.77	GW-3		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.964	GW-3		< 2 U	< 0.21 U	< 2 U	< 0.21 U	< 2 U	--
1,2,4-Trimethylbenzene	95-63-6	T	ug/L	239	GW-4		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	--
1,2-Dibromo-3-chloropropane	96-12-8	T	ug/L	0.0423	GW-4		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	--
1,2-Dibromoethane (EDB)	106-93-4	T	ug/L	0.296	GW-4		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	--
1,2-Dichlorobenzene	95-50-1	T	ug/L	4.48	GW-3		< 0.5 U	< 0.21 U	< 0.5 U	< 0.21 U	< 0.5 U	< 0.2 U
1,2-Dichloroethane (EDC)	107-06-2	T	ug/L	3.48	GW-4		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
1,2-Dichloropropane	78-87-5	T	ug/L	3.1	GW-2		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
1,3,5-Trimethylbenzene	108-67-8	T	ug/L	167	GW-4		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	--
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
1,3-Dichloropropane	142-28-9	T	ug/L	2460000	GW-3		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
1,4-Dichloro-2-Butene	110-57-6	T	ug/L	--	--		--	--	--	--	--	--
1,4-Dichlorobenzene	106-46-7	T	ug/L	4.96	GW-4		< 0.5 U	< 0.21 U	< 0.5 U	< 0.21 U	< 0.5 U	--
2,2-Dichloropropane	594-20-7	T	ug/L	--	--		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
2-Butanone	78-93-3	T	ug/L	1710000	GW-4		< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	< 5 U
2-Chlorotoluene	95-49-8	T	ug/L	618000	GW-3		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	--
2-Hexanone	591-78-6	T	ug/L	7260	GW-4		< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	--
2-Pentanone	107-87-9	T	ug/L	--	--		--	--	--	--	--	--
4-Chlorotoluene	106-43-4	T	ug/L	--	--		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	--
4-Methyl-2-pentanone	108-10-1	T	ug/L	466000	GW-4		< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	--
Acetone	67-64-1	T	ug/L	338000000	GW-3		< 20 U	< 20 U	< 20 U	< 20 U	< 20 U	--
Acrolein	107-02-8	T	ug/L	1.1	GW-2		--	--	--	--	--	--
Acrylonitrile	107-13-1	T	ug/L	0.028	GW-2		--	--	--	--	--	--
Benzene	71-43-2	T	ug/L	1.6	GW-2		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U
Bromobenzene	108-86-1	T	ug/L	633	GW-4		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	--
Bromochloromethane	74-97-5	T	ug/L	--	--		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Bromodichloromethane	75-27-4	T	ug/L	1.37	GW-4		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Bromoform	75-25-2	T	ug/L	12	GW-2		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Bromomethane	74-83-9	T	ug/L	10.9	GW-4		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Carbon Disulfide	75-15-0	T	ug/L	836	GW-4		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U
Carbon Tetrachloride	56-23-5	T	ug/L	0.35	GW-2		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Chlorobenzene	108-90-7	T	ug/L	200	GW-2		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Chloroethane	75-00-3	T	ug/L	14700	GW-4		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Chloroform	67-66-3	T	ug/L	1.18	GW-4		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Chloromethane	74-87-3	T	ug/L	153	GW-4		0.82	< 0.5 U	0.36 T	0.46 T	0.9	--
cis-1,2-Dichloroethene (cDCE)	156-59-2	T	ug/L	359000	GW-3		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
cis-1,3-Dichloropropene	10061-01-5	T	ug/L	1.2	GW-2		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Dibromochloromethane	124-48-1	T	ug/L	2.2	GW-2		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Dibromomethane	74-95-3	T	ug/L	86.4	GW-4		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Dichlorodifluoromethane	75-71-8	T	ug/L	4.24	GW-4		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Ethylbenzene	100-41-4	T	ug/L	21	GW-2		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.2 U
Isopropylbenzene	98-82-8	T	ug/L	907	GW-4		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	--
m,p-Xylenes	179601-23-1	T	ug/L	--	--		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Methyl tert-butyl ether (MTBE)	1634-04-4	T	ug/L	801	GW-4		--	--	--	--	--	--
Methylene Chloride	75-09-2	T	ug/L	100	GW-2		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	--
Methyliodide	74-88-4	T	ug/L	--	--		--	--	--	--	--	--

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

						Location Date Sample	SB-22 07/27/2011 SB22-WATER-072711
Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_le vel	Screening Level Source		
Lindane	58-89-9	T	ug/L	0.126	GW-2	< 0.005 U	
Methoxychlor	72-43-5	T	ug/L	0.02	GW-2	< 0.01 U	
Mirex	2385-85-5	T	ug/L	0.001	GW-2	--	
Oxychlorodane	27304-13-8	T	ug/L			--	
Total Chlorodane	57-74-9	T	ug/L	2.2E-05	GW-2	--	
Toxaphene	8001-35-2	T	ug/L	3.2E-05	GW-2	< 0.05 U	
trans-Chlorodane	5103-74-2	T	ug/L	0.000103	GW-3	< 0.005 U	
trans-Nonachlor	39765-80-5	T	ug/L			--	
Total Petroleum Hydrocarbons							
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2	< 100 U	
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2	< 270 U	
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2	< 430 U	
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2	< 430 U	
Volatile Organic Compounds							
1,1,1,2-Tetrachloroethane	630-20-6	T	ug/L	7.11	GW-4	--	
1,1,1-Trichloroethane	71-55-6	T	ug/L	5450	GW-4	--	
1,1,2,2-Tetrachloroethane	79-34-5	T	ug/L	0.3	GW-2	--	
1,1,2-Trichloroethane	79-00-5	T	ug/L	0.9	GW-2	--	
1,1,2-Trichlorotrifluoroethane	76-13-1	T	ug/L	167	GW-4	--	
1,1-Dichloroethane	75-34-3	T	ug/L	11	GW-4	--	
1,1-Dichloroethene	75-35-4	T	ug/L	130	GW-4	--	
1,1-Dichloropropene	563-58-6	T	ug/L			--	
1,2,3-Trichlorobenzene	87-61-6	T	ug/L	7260	GW-3	--	
1,2,3-Trichloropropane	96-18-4	T	ug/L	6.77	GW-3	--	
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.964	GW-3	--	
1,2,4-Trimethylbenzene	95-63-6	T	ug/L	239	GW-4	--	
1,2-Dibromo-3-chloropropane	96-12-8	T	ug/L	0.0423	GW-4	--	
1,2-Dibromoethane (EDB)	106-93-4	T	ug/L	0.296	GW-4	--	
1,2-Dichlorobenzene	95-50-1	T	ug/L	4.48	GW-3	< 0.2 U	
1,2-Dichloroethane (EDC)	107-06-2	T	ug/L	3.48	GW-4	--	
1,2-Dichloropropane	78-87-5	T	ug/L	3.1	GW-2	--	
1,3,5-Trimethylbenzene	108-67-8	T	ug/L	167	GW-4	--	
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2	--	
1,3-Dichloropropane	142-28-9	T	ug/L	2460000	GW-3	--	
1,4-Dichloro-2-Butene	110-57-6	T	ug/L			--	
1,4-Dichlorobenzene	106-46-7	T	ug/L	4.96	GW-4	--	
2,2-Dichloropropane	594-20-7	T	ug/L			--	
2-Butanone	78-93-3	T	ug/L	1710000	GW-4	< 5 U	
2-Chlorotoluene	95-49-8	T	ug/L	618000	GW-3	--	
2-Hexanone	591-78-6	T	ug/L	7260	GW-4	--	
2-Pentanone	107-87-9	T	ug/L			--	
4-Chlorotoluene	106-43-4	T	ug/L			--	
4-Methyl-2-pentanone	108-10-1	T	ug/L	466000	GW-4	--	
Acetone	67-64-1	T	ug/L	338000000	GW-3	--	
Acrolein	107-02-8	T	ug/L	1.1	GW-2	--	
Acrylonitrile	107-13-1	T	ug/L	0.028	GW-2	--	
Benzene	71-43-2	T	ug/L	1.6	GW-2	< 0.2 U	
Bromobenzene	108-86-1	T	ug/L	633	GW-4	--	
Bromochloromethane	74-97-5	T	ug/L			--	
Bromodichloromethane	75-27-4	T	ug/L	1.37	GW-4	--	
Bromoform	75-25-2	T	ug/L	12	GW-2	--	
Bromomethane	74-83-9	T	ug/L	10.9	GW-4	--	
Carbon Disulfide	75-15-0	T	ug/L	836	GW-4	< 0.2 U	
Carbon Tetrachloride	56-23-5	T	ug/L	0.35	GW-2	--	
Chlorobenzene	108-90-7	T	ug/L	200	GW-2	--	
Chloroethane	75-00-3	T	ug/L	14700	GW-4	--	
Chloroform	67-66-3	T	ug/L	1.18	GW-4	--	
Chloromethane	74-87-3	T	ug/L	153	GW-4	--	
cis-1,2-Dichloroethene (cDCE)	156-59-2	T	ug/L	359000	GW-3	--	
cis-1,3-Dichloropropene	10061-01-5	T	ug/L	1.2	GW-2	--	
Dibromochloromethane	124-48-1	T	ug/L	2.2	GW-2	--	
Dibromomethane	74-95-3	T	ug/L	86.4	GW-4	--	
Dichlorodifluoromethane	75-71-8	T	ug/L	4.24	GW-4	--	
Ethylbenzene	100-41-4	T	ug/L	2.1	GW-2	< 0.2 U	
Isopropylbenzene	98-82-8	T	ug/L	907	GW-4	--	
m,p-Xylenes	179601-23-1	T	ug/L			--	
Methyl tert-butyl ether (MTBE)	1634-04-4	T	ug/L	801	GW-4	--	
Methylene Chloride	75-09-2	T	ug/L	100	GW-2	--	
Methyl iodide	74-88-4	T	ug/L			--	

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS_2022.02_action_level	Screening Level Source	Location Date Sample	MW-04 03/31/2021	MW-04 05/27/2021	MW-05 03/31/2021	MW-05 05/27/2021	MW-06 03/29/2021	MW-07 03/29/2021
							MW-04-210331	MW-04-210527	MW-05-210331	MW-05-210527	MW-06-210329	MW-07-210329
n-Butylbenzene	104-51-8	T	ug/L	424000	GW-3		< 0.2 U	--	0.65	--	< 0.2 U	< 0.2 U
n-Propylbenzene	103-65-1	T	ug/L	2270	GW-4		< 0.2 U	--	2.63	--	< 0.2 U	< 0.2 U
o-Xylene	95-47-6	T	ug/L				< 0.2 U	--	1.5	--	< 0.2 U	< 0.2 U
p-Isopropyltoluene	99-87-6	T	ug/L				< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
sec-Butylbenzene	135-98-8	T	ug/L	940000	GW-3		< 0.2 U	--	0.68	--	< 0.2 U	< 0.2 U
Styrene	100-42-5	T	ug/L	8170	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
tert-Butylbenzene	98-06-6	T	ug/L	1240000	GW-3		< 0.2 U	--	0.09 J	--	< 0.2 U	< 0.2 U
Tetrachloroethene (PCE)	127-18-4	T	ug/L	2.9	GW-2		1.3	--	0.1 J	--	2.99	< 0.2 U
Toluene	108-88-3	T	ug/L	102	GW-2		< 0.2 U	--	0.36	--	< 0.2 U	< 0.2 U
Total Xylenes	1330-20-7	T	ug/L	106	GW-2		< 0.6 U	--	2.72	--	< 0.6 U	< 0.6 U
trans-1,2-Dichloroethene	156-60-5	T	ug/L	76.8	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
trans-1,3-Dichloropropene	10061-02-6	T	ug/L	1.2	GW-2		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Trichloroethene (TCE)	79-01-6	T	ug/L	0.7	GW-2		0.11 J	--	< 0.2 U	--	0.09 J	< 0.2 U
Trichlorofluoromethane	75-69-4	T	ug/L	119	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Vinyl Acetate	108-05-4	T	ug/L	7810	GW-4		< 0.2 U	--	< 0.2 U	--	< 0.2 U	< 0.2 U
Vinyl Chloride	75-01-4	T	ug/L	0.18	GW-2		< 0.2 U	--	0.35	--	< 0.2 U	< 0.2 U
Conventionals												
Total Organic Carbon	TOC	T	ug/L				11480	--	14240	--	2040	--
Total Suspended Solids	TSS	T	ug/L				< 1000 U	--	17000	--	< 1000 U	--
Field Parameters												
Temperature	Temp	T	deg C				11.4	--	11.6	--	9.7	10.6
Specific Conductance	Cond	T	uS/cm				117.5	--	258.9	--	109.2	1575
Dissolved Oxygen	DO	T	ug/L				330	--	510	--	5270	7530
pH	pH	T	pH units				6.23	--	5.84	--	6.34	7.75
Oxidation Reduction Potential	ORP	T	mV				94	--	72.4	--	73.3	92.4
Turbidity	Turb	T	NTU				2.43	--	5.38	--	3.17	106
												143 H, D

Bold - detected
 Blue Shaded - Detected result exceeded screening level
 U - Analyte not detected at or above Reporting Limit (RL) shown
 J - Result value estimated
 UJ - Analyte not detected and the Reporting Limit (RL) is an estimate
 D - Dissolved Fraction (filtered) sample result
 T - Total Fraction (unfiltered) sample result
 cPAHs = carcinogenic polycyclic aromatic hydrocarbons
 HPAH = high molecular weight PAH
 LPAH = low molecular weight PAH
 TEQ = Toxic Equivalency
 "--" - indicates results not available
 ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components
 ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

GW-2	Protect Surface Water
GW-3	Protect Sediment
GW-4	Protect Indoor Air
GW-5	Natural Background

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS_2022.02_action_level	Screening Level Source	Location Date Sample	MW-08 03/29/2021	MW-08 05/27/2021	MW-09 03/29/2021	MW-10 03/30/2021	MW-11 03/30/2021	MW-12 03/30/2021
						MW-08-210329	MW-08-210527	MW-09-210329	MW-10-210330	MW-11-210330	MW-12-210330	
n-Butylbenzene	104-51-8	T	ug/L	424000	GW-3		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
n-Propylbenzene	103-65-1	T	ug/L	2270	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
o-Xylene	95-47-6	T	ug/L				< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
p-Isopropyltoluene	99-87-6	T	ug/L				< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
sec-Butylbenzene	135-98-8	T	ug/L	940000	GW-3		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Styrene	100-42-5	T	ug/L	8170	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
tert-Butylbenzene	98-06-6	T	ug/L	1240000	GW-3		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Tetrachloroethene (PCE)	127-18-4	T	ug/L	2.9	GW-2		0.2	--	28.1	0.09 J	< 0.2 U	< 0.2 U
Toluene	108-88-3	T	ug/L	102	GW-2		0.19 J	--	0.12 J	< 0.2 U	< 0.2 U	< 0.2 U
Total Xylenes	1330-20-7	T	ug/L	106	GW-2		< 0.6 U	--	< 0.6 U	< 0.6 U	< 0.6 U	< 0.6 U
trans-1,2-Dichloroethene	156-60-5	T	ug/L	76.8	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
trans-1,3-Dichloropropene	10061-02-6	T	ug/L	1.2	GW-2		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Trichloroethene (TCE)	79-01-6	T	ug/L	0.7	GW-2		< 0.2 U	--	15.2	< 0.2 U	< 0.2 U	< 0.2 U
Trichlorofluoromethane	75-69-4	T	ug/L	119	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Vinyl Acetate	108-05-4	T	ug/L	7810	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Vinyl Chloride	75-01-4	T	ug/L	0.18	GW-2		< 0.2 U	--	< 0.2 U	< 0.2 U	< 0.2 U	< 0.2 U
Conventionals												
Total Organic Carbon	TOC	T	ug/L				--	--	--	--	1290	6840
Total Suspended Solids	TSS	T	ug/L				--	--	--	--	6000	4000
Field Parameters												
Temperature	Temp	T	deg C				7.7	--	7.2	6.9	7.6	12.6
Specific Conductance	Cond	T	uS/cm				2166	--	1182	1642	2658	938
Dissolved Oxygen	DO	T	ug/L				10300	--	8730	10510	9380	1780
pH	pH	T	pH units				8	--	7.59	7.54	7.17	6.37
Oxidation Reduction Potential	ORP	T	mV				103.3	--	119.3	122.9	144.9	115.9
Turbidity	Turb	T	NTU				2.38	--	56.4	93.6	9.98	1.87

Bold - detected
 Blue Shaded - Detected result exceeded screening level
 U - Analyte not detected at or above Reporting Limit (RL) shown
 J - Result value estimated
 UJ - Analyte not detected and the Reporting Limit (RL) is an estimate
 D - Dissolved Fraction (filtered) sample result
 T - Total Fraction (unfiltered) sample result
 cPAHs = carcinogenic polycyclic aromatic hydrocarbons
 HPAH = high molecular weight PAH
 LPAH = low molecular weight PAH
 TEQ = Toxic Equivalency
 "--" - indicates results not available
 ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components
 ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

GW-2	Protect Surface Water
GW-3	Protect Sediment
GW-4	Protect Indoor Air
GW-5	Natural Background

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_le vel	Screening Level Source	Location Date Sample	MW-13 03/31/2021	MW-13 05/27/2021	MW-14 03/31/2021	MW-15 03/30/2021	MW-15 05/27/2021	MW-01 10/09/2007
							MW-13-210331	MW-13-210527	MW-14-210331	MW-15-210330	MW-15-210527	MW-1-100907
n-Butylbenzene	104-51-8	T	ug/L	424000	GW-3		< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 2 U
n-Propylbenzene	103-65-1	T	ug/L	2270	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 2 U
o-Xylene	95-47-6	T	ug/L				< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
p-Isopropyltoluene	99-87-6	T	ug/L				< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 2 U
sec-Butylbenzene	135-98-8	T	ug/L	940000	GW-3		< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 2 U
Styrene	100-42-5	T	ug/L	8170	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
tert-Butylbenzene	98-06-6	T	ug/L	1240000	GW-3		< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 2 U
Tetrachloroethene (PCE)	127-18-4	T	ug/L	2.9	GW-2		4640	--	0.32	< 0.2 U	--	< 0.5 U
Toluene	108-88-3	T	ug/L	102	GW-2		0.11 J	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Total Xylenes	1330-20-7	T	ug/L	106	GW-2		< 0.6 U	--	< 0.6 U	< 0.6 U	--	< 0.5 U
trans-1,2-Dichloroethene	156-60-5	T	ug/L	76.8	GW-4		4.99	--	< 0.2 U	< 0.2 U	--	< 0.5 U
trans-1,3-Dichloropropene	10061-02-6	T	ug/L	1.2	GW-2		< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Trichloroethene (TCE)	79-01-6	T	ug/L	0.7	GW-2		259	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Trichlorofluoromethane	75-69-4	T	ug/L	119	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Vinyl Acetate	108-05-4	T	ug/L	7810	GW-4		< 0.2 U	--	< 0.2 U	< 0.2 U	--	--
Vinyl Chloride	75-01-4	T	ug/L	0.18	GW-2		0.53	--	< 0.2 U	< 0.2 U	--	< 0.5 U
Conventionals												
Total Organic Carbon	TOC	T	ug/L				4830	--	890	2190	--	--
Total Suspended Solids	TSS	T	ug/L				4000	--	< 1000 U	6000	--	--
Field Parameters												
Temperature	Temp	T	deg C				14.6	--	11.6	11.8	--	--
Specific Conductance	Cond	T	uS/cm				481.5	--	122.3	182.5	--	--
Dissolved Oxygen	DO	T	ug/L				1210	--	5390	630	--	--
pH	pH	T	pH units				6.41	--	6.03	6.88	--	--
Oxidation Reduction Potential	ORP	T	mV				112.3	--	67.2	57.9	--	--
Turbidity	Turb	T	NTU				6.41	--	11.8	11.8	--	--

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

D - Dissolved Fraction (filtered) sample result

T - Total Fraction (unfiltered) sample result

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

TEQ = Toxic Equivalency

"--" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

GW-2	Protect Surface Water
GW-3	Protect Sediment
GW-4	Protect Indoor Air
GW-5	Natural Background

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_level	Screening Level Source	Location	MW-01	MW-02	MW-02	MW-03	MW-03	SB-21
						Date Sample	03/12/2008	10/09/2007	03/12/2008	10/08/2007	03/12/2008	07/27/2011
						MW-1-031208	MW-2-100907	MW-2-031208	MW-3-100807	MW-3-031208	SB21-WATER-072711	
n-Butylbenzene	104-51-8	T	ug/L	424000	GW-3		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 0.2 U
n-Propylbenzene	103-65-1	T	ug/L	2270	GW-4		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	--
o-Xylene	95-47-6	T	ug/L				< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
p-Isopropyltoluene	99-87-6	T	ug/L				< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	--
sec-Butylbenzene	135-98-8	T	ug/L	940000	GW-3		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	< 0.2 U
Styrene	100-42-5	T	ug/L	8170	GW-4		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
tert-Butylbenzene	98-06-6	T	ug/L	1240000	GW-3		< 2 U	< 2 U	< 2 U	< 2 U	< 2 U	--
Tetrachloroethene (PCE)	127-18-4	T	ug/L	2.9	GW-2		< 0.5 U	< 0.5 U	0.2 T	0.16 T	0.18 T	< 0.2 U
Toluene	108-88-3	T	ug/L	102	GW-2		< 0.5 U	0.11 T	< 0.5 U	0.12 T	< 0.5 U	< 1 U
Total Xylenes	1330-20-7	T	ug/L	106	GW-2		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.6 U
trans-1,2-Dichloroethene	156-60-5	T	ug/L	76.8	GW-4		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
trans-1,3-Dichloropropene	10061-02-6	T	ug/L	1.2	GW-2		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Trichloroethene (TCE)	79-01-6	T	ug/L	0.7	GW-2		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Trichlorofluoromethane	75-69-4	T	ug/L	119	GW-4		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Vinyl Acetate	108-05-4	T	ug/L	7810	GW-4		--	--	--	--	--	--
Vinyl Chloride	75-01-4	T	ug/L	0.18	GW-2		< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	< 0.5 U	--
Conventionals												
Total Organic Carbon	TOC	T	ug/L				--	--	--	--	--	--
Total Suspended Solids	TSS	T	ug/L				--	--	--	--	--	--
Field Parameters												
Temperature	Temp	T	deg C				--	--	--	--	--	--
Specific Conductance	Cond	T	uS/cm				--	--	--	--	--	--
Dissolved Oxygen	DO	T	ug/L				--	--	--	--	--	--
pH	pH	T	pH units				--	--	--	--	--	--
Oxidation Reduction Potential	ORP	T	mV				--	--	--	--	--	--
Turbidity	Turb	T	NTU				--	--	--	--	--	--

Bold - detected
 Blue Shaded - Detected result exceeded screening level
 U - Analyte not detected at or above Reporting Limit (RL) shown
 J - Result value estimated
 UJ - Analyte not detected and the Reporting Limit (RL) is an estimate
 D - Dissolved Fraction (filtered) sample result
 T - Total Fraction (unfiltered) sample result
 cPAHs = carcinogenic polycyclic aromatic hydrocarbons
 HPAH = high molecular weight PAH
 LPAH = low molecular weight PAH
 TEQ = Toxic Equivalency
 "--" - indicates results not available
 ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components
 ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

GW-2	Protect Surface Water
GW-3	Protect Sediment
GW-4	Protect Indoor Air
GW-5	Natural Background

Table B.3. Groundwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

					Location Date Sample	SB-22 07/27/2011 SB22-WATER-072711
Analyte	CAS RN	Fraction	Unit	SPM_RI_GW_SLS _2022.02_action_le vel	Screening Level Source	
n-Butylbenzene	104-51-8	T	ug/L	424000	GW-3	< 0.2 U
n-Propylbenzene	103-65-1	T	ug/L	2270	GW-4	--
o-Xylene	95-47-6	T	ug/L			--
p-Isopropyltoluene	99-87-6	T	ug/L			--
sec-Butylbenzene	135-98-8	T	ug/L	940000	GW-3	< 0.2 U
Styrene	100-42-5	T	ug/L	8170	GW-4	--
tert-Butylbenzene	98-06-6	T	ug/L	1240000	GW-3	--
Tetrachloroethene (PCE)	127-18-4	T	ug/L	2.9	GW-2	< 0.2 U
Toluene	108-88-3	T	ug/L	102	GW-2	< 1 U
Total Xylenes	1330-20-7	T	ug/L	106	GW-2	< 0.6 U
trans-1,2-Dichloroethene	156-60-5	T	ug/L	76.8	GW-4	--
trans-1,3-Dichloropropene	10061-02-6	T	ug/L	1.2	GW-2	--
Trichloroethene (TCE)	79-01-6	T	ug/L	0.7	GW-2	--
Trichlorofluoromethane	75-69-4	T	ug/L	119	GW-4	--
Vinyl Acetate	108-05-4	T	ug/L	7810	GW-4	--
Vinyl Chloride	75-01-4	T	ug/L	0.18	GW-2	--
Conventionals						
Total Organic Carbon	TOC	T	ug/L			--
Total Suspended Solids	TSS	T	ug/L			--
Field Parameters						
Temperature	Temp	T	deg C			--
Specific Conductance	Cond	T	uS/cm			--
Dissolved Oxygen	DO	T	ug/L			--
pH	pH	T	pH units			--
Oxidation Reduction Potential	ORP	T	mV			--
Turbidity	Turb	T	NTU			--

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

D - Dissolved Fraction (filtered) sample result

T - Total Fraction (unfiltered) sample result

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

TEQ = Toxic Equivalency

"-" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Screening Level Codes:

GW-2	Protect Surface Water
GW-3	Protect Sediment
GW-4	Protect Indoor Air
GW-5	Natural Background

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location	CB-01	CB-02	CB-02	CB-02	CB-02
						Date Sample	09/19/2017 SPM-CB-01-SW-20170919	06/08/2017 SPM-CB-02-SW-20170608	09/19/2017 SPM-CB-02-SW-20170919	03/05/2021 CB-02-SW-210305	04/24/2021 SPM-CB-02-SW-20210424
Metals											
Antimony	7440-36-0	T	ug/L	90	GW-2	--	--	< 5.6 U	--	--	--
Arsenic	7440-38-2	D	ug/L	0.14	GW-2	--	--	--	--	13.2 J	--
Arsenic	7440-38-2	T	ug/L	0.14	GW-2	--	--	3.9	--	8.81 J	--
Beryllium	7440-41-7	T	ug/L	75.6	GW-2	--	--	< 11 U	--	--	--
Cadmium	7440-43-9	D	ug/L	7.9	GW-2	--	--	--	--	0.138 J	--
Cadmium	7440-43-9	T	ug/L	7.9	GW-2	--	--	< 4.4 U	--	0.254	--
Chromium	7440-47-3	D	ug/L	27.4	GW-2	--	--	--	--	< 0.5 UJ	--
Chromium	7440-47-3	T	ug/L	27.4	GW-2	--	--	< 11 U	--	0.864	--
Copper	7440-50-8	D	ug/L	50	SPM Boatyard Permit	--	--	--	--	35.1 J	160
Copper	7440-50-8	T	ug/L	50	SPM Boatyard Permit	--	--	130	--	85.7	170
Lead	7439-92-1	D	ug/L	5.6	GW-2	--	--	--	--	0.198 J	1.6
Lead	7439-92-1	T	ug/L	5.6	GW-2	--	--	5.7	--	4.8	3.9
Mercury	7439-97-6	D	ug/L	0.025	GW-2	--	--	--	--	< 0.02 UJ	--
Mercury	7439-97-6	T	ug/L	0.025	GW-2	--	--	< 0.5 U	--	< 0.02 U	--
Nickel	7440-02-0	D	ug/L	8.2	GW-2	--	--	--	--	0.681 J	--
Nickel	7440-02-0	T	ug/L	8.2	GW-2	--	--	< 22 U	--	1.16	--
Selenium	7782-49-2	T	ug/L	71	GW-2	--	--	< 5.6 U	--	--	--
Silver	7440-22-4	T	ug/L	1.9	GW-2	--	--	< 11 U	--	--	--
Thallium	7440-28-0	T	ug/L	0.0619	GW-2	--	--	< 5.6 U	--	--	--
Zinc	7440-66-6	D	ug/L	85	SPM Boatyard Permit	--	--	--	--	404 J	1800
Zinc	7440-66-6	T	ug/L	85	SPM Boatyard Permit	--	--	1800	--	528	1800
Butyl Tin Ions											
Dibutyltin Ion	14488-53-0	T	ug/L	--	--	--	--	--	--	< 0.0077 U	--
Monobutyltin	78763-54-9	T	ug/L	--	--	--	--	--	--	0.0117 J	--
Tetrabutyltin	1461-25-2	T	ug/L	--	--	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	T	ug/L	0.0074	GW-2	--	--	--	--	< 0.0052 U	--
Polychlorinated Biphenyl Aroclors											
Aroclor 1016	12674-11-2	T	ug/L	--	--	< 0.047 U	--	< 0.047 U	--	< 0.048 U	< 0.01 U
Aroclor 1221	11104-28-2	T	ug/L	--	--	< 0.047 U	--	< 0.047 U	--	< 0.048 U	< 0.01 U
Aroclor 1232	11141-16-5	T	ug/L	--	--	< 0.047 U	--	< 0.047 U	--	< 0.048 U	< 0.01 U
Aroclor 1242	53469-21-9	T	ug/L	--	--	< 0.047 U	--	< 0.047 U	--	< 0.048 U	< 0.01 U
Aroclor 1248	12672-29-6	T	ug/L	--	--	< 0.047 U	--	< 0.047 U	--	< 0.048 U	< 0.01 U
Aroclor 1254	11097-69-1	T	ug/L	--	--	< 0.047 U	--	< 0.047 U	--	< 0.048 U	< 0.01 U
Aroclor 1260	11096-82-5	T	ug/L	--	--	< 0.047 U	--	< 0.047 U	--	< 0.048 U	< 0.01 U
Aroclor 1262	37324-23-5	T	ug/L	--	--	--	--	--	--	< 0.01 U	--
Aroclor 1268	11100-14-4	T	ug/L	--	--	--	--	--	--	< 0.01 U	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2	< 0.165 UJ	--	< 0.165 UJ	--	< 0.168 UJ	< 0.01 U
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2	< 0.047 U	--	< 0.047 U	--	< 0.048 U	< 0.01 U
Polychlorinated Biphenyl Congeners											
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2	0.00417	--	0.00682	--	0.0038	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2	0.00000509 J	--	0.00000844 J	--	0.00000294 J	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2	0.00000584 J	--	0.00000844 J	--	0.00000301 J	--
Total Monochlorobiphenyls	MONOPCB	T	ug/L	--	--	0.00000408	--	0.0000038	--	0.000003	--
Total Dichlorobiphenyls	DIPCB	T	ug/L	--	--	0.0000905 J	--	0.00023	--	0.0000698	--
Total Trichlorobiphenyls	TRIPCB	T	ug/L	--	--	0.000147	--	0.000161	--	0.000108 J	--
Total Tetrachlorobiphenyls	TETRAPCB	T	ug/L	--	--	0.00032 J	--	0.000389	--	0.000219	--
Total Pentachlorobiphenyls	PENTAPCB	T	ug/L	--	--	0.00086 J	--	0.00139	--	0.000637	--
Total Hexachlorobiphenyls	HEXAPCB	T	ug/L	--	--	0.00138	--	0.00226	--	0.00126 J	--
Total Heptachlorobiphenyls	HEPTAPCB	T	ug/L	--	--	0.00109 J	--	0.00191	--	0.00116	--
Total Octachlorobiphenyls	OCTAPCB	T	ug/L	--	--	0.000239 J	--	0.000438	--	0.000314	--
Total Nonachlorobiphenyls	NONAPCB	T	ug/L	--	--	0.0000295	--	0.0000335	--	0.0000228	--
Total Decachlorobiphenyls	DECAPCB	T	ug/L	--	--	0.00000318	--	0.00000343	--	0.00000341	--
Dioxins/Furans											
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	T	ug/L	--	--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	T	ug/L	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	T	ug/L	2.76E-08	GW-2	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	T	ug/L	2.76E-08	GW-2	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	T	ug/L	2.76E-08	GW-2	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons											
1-Methylnaphthalene	90-12-0	T	ug/L	--	--	--	--	< 0.096 U	--	< 0.1 U	--
2-Methylnaphthalene	91-57-6	T	ug/L	--	--	--	--	< 0.096 U	--	< 0.1 U	--
Acenaphthene	83-32-9	T	ug/L	30	GW-2	--	--	< 0.096 U	--	< 0.1 U	--
Acenaphthylene	208-96-8	T	ug/L	--	--	--	--	< 0.096 U	--	< 0.1 U	--
Anthracene	120-12-7	T	ug/L	100	GW-2	--	--	< 0.096 U	--	< 0.1 U	--
Benzo(g,h,i)perylene	191-24-2	T	ug/L	--	--	--	--	< 0.096 U	--	< 0.1 U	--
Fluoranthene	206-44-0	T	ug/L	6	GW-2	--	--	< 0.096 U	--	0.02 J	--
Fluorene	86-73-7	T	ug/L	10	GW-2	--	--	< 0.096 U	--	< 0.1 U	--
Naphthalene	91-20-3	T	ug/L	1.4	GW-2	--	--	< 0.096 U	--	< 0.1 U	--
Phenanthrene	85-01-8	T	ug/L	--	--	--	--	< 0.096 U	--	< 0.1 U	--
Pyrene	129-00-0	T	ug/L	8	GW-2	--	--	< 0.096 U	--	0.03 J	--
Benz(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2	--	--	< 0.096 U	--	< 0.1 U	--
Benz(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2	--	--	< 0.096 U	--	< 0.1 U	--
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2	--	--	< 0.096 U	--	< 0.1 U	--
Benzo(i)fluoranthene	205-82-3	T	ug/L	--	--	--	--	--	--	< 0.1 U	--
Benzo(k)fluoranthene	Benz-ik-fluor	T	ug/L	--	--	--	--	< 0.096 U	--	--	--
Benzo(l)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2	--	--	--	--	< 0.1 U	--
Chrysene	218-01-9	T	ug/L	0.016	GW-2	--	--	< 0.096 U	--	< 0.1 U	--
Dibenzo(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2	--	--	< 0.096 U	--	< 0.1 U	--
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2	--	--	< 0.096 U	--	< 0.1 U	--
Total Benzofluoranthenes	TOTBFA	T	ug/L	--	--	--	--	--	--	< 0.2 U	--
Total HPAHs	T-HPAH	T	ug/L	--	--	--	--	< 0.096 U	--	0.0500 J	--
Total LPAHs	T-LPAH	T	ug/L	--	--	--	--	< 0.096 U	--	0.0200	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location	CB-02	CB-02	CB-05	CB-05	CB-05
						Date Sample	05/27/2021 SPM-CB-02-SW-20210527	05/27/2021 CB-02-SW-210527	09/19/2017 SPM-CB-05-SW-20170919	04/24/2021 SPM-CB-05-SW-20210424	05/27/2021 SPM-CB-05-SW-20210527
Metals											
Antimony	7440-36-0	T	ug/L	90	GW-2	--	--	--	--	--	--
Arsenic	7440-38-2	D	ug/L	0.14	GW-2	--	2.37	--	--	--	--
Arsenic	7440-38-2	T	ug/L	0.14	GW-2	--	3.08	--	--	--	--
Beryllium	7440-41-7	T	ug/L	75.6	GW-2	--	--	--	--	--	--
Cadmium	7440-43-9	D	ug/L	7.9	GW-2	--	0.796	--	--	--	--
Cadmium	7440-43-9	T	ug/L	7.9	GW-2	--	1.37	--	--	--	--
Chromium	7440-47-3	D	ug/L	27.4	GW-2	--	< 0.5 U	--	--	--	--
Chromium	7440-47-3	T	ug/L	27.4	GW-2	--	< 0.5 U	--	--	--	--
Copper	7440-50-8	D	ug/L	50	SPM Boatyard Permit	48	41.3	--	320	77	--
Copper	7440-50-8	T	ug/L	50	SPM Boatyard Permit	67	159	--	300	110	--
Lead	7439-92-1	D	ug/L	5.6	GW-2	0.72	0.474	--	3.9	2	--
Lead	7439-92-1	T	ug/L	5.6	GW-2	2.3	4.2	--	7.1	6	--
Mercury	7439-97-6	D	ug/L	0.025	GW-2	--	0.00175	--	--	--	--
Mercury	7439-97-6	T	ug/L	0.025	GW-2	--	0.00359	--	--	--	--
Nickel	7440-02-0	D	ug/L	8.2	GW-2	--	1.43	--	--	--	--
Nickel	7440-02-0	T	ug/L	8.2	GW-2	--	2.35 J	--	--	--	--
Selenium	7782-49-2	T	ug/L	71	GW-2	--	--	--	--	--	--
Silver	7440-22-4	T	ug/L	1.9	GW-2	--	--	--	--	--	--
Thallium	7440-28-0	T	ug/L	0.0619	GW-2	--	--	--	--	--	--
Zinc	7440-66-6	D	ug/L	85	SPM Boatyard Permit	820	825	--	110	100	--
Zinc	7440-66-6	T	ug/L	85	SPM Boatyard Permit	860	1040	--	89	130	--
Butyl Tin Ions											
Dibutyltin Ion	14488-53-0	T	ug/L	--	--	--	< 0.0077 UJ	--	--	--	--
Monobutyltin	78763-54-9	T	ug/L	--	--	--	0.0112 J	--	--	--	--
Tetrabutyltin	1461-25-2	T	ug/L	--	--	--	< 0.03 U	--	--	--	--
Tributyltin Ion	36643-28-4	T	ug/L	0.0074	GW-2	--	< 0.0052 UJ	--	--	--	--
Polychlorinated Biphenyl Aroclors											
Aroclor 1016	12674-11-2	T	ug/L	--	--	--	< 0.01 U	< 0.047 U	--	--	--
Aroclor 1221	11104-28-2	T	ug/L	--	--	--	< 0.01 U	< 0.047 U	--	--	--
Aroclor 1232	11141-16-5	T	ug/L	--	--	--	< 0.01 U	< 0.047 U	--	--	--
Aroclor 1242	53469-21-9	T	ug/L	--	--	--	< 0.01 U	< 0.047 U	--	--	--
Aroclor 1248	12672-29-6	T	ug/L	--	--	--	< 0.01 U	< 0.047 U	--	--	--
Aroclor 1254	11097-69-1	T	ug/L	--	--	--	0.005 J	< 0.047 U	--	--	--
Aroclor 1260	11096-82-5	T	ug/L	--	--	--	0.01 J	< 0.047 U	--	--	--
Aroclor 1262	37324-23-5	T	ug/L	--	--	--	< 0.01 U	--	--	--	--
Aroclor 1268	11100-14-4	T	ug/L	--	--	--	< 0.01 U	--	--	--	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2	--	0.0500 J	< 0.165 UJ	--	--	--
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2	--	0.0150 J	< 0.047 U	--	--	--
Polychlorinated Biphenyl Congeners											
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2	--	--	0.0221	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2	--	--	0.0000145	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2	--	--	0.0000152	--	--	--
Total Monochlorobiphenyls	MONOPCB	T	ug/L	--	--	--	--	0.0000584	--	--	--
Total Dichlorobiphenyls	DIPCB	T	ug/L	--	--	--	--	0.000192	--	--	--
Total Trichlorobiphenyls	TRIPCB	T	ug/L	--	--	--	--	0.000271	--	--	--
Total Tetrachlorobiphenyls	TETRAPCB	T	ug/L	--	--	--	--	0.00171	--	--	--
Total Pentachlorobiphenyls	PENTAPCB	T	ug/L	--	--	--	--	0.00691	--	--	--
Total Hexachlorobiphenyls	HEXAPCB	T	ug/L	--	--	--	--	0.00622	--	--	--
Total Heptachlorobiphenyls	HEPTAPCB	T	ug/L	--	--	--	--	0.00524	--	--	--
Total Octachlorobiphenyls	OCTAPCB	T	ug/L	--	--	--	--	0.00145	--	--	--
Total Nonachlorobiphenyls	NONAPCB	T	ug/L	--	--	--	--	0.0000679	--	--	--
Total Decachlorobiphenyls	DECAPCB	T	ug/L	--	--	--	--	0.000011	--	--	--
Dioxins/Furans											
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	T	ug/L	--	--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	T	ug/L	--	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	T	ug/L	2.76E-08	GW-2	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	T	ug/L	2.76E-08	GW-2	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	T	ug/L	2.76E-08	GW-2	--	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons											
1-Methylnaphthalene	90-12-0	T	ug/L	--	--	--	0.557	--	--	--	--
2-Methylnaphthalene	91-57-6	T	ug/L	--	--	--	0.822	--	--	--	--
Acenaphthene	83-32-9	T	ug/L	30	GW-2	--	0.032	--	--	--	--
Acenaphthylene	208-96-8	T	ug/L	--	--	--	0.399	--	--	--	--
Anthracene	120-12-7	T	ug/L	100	GW-2	--	0.033	--	--	--	--
Benzo(g,h,i)perylene	191-24-2	T	ug/L	--	--	--	0.051	--	--	--	--
Fluoranthene	206-44-0	T	ug/L	6	GW-2	--	0.071	--	--	--	--
Fluorene	86-73-7	T	ug/L	10	GW-2	--	0.071	--	--	--	--
Naphthalene	91-20-3	T	ug/L	1.4	GW-2	--	1.73	--	--	--	--
Phenanthrene	85-01-8	T	ug/L	--	--	--	0.113	--	--	--	--
Pyrene	129-00-0	T	ug/L	8	GW-2	--	0.11	--	--	--	--
Benz(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2	--	0.012	--	--	--	--
Benzo(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2	--	0.012	--	--	--	--
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2	--	0.01	--	--	--	--
Benzo(i)fluoranthene	205-82-3	T	ug/L	--	--	--	0.003 J	--	--	--	--
Benzo(j,k)fluoranthene	Benz-ik-fluor	T	ug/L	--	--	--	--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2	--	0.005 J	--	--	--	--
Chrysene	218-01-9	T	ug/L	0.016	GW-2	--	0.021	--	--	--	--
Dibenzo(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2	--	< 0.01 UJ	--	--	--	--
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2	--	0.009 J	--	--	--	--
Total Benzofluoranthenes	TOTBFA	T	ug/L	--	--	--	0.019	--	--	--	--
Total HPAHs	T-HPAH	T	ug/L	--	--	--	0.301 J	--	--	--	--
Total LPAHs	T-LPAH	T	ug/L	--	--	--	2.38	--	--	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location	CB-06	CB-06	CB-06	CB-06	CB-06
						Date Sample	06/08/2017 SPM-CB-06-SW-20170608	09/19/2017 SPM-CB-06-SW-20170919	03/04/2021 CB-06-SW-210304	04/24/2021 SPM-CB-06-SW-20210424	05/27/2021 SPM-CB-06-SW-20210527
Metals											
Antimony	7440-36-0	T	ug/L	90	GW-2		< 5.6 U	--	--	--	--
Arsenic	7440-38-2	D	ug/L	0.14	GW-2		--	--	1.27 J	--	--
Arsenic	7440-38-2	T	ug/L	0.14	GW-2		< 3.3 U	--	1.85	--	--
Beryllium	7440-41-7	T	ug/L	75.6	GW-2		< 11 U	--	--	--	--
Cadmium	7440-43-9	D	ug/L	7.9	GW-2		--	--	0.131 J	--	--
Cadmium	7440-43-9	T	ug/L	7.9	GW-2		< 4.4 U	--	0.237	--	--
Chromium	7440-47-3	D	ug/L	27.4	GW-2		--	--	< 0.5 UJ	--	--
Chromium	7440-47-3	T	ug/L	27.4	GW-2		< 11 U	--	1.45	--	--
Copper	7440-50-8	D	ug/L	50	SPM Boatyard Permit		--	--	33.5 J	87	46
Copper	7440-50-8	T	ug/L	50	SPM Boatyard Permit		120	--	99	120	300
Lead	7439-92-1	D	ug/L	5.6	GW-2		--	--	0.128 J	1.1	0.55
Lead	7439-92-1	T	ug/L	5.6	GW-2		5.9	--	5.68	5.4	19
Mercury	7439-97-6	D	ug/L	0.025	GW-2		--	--	< 0.02 UJ	--	--
Mercury	7439-97-6	T	ug/L	0.025	GW-2		< 0.5 U	--	0.013 J	--	--
Nickel	7440-02-0	D	ug/L	8.2	GW-2		--	--	0.845 J	--	--
Nickel	7440-02-0	T	ug/L	8.2	GW-2		< 22 U	--	2.73	--	--
Selenium	7782-49-2	T	ug/L	71	GW-2		< 5.6 U	--	--	--	--
Silver	7440-22-4	T	ug/L	1.9	GW-2		< 11 U	--	--	--	--
Thallium	7440-28-0	T	ug/L	0.0619	GW-2		< 5.6 U	--	--	--	--
Zinc	7440-66-6	D	ug/L	85	SPM Boatyard Permit		--	--	64.4 J	58	78
Zinc	7440-66-6	T	ug/L	85	SPM Boatyard Permit		92	--	93.8	85	330
Butyl Tin Ions											
Dibutyltin Ion	14488-53-0	T	ug/L				--	--	< 0.0077 U	--	--
Monobutyltin	78763-54-9	T	ug/L				--	--	0.009 J	--	--
Tetrabutyltin	1461-25-2	T	ug/L				--	--	--	--	--
Tributyltin Ion	36643-28-4	T	ug/L	0.0074	GW-2		--	--	0.0111	--	--
Polychlorinated Biphenyl Aroclors											
Aroclor 1016	12674-11-2	T	ug/L				< 0.047 U	< 0.048 U	< 0.01 U	--	--
Aroclor 1221	11104-28-2	T	ug/L				< 0.047 U	< 0.048 U	< 0.01 U	--	--
Aroclor 1232	11141-16-5	T	ug/L				< 0.047 U	< 0.048 U	< 0.01 U	--	--
Aroclor 1242	53469-21-9	T	ug/L				< 0.047 U	< 0.048 U	< 0.01 U	--	--
Aroclor 1248	12672-29-6	T	ug/L				< 0.047 U	< 0.048 U	< 0.01 U	--	--
Aroclor 1254	11097-69-1	T	ug/L				< 0.047 U	< 0.048 U	0.006 J	--	--
Aroclor 1260	11096-82-5	T	ug/L				< 0.047 U	< 0.048 U	0.011 J	--	--
Aroclor 1262	37324-23-5	T	ug/L				--	--	< 0.01 U	--	--
Aroclor 1268	11100-14-4	T	ug/L				--	--	< 0.01 U	--	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2		< 0.165 UJ	< 0.168 UJ	0.0520 J	--	--
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2		< 0.047 U	< 0.048 U	0.017 J	--	--
Polychlorinated Biphenyl Congeners											
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2		0.0574	0.0267	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2		0.0000116 J	0.00000242 J	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2		0.0000116 J	0.00000280 J	--	--	--
Total Monochlorobiphenyls	MONOPCB	T	ug/L				0.00000665	0.0000198	--	--	--
Total Dichlorobiphenyls	DIPCB	T	ug/L				0.000581	0.000521	--	--	--
Total Trichlorobiphenyls	TRIPCB	T	ug/L				0.000431	0.000318 J	--	--	--
Total Tetrachlorobiphenyls	TETRAPCB	T	ug/L				0.00387	0.00192 J	--	--	--
Total Pentachlorobiphenyls	PENTAPCB	T	ug/L				0.0247	0.00999 J	--	--	--
Total Hexachlorobiphenyls	HEXAPCB	T	ug/L				0.0208	0.00915	--	--	--
Total Heptachlorobiphenyls	HEPTAPCB	T	ug/L				0.00582	0.0038	--	--	--
Total Octachlorobiphenyls	OCTAPCB	T	ug/L				0.00101	0.000827	--	--	--
Total Nonachlorobiphenyls	NONAPCB	T	ug/L				0.000127	0.0000914	--	--	--
Total Decachlorobiphenyls	DECAPCB	T	ug/L				0.0000123	0.000013	--	--	--
Dioxins/Furans											
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	T	ug/L				--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	T	ug/L				--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	T	ug/L	2.76E-08	GW-2		--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	T	ug/L	2.76E-08	GW-2		--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	T	ug/L	2.76E-08	GW-2		--	--	--	--	--
Polycyclic Aromatic Hydrocarbons											
1-Methylnaphthalene	90-12-0	T	ug/L				< 0.094 U	--	< 0.1 U	--	--
2-Methylnaphthalene	91-57-6	T	ug/L				< 0.094 U	--	< 0.1 U	--	--
Acenaphthene	83-32-9	T	ug/L	30	GW-2		< 0.094 U	--	< 0.1 U	--	--
Acenaphthylene	208-96-8	T	ug/L				< 0.094 U	--	< 0.1 U	--	--
Anthracene	120-12-7	T	ug/L	100	GW-2		< 0.094 U	--	< 0.1 U	--	--
Benzo(g,h,i)perylene	191-24-2	T	ug/L				0.014	--	< 0.1 U	--	--
Fluoranthene	206-44-0	T	ug/L	6	GW-2		< 0.094 U	--	0.05 J	--	--
Fluorene	86-73-7	T	ug/L	10	GW-2		< 0.094 U	--	< 0.1 U	--	--
Naphthalene	91-20-3	T	ug/L	1.4	GW-2		< 0.094 U	--	< 0.1 U	--	--
Phenanthrene	85-01-8	T	ug/L				< 0.094 U	--	0.03 J	--	--
Pyrene	129-00-0	T	ug/L	8	GW-2		< 0.094 U	--	0.05 J	--	--
Benzo(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2		< 0.0094 U	--	< 0.1 U	--	--
Benzo(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2		< 0.0094 U	--	< 0.1 U	--	--
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2		0.015	--	< 0.1 U	--	--
Benzo(i)fluoranthene	205-82-3	T	ug/L				--	--	< 0.1 U	--	--
Benzo(j,k)fluoranthene	Benz-ik-fluor	T	ug/L				< 0.0094 U	--	--	--	--
Benzo(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2		--	--	< 0.1 U	--	--
Chrysene	218-01-9	T	ug/L	0.016	GW-2		0.032	--	< 0.1 U	--	--
Dibenzo(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2		< 0.0094 U	--	< 0.1 U	--	--
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2		< 0.0094 U	--	< 0.1 U	--	--
Total Benzo(a)fluoranthenes	TOTBFA	T	ug/L				--	--	< 0.2 U	--	--
Total HPAHs	T-HPAH	T	ug/L				0.0610	--	0.100 J	--	--
Total LPAHs	T-LPAH	T	ug/L				< 0.094 U	--	0.0300 J	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Location Date Sample	CB-06	SWRX-MID	SWRX-MID	SWRX-MID
						05/27/2021 CB-06-SW-210527	04/12/2017 SPM-SWRX-MID-SW-20170412	05/16/2017 SPM-SWRX-MID-SW-20170516	06/08/2017 SPM-SWRX-MID-SW-20170608
					Screening Level Source				
Metals									
Antimony	7440-36-0	T	ug/L	90	GW-2	--	--	--	< 5.6 U
Arsenic	7440-38-2	D	ug/L	0.14	GW-2	15.7	--	--	--
Arsenic	7440-38-2	T	ug/L	0.14	GW-2	19	--	--	< 3.3 U
Beryllium	7440-41-7	T	ug/L	75.6	GW-2	--	--	--	< 11 U
Cadmium	7440-43-9	D	ug/L	7.9	GW-2	0.254	--	--	--
Cadmium	7440-43-9	T	ug/L	7.9	GW-2	0.432	--	--	< 4.4 U
Chromium	7440-47-3	D	ug/L	27.4	GW-2	2.85	--	--	--
Chromium	7440-47-3	T	ug/L	27.4	GW-2	< 0.5 U	--	--	< 11 U
Copper	7440-50-8	D	ug/L	50	SPM Boatyard Permit	50.5	--	--	--
Copper	7440-50-8	T	ug/L	50	SPM Boatyard Permit	77.6	--	--	1400
Lead	7439-92-1	D	ug/L	5.6	GW-2	0.51	--	--	--
Lead	7439-92-1	T	ug/L	5.6	GW-2	3.05	--	--	26
Mercury	7439-97-6	D	ug/L	0.025	GW-2	0.0023	--	--	--
Mercury	7439-97-6	T	ug/L	0.025	GW-2	0.00532	--	--	< 0.5 U
Nickel	7440-02-0	D	ug/L	8.2	GW-2	2.11	--	--	--
Nickel	7440-02-0	T	ug/L	8.2	GW-2	3.04	--	--	< 22 U
Selenium	7782-49-2	T	ug/L	71	GW-2	--	--	--	< 5.6 U
Silver	7440-22-4	T	ug/L	1.9	GW-2	--	--	--	< 11 U
Thallium	7440-28-0	T	ug/L	0.0619	GW-2	--	--	--	< 5.6 U
Zinc	7440-66-6	D	ug/L	85	SPM Boatyard Permit	95.8	--	--	--
Zinc	7440-66-6	T	ug/L	85	SPM Boatyard Permit	137	--	--	870
Butyl Tin Ions									
Dibutyltin Ion	14488-53-0	T	ug/L			< 0.0077 U	--	--	--
Monobutyltin	78763-54-9	T	ug/L			0.0696	--	--	--
Tetrabutyltin	1461-25-2	T	ug/L			< 0.03 U	--	--	--
Tributyltin Ion	36643-28-4	T	ug/L	0.0074	GW-2	< 0.0052 U	--	--	--
Polychlorinated Biphenyl Aroclors									
Aroclor 1016	12674-11-2	T	ug/L			< 0.01 U	< 0.048 U	< 0.048 U	< 0.051 U
Aroclor 1221	11104-28-2	T	ug/L			< 0.01 U	< 0.048 U	< 0.048 U	< 0.051 U
Aroclor 1232	11141-16-5	T	ug/L			< 0.01 U	< 0.048 U	< 0.048 U	< 0.051 U
Aroclor 1242	53469-21-9	T	ug/L			< 0.01 U	< 0.048 U	< 0.048 U	< 0.051 U
Aroclor 1248	12672-29-6	T	ug/L			< 0.01 U	< 0.048 U	< 0.048 U	< 0.051 U
Aroclor 1254	11097-69-1	T	ug/L			< 0.01 U	< 0.048 U	< 0.048 U	< 0.051 U
Aroclor 1260	11096-82-5	T	ug/L			< 0.01 U	< 0.048 U	< 0.048 U	< 0.051 U
Aroclor 1262	37324-23-5	T	ug/L			< 0.01 U	--	--	--
Aroclor 1268	11100-14-4	T	ug/L			< 0.01 U	--	--	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2	< 0.01 U	< 0.168 UJ	< 0.168 UJ	< 0.178 UJ
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2	< 0.01 U	< 0.048 U	< 0.048 U	< 0.051 U
Polychlorinated Biphenyl Congeners									
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2	--	0.00635	0.00556	0.0284
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2	--	0.00000731 J	0.00000524 J	0.0000328 J
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2	--	0.00000765 J	0.00000558 J	0.0000328 J
Total Monochlorobiphenyls	MONOPCB	T	ug/L			--	0.00000259	0.0000028	0.00002
Total Dichlorobiphenyls	DIPCB	T	ug/L			--	0.00024	0.000149	0.00047
Total Trichlorobiphenyls	TRIPCB	T	ug/L			--	0.000421	0.000173	0.00104
Total Tetrachlorobiphenyls	TETRAPCB	T	ug/L			--	0.000906	0.000591	0.00353
Total Pentachlorobiphenyls	PENTAPCB	T	ug/L			--	0.00181	0.00164	0.00802
Total Hexachlorobiphenyls	HEXAPCB	T	ug/L			--	0.00168	0.0017	0.0084
Total Heptachlorobiphenyls	HEPTAPCB	T	ug/L			--	0.00103	0.00101	0.00549
Total Octachlorobiphenyls	OCTAPCB	T	ug/L			--	0.000239	0.000261	0.00134
Total Nonachlorobiphenyls	NONAPCB	T	ug/L			--	0.0000164	0.0000165	0.0000956
Total Decachlorobiphenyls	DECAPCB	T	ug/L			--	< 0.00000173 U	0.0000119	0.0000123
Dioxins/Furans									
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	T	ug/L			--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	T	ug/L			--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	T	ug/L	2.76E-08	GW-2	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	T	ug/L	2.76E-08	GW-2	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	T	ug/L	2.76E-08	GW-2	--	--	--	--
Polycyclic Aromatic Hydrocarbons									
1-Methylnaphthalene	90-12-0	T	ug/L			0.01 J	--	--	< 0.099 U
2-Methylnaphthalene	91-57-6	T	ug/L			< 0.01 U	--	--	< 0.099 U
Acenaphthene	83-32-9	T	ug/L	30	GW-2	< 0.01 U	--	--	< 0.099 U
Acenaphthylene	208-96-8	T	ug/L			< 0.01 U	--	--	< 0.099 U
Anthracene	120-12-7	T	ug/L	100	GW-2	< 0.01 U	--	--	< 0.099 U
Benzo(g,h,i)perylene	191-24-2	T	ug/L			0.023	--	--	0.021
Fluoranthene	206-44-0	T	ug/L	6	GW-2	0.03	--	--	0.1
Fluorene	86-73-7	T	ug/L	10	GW-2	0.004 J	--	--	< 0.099 U
Naphthalene	91-20-3	T	ug/L	1.4	GW-2	< 0.01 U	--	--	< 0.099 U
Phenanthrene	85-01-8	T	ug/L			0.01	--	--	< 0.099 U
Pyrene	129-00-0	T	ug/L	8	GW-2	0.036	--	--	< 0.099 U
Benz(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2	0.005 J	--	--	0.017
Benz(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2	0.007 J	--	--	0.016
Benz(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2	0.014	--	--	0.042
Benz(i)fluoranthene	205-82-3	T	ug/L			0.002 J	--	--	--
Benz(j,k)fluoranthene	Benz-ik-fluor	T	ug/L			--	--	--	0.011
Benz(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2	0.005 J	--	--	--
Chrysene	218-01-9	T	ug/L	0.016	GW-2	0.029	--	--	0.05
Dibenzo(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2	0.001 J	--	--	< 0.0099 U
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2	0.008 J	--	--	0.02
Total Benzofluoranthenes	TOTBFA	T	ug/L			0.021	--	--	--
Total HPAHs	T-HPAH	T	ug/L			0.158 J	--	--	0.277
Total LPAHs	T-LPAH	T	ug/L			0.0140 J	--	--	< 0.099 U

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	SWRX-MID	SWRX-POST	SWRX-POST	SWRX-POST
						09/19/2017	12/01/2016	01/01/2017	04/12/2017
						SPM-SWRX-MID-SW-20170919	SPM-SWRX-POST-SW-20161201	SPM-SWRX-POST-SW-20170101	SPM-SWRX-POST-SW-20170412
Metals									
Antimony	7440-36-0	T	ug/L	90	GW-2	--	--	--	--
Arsenic	7440-38-2	D	ug/L	0.14	GW-2	--	--	--	--
Arsenic	7440-38-2	T	ug/L	0.14	GW-2	--	--	--	--
Beryllium	7440-41-7	T	ug/L	75.6	GW-2	--	--	--	--
Cadmium	7440-43-9	D	ug/L	7.9	GW-2	--	--	--	--
Cadmium	7440-43-9	T	ug/L	7.9	GW-2	--	--	--	--
Chromium	7440-47-3	D	ug/L	27.4	GW-2	--	--	--	--
Chromium	7440-47-3	T	ug/L	27.4	GW-2	--	--	--	--
Copper	7440-50-8	D	ug/L	50	SPM Boatyard Permit	--	--	--	--
Copper	7440-50-8	T	ug/L	50	SPM Boatyard Permit	--	--	7.03	3.5
Lead	7439-92-1	D	ug/L	5.6	GW-2	--	--	--	--
Lead	7439-92-1	T	ug/L	5.6	GW-2	--	--	0.202	--
Mercury	7439-97-6	D	ug/L	0.025	GW-2	--	--	--	--
Mercury	7439-97-6	T	ug/L	0.025	GW-2	--	--	--	--
Nickel	7440-02-0	D	ug/L	8.2	GW-2	--	--	--	--
Nickel	7440-02-0	T	ug/L	8.2	GW-2	--	--	--	--
Selenium	7782-49-2	T	ug/L	71	GW-2	--	--	--	--
Silver	7440-22-4	T	ug/L	1.9	GW-2	--	--	--	--
Thallium	7440-28-0	T	ug/L	0.0619	GW-2	--	--	--	--
Zinc	7440-66-6	D	ug/L	85	SPM Boatyard Permit	--	--	--	--
Zinc	7440-66-6	T	ug/L	85	SPM Boatyard Permit	--	--	62.3	20
Butyl Tin Ions									
Dibutyltin Ion	14488-53-0	T	ug/L	--	--	--	--	--	--
Monobutyltin	78763-54-9	T	ug/L	--	--	--	--	--	--
Tetrabutyltin	1461-25-2	T	ug/L	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	T	ug/L	0.0074	GW-2	--	--	--	--
Polychlorinated Biphenyl Aroclors									
Aroclor 1016	12674-11-2	T	ug/L	--	--	< 0.049 U	< 0.0994 U	--	< 0.05 U
Aroclor 1221	11104-28-2	T	ug/L	--	--	< 0.049 U	< 0.0994 U	--	< 0.05 U
Aroclor 1232	11141-16-5	T	ug/L	--	--	< 0.049 U	< 0.0994 U	--	< 0.05 U
Aroclor 1242	53469-21-9	T	ug/L	--	--	< 0.049 U	< 0.0994 U	--	< 0.05 U
Aroclor 1248	12672-29-6	T	ug/L	--	--	< 0.049 U	< 0.0994 U	--	< 0.05 U
Aroclor 1254	11097-69-1	T	ug/L	--	--	< 0.049 U	< 0.0994 U	--	< 0.05 U
Aroclor 1260	11096-82-5	T	ug/L	--	--	< 0.049 U	< 0.0994 U	--	< 0.05 U
Aroclor 1262	37324-23-5	T	ug/L	--	--	--	--	--	--
Aroclor 1268	11100-14-4	T	ug/L	--	--	--	--	--	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2	< 0.172 UJ	< 0.348 UJ	--	< 0.175 UJ
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2	< 0.049 U	< 0.0994 U	--	< 0.05 U
Polychlorinated Biphenyl Congeners									
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2	0.0106	0.000323	--	0.000814
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2	0.00000109 J	3.00E-10 J	--	0.000000790 J
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2	0.00000110 J	0.000000748 J	--	0.000000114 J
Total Monochlorobiphenyls	MONOPCB	T	ug/L	--	--	0.00000857	< 0.00000202 U	--	< 0.00000035 U
Total Dichlorobiphenyls	DIPCB	T	ug/L	--	--	0.000197	< 0.00000525 U	--	0.0000113
Total Trichlorobiphenyls	TRIPCB	T	ug/L	--	--	0.000379	< 0.00000303 U	--	0.000017
Total Tetrachlorobiphenyls	TETRAPCB	T	ug/L	--	--	0.00129	0.0000464	--	0.0000636
Total Pentachlorobiphenyls	PENTAPCB	T	ug/L	--	--	0.0033	0.000107	--	0.000195
Total Hexachlorobiphenyls	HEXAPCB	T	ug/L	--	--	0.00315	0.000103	--	0.000272
Total Heptachlorobiphenyls	HEPTAPCB	T	ug/L	--	--	0.00179	0.0000481	--	0.000191
Total Octachlorobiphenyls	OCTAPCB	T	ug/L	--	--	0.000457	0.0000173	--	0.0000567
Total Nonachlorobiphenyls	NONAPCB	T	ug/L	--	--	0.0000326	0.00000117	--	0.00000687
Total Decachlorobiphenyls	DECAPCB	T	ug/L	--	--	0.00000479	< 0.000000679 U	--	0.00000104
Dioxins/Furans									
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	T	ug/L	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	T	ug/L	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	T	ug/L	2.76E-08	GW-2	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	T	ug/L	2.76E-08	GW-2	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	T	ug/L	2.76E-08	GW-2	--	--	--	--
Polycyclic Aromatic Hydrocarbons									
1-Methylnaphthalene	90-12-0	T	ug/L	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	T	ug/L	--	--	--	--	--	--
Acenaphthene	83-32-9	T	ug/L	30	GW-2	--	--	--	--
Acenaphthylene	208-96-8	T	ug/L	--	--	--	--	--	--
Anthracene	120-12-7	T	ug/L	100	GW-2	--	--	--	--
Benzo(g,h,i)perylene	191-24-2	T	ug/L	--	--	--	--	--	--
Fluoranthene	206-44-0	T	ug/L	6	GW-2	--	--	--	--
Fluorene	86-73-7	T	ug/L	10	GW-2	--	--	--	--
Naphthalene	91-20-3	T	ug/L	1.4	GW-2	--	--	--	--
Phenanthrene	85-01-8	T	ug/L	--	--	--	--	--	--
Pyrene	129-00-0	T	ug/L	8	GW-2	--	--	--	--
Benz(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2	--	--	--	--
Benz(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2	--	--	--	--
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2	--	--	--	--
Benzo(i)fluoranthene	205-82-3	T	ug/L	--	--	--	--	--	--
Benzo(j,k)fluoranthene	Benz-ik-fluor	T	ug/L	--	--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2	--	--	--	--
Chrysene	218-01-9	T	ug/L	0.016	GW-2	--	--	--	--
Dibenzo(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2	--	--	--	--
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2	--	--	--	--
Total Benzofluoranthenes	TOTBFA	T	ug/L	--	--	--	--	--	--
Total HPAHs	T-HPAH	T	ug/L	--	--	--	--	--	--
Total LPAHs	T-LPAH	T	ug/L	--	--	--	--	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Location Date Sample	SWRX-POST	SWRX-POST	SWRX-POST	SWRX-POST
						05/16/2017 SPM-SWRX-POST-SW-20170516	06/08/2017 SPM-SWRX-POST-SW-20170608	09/19/2017 SPM-SWRX-POST-SW-20170919	10/18/2017 SPM-NPDES-SW-20171018
				Screening Level Source					
Metals									
Antimony	7440-36-0	T	ug/L	90	GW-2	--	< 5.6 U	--	--
Arsenic	7440-38-2	D	ug/L	0.14	GW-2	--	--	--	--
Arsenic	7440-38-2	T	ug/L	0.14	GW-2	--	< 3.3 U	--	--
Beryllium	7440-41-7	T	ug/L	75.6	GW-2	--	< 11 U	--	--
Cadmium	7440-43-9	D	ug/L	7.9	GW-2	--	--	--	--
Cadmium	7440-43-9	T	ug/L	7.9	GW-2	--	< 4.4 U	--	--
Chromium	7440-47-3	D	ug/L	27.4	GW-2	--	--	--	--
Chromium	7440-47-3	T	ug/L	27.4	GW-2	--	< 11 U	--	--
Copper	7440-50-8	D	ug/L	50	SPM Boatyard Permit	--	--	--	--
Copper	7440-50-8	T	ug/L	50	SPM Boatyard Permit	17	42	--	20
Lead	7439-92-1	D	ug/L	5.6	GW-2	--	--	--	--
Lead	7439-92-1	T	ug/L	5.6	GW-2	--	2.4	--	--
Mercury	7439-97-6	D	ug/L	0.025	GW-2	--	--	--	--
Mercury	7439-97-6	T	ug/L	0.025	GW-2	--	< 0.5 U	--	--
Nickel	7440-02-0	D	ug/L	8.2	GW-2	--	--	--	--
Nickel	7440-02-0	T	ug/L	8.2	GW-2	--	< 22 U	--	--
Selenium	7782-49-2	T	ug/L	71	GW-2	--	< 5.6 U	--	--
Silver	7440-22-4	T	ug/L	1.9	GW-2	--	< 11 U	--	--
Thallium	7440-28-0	T	ug/L	0.0619	GW-2	--	< 5.6 U	--	--
Zinc	7440-66-6	D	ug/L	85	SPM Boatyard Permit	--	--	--	--
Zinc	7440-66-6	T	ug/L	85	SPM Boatyard Permit	53	72	--	53
Butyl Tin Ions									
Dibutyltin Ion	14488-53-0	T	ug/L	--	--	--	--	--	--
Monobutyltin	78763-54-9	T	ug/L	--	--	--	--	--	--
Tetrabutyltin	1461-25-2	T	ug/L	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	T	ug/L	0.0074	GW-2	--	--	--	--
Polychlorinated Biphenyl Aroclors									
Aroclor 1016	12674-11-2	T	ug/L	--	--	< 0.047 U	< 0.048 U	< 0.048 U	--
Aroclor 1221	11104-28-2	T	ug/L	--	--	< 0.047 U	< 0.048 U	< 0.048 U	--
Aroclor 1232	11141-16-5	T	ug/L	--	--	< 0.047 U	< 0.048 U	< 0.048 U	--
Aroclor 1242	53469-21-9	T	ug/L	--	--	< 0.047 U	< 0.048 U	< 0.048 U	--
Aroclor 1248	12672-29-6	T	ug/L	--	--	< 0.047 U	< 0.048 U	< 0.048 U	--
Aroclor 1254	11097-69-1	T	ug/L	--	--	< 0.047 U	< 0.048 U	< 0.048 U	--
Aroclor 1260	11096-82-5	T	ug/L	--	--	< 0.047 U	< 0.048 U	< 0.048 U	--
Aroclor 1262	37324-23-5	T	ug/L	--	--	--	--	--	--
Aroclor 1268	11100-14-4	T	ug/L	--	--	--	--	--	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2	< 0.165 UJ	< 0.168 UJ	< 0.168 UJ	--
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2	< 0.047 U	< 0.048 U	< 0.048 U	--
Polychlorinated Biphenyl Congeners									
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2	0.00105	0.00179	0.00154	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2	0.000000851 J	0.00000138 J	0.000000260 J	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2	0.00000119 J	0.00000173 J	0.00000326 J	--
Total Monochlorobiphenyls	MONOPCB	T	ug/L	--	--	< 0.0000124 U	< 0.0000171 U	< 0.00000828 UJ	--
Total Dichlorobiphenyls	DIPCB	T	ug/L	--	--	0.0000179	0.0000922	< 0.0000897 UJ	--
Total Trichlorobiphenyls	TRIPCB	T	ug/L	--	--	0.0000119	0.0000136	0.0000895 J	--
Total Tetrachlorobiphenyls	TETRAPCB	T	ug/L	--	--	0.0000816	0.000192	0.000691 J	--
Total Pentachlorobiphenyls	PENTAPCB	T	ug/L	--	--	0.000265	0.000424	0.000347 J	--
Total Hexachlorobiphenyls	HEXAPCB	T	ug/L	--	--	0.000361	0.000601	0.000554 J	--
Total Heptachlorobiphenyls	HEPTAPCB	T	ug/L	--	--	0.000247	0.000444	0.000415 J	--
Total Octachlorobiphenyls	OCTAPCB	T	ug/L	--	--	0.0000626	0.0000966	0.000129	--
Total Nonachlorobiphenyls	NONAPCB	T	ug/L	--	--	0.0000479	0.0000114	0.0000132	--
Total Decachlorobiphenyls	DECAPCB	T	ug/L	--	--	0.00000158	0.00000197	< 0.0000115 U	--
Dioxins/Furans									
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	T	ug/L	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	T	ug/L	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	T	ug/L	2.76E-08	GW-2	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	T	ug/L	2.76E-08	GW-2	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	T	ug/L	2.76E-08	GW-2	--	--	--	--
Polycyclic Aromatic Hydrocarbons									
1-Methylnaphthalene	90-12-0	T	ug/L	--	--	--	< 0.094 U	--	--
2-Methylnaphthalene	91-57-6	T	ug/L	--	--	--	0.17	--	--
Acenaphthene	83-32-9	T	ug/L	30	GW-2	--	< 0.094 U	--	--
Acenaphthylene	208-96-8	T	ug/L	--	--	--	< 0.094 U	--	--
Anthracene	120-12-7	T	ug/L	100	GW-2	--	< 0.094 U	--	--
Benzo(g,h,i)perylene	191-24-2	T	ug/L	--	--	--	< 0.0094 U	--	--
Fluoranthene	206-44-0	T	ug/L	6	GW-2	--	< 0.094 U	--	--
Fluorene	86-73-7	T	ug/L	10	GW-2	--	< 0.094 U	--	--
Naphthalene	91-20-3	T	ug/L	1.4	GW-2	--	< 0.094 U	--	--
Phenanthrene	85-01-8	T	ug/L	--	--	--	< 0.094 U	--	--
Pyrene	129-00-0	T	ug/L	8	GW-2	--	< 0.094 U	--	--
Benz(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2	--	< 0.0094 U	--	--
Benzo(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2	--	< 0.0094 U	--	--
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2	--	< 0.0094 U	--	--
Benzo(i)fluoranthene	205-82-3	T	ug/L	--	--	--	--	--	--
Benzo(j,k)fluoranthene	Benz-ik-fluor	T	ug/L	--	--	--	< 0.0094 U	--	--
Benzo(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2	--	--	--	--
Chrysene	218-01-9	T	ug/L	0.016	GW-2	--	< 0.0094 U	--	--
Dibenzo(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2	--	< 0.0094 U	--	--
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2	--	< 0.0094 U	--	--
Total Benzofluoranthenes	TOTBFA	T	ug/L	--	--	--	--	--	--
Total HPAHs	T-HPAH	T	ug/L	--	--	--	< 0.094 U	--	--
Total LPAHs	T-LPAH	T	ug/L	--	--	--	< 0.094 U	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	SWRX-POST	SWRX-POST	SWRX-POST	SWRX-POST
						10/18/2017	11/03/2017	11/03/2017	01/05/2018
						SPM-SWRX-POST-SW-20171018	SPM-NPDES-SW-20171103	SPM-SWRX-POST-SW-20171103	SPM-NPDES-SW-20180105
Metals									
Antimony	7440-36-0	T	ug/L	90	GW-2	--	--	--	--
Arsenic	7440-38-2	D	ug/L	0.14	GW-2	--	--	--	--
Arsenic	7440-38-2	T	ug/L	0.14	GW-2	--	--	--	--
Beryllium	7440-41-7	T	ug/L	75.6	GW-2	--	--	--	--
Cadmium	7440-43-9	D	ug/L	7.9	GW-2	--	--	--	--
Cadmium	7440-43-9	T	ug/L	7.9	GW-2	--	--	--	--
Chromium	7440-47-3	D	ug/L	27.4	GW-2	--	--	--	--
Chromium	7440-47-3	T	ug/L	27.4	GW-2	--	--	--	--
Copper	7440-50-8	D	ug/L	50	SPM Boatyard Permit	--	--	--	--
Copper	7440-50-8	T	ug/L	50	SPM Boatyard Permit	--	13	--	7
Lead	7439-92-1	D	ug/L	5.6	GW-2	--	--	--	--
Lead	7439-92-1	T	ug/L	5.6	GW-2	--	--	--	--
Mercury	7439-97-6	D	ug/L	0.025	GW-2	--	--	--	--
Mercury	7439-97-6	T	ug/L	0.025	GW-2	--	--	--	--
Nickel	7440-02-0	D	ug/L	8.2	GW-2	--	--	--	--
Nickel	7440-02-0	T	ug/L	8.2	GW-2	--	--	--	--
Selenium	7782-49-2	T	ug/L	71	GW-2	--	--	--	--
Silver	7440-22-4	T	ug/L	1.9	GW-2	--	--	--	--
Thallium	7440-28-0	T	ug/L	0.0619	GW-2	--	--	--	--
Zinc	7440-66-6	D	ug/L	85	SPM Boatyard Permit	--	--	--	--
Zinc	7440-66-6	T	ug/L	85	SPM Boatyard Permit	--	72	--	300
Butyl Tin Ions									
Dibutyltin Ion	14488-53-0	T	ug/L			--	--	--	--
Monobutyltin	78763-54-9	T	ug/L			--	--	--	--
Tetrabutyltin	1461-25-2	T	ug/L			--	--	--	--
Tributyltin Ion	36643-28-4	T	ug/L	0.0074	GW-2	--	--	--	--
Polychlorinated Biphenyl Aroclors									
Aroclor 1016	12674-11-2	T	ug/L			< 0.047 U	--	< 0.048 U	--
Aroclor 1221	11104-28-2	T	ug/L			< 0.047 U	--	< 0.048 U	--
Aroclor 1232	11141-16-5	T	ug/L			< 0.047 U	--	< 0.048 U	--
Aroclor 1242	53469-21-9	T	ug/L			< 0.047 U	--	< 0.048 U	--
Aroclor 1248	12672-29-6	T	ug/L			< 0.047 U	--	< 0.048 U	--
Aroclor 1254	11097-69-1	T	ug/L			< 0.047 U	--	< 0.048 U	--
Aroclor 1260	11096-82-5	T	ug/L			< 0.047 U	--	< 0.048 U	--
Aroclor 1262	37324-23-5	T	ug/L			--	--	--	--
Aroclor 1268	11100-14-4	T	ug/L			--	--	--	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2	< 0.165 UJ	--	< 0.168 UJ	--
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2	< 0.047 UJ	--	< 0.048 UJ	--
Polychlorinated Biphenyl Congeners									
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2	0.00362	--	0.000924	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2	0.00000366 J	--	0.0000000193 J	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2	0.00000439 J	--	0.000000312 J	--
Total Monochlorobiphenyls	MONOPCB	T	ug/L			< 0.0000252 U	--	< 0.00000212 U	--
Total Dichlorobiphenyls	DIPCB	T	ug/L			0.0000277	--	0.00000756	--
Total Trichlorobiphenyls	TRIPCB	T	ug/L			0.000035	--	< 0.0000018 U	--
Total Tetrachlorobiphenyls	TETRAPCB	T	ug/L			0.000252	--	0.000611	--
Total Pentachlorobiphenyls	PENTAPCB	T	ug/L			0.000972	--	0.000255	--
Total Hexachlorobiphenyls	HEXAPCB	T	ug/L			0.00122	--	0.000321	--
Total Heptachlorobiphenyls	HEPTAPCB	T	ug/L			0.000879	--	0.00022	--
Total Octachlorobiphenyls	OCTAPCB	T	ug/L			0.000219	--	0.0000558	--
Total Nonachlorobiphenyls	NONAPCB	T	ug/L			0.0000144	--	0.00000408	--
Total Decachlorobiphenyls	DECAPCB	T	ug/L			< 0.00000176 U	--	< 0.00000151 U	--
Dioxins/Furans									
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	T	ug/L			--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	T	ug/L			--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	T	ug/L	2.76E-08	GW-2	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	T	ug/L	2.76E-08	GW-2	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	T	ug/L	2.76E-08	GW-2	--	--	--	--
Polycyclic Aromatic Hydrocarbons									
1-Methylnaphthalene	90-12-0	T	ug/L			--	--	--	--
2-Methylnaphthalene	91-57-6	T	ug/L			--	--	--	--
Acenaphthene	83-32-9	T	ug/L	30	GW-2	--	--	--	--
Acenaphthylene	208-96-8	T	ug/L			--	--	--	--
Anthracene	120-12-7	T	ug/L	100	GW-2	--	--	--	--
Benzo(g,h,i)perylene	191-24-2	T	ug/L			--	--	--	--
Fluoranthene	206-44-0	T	ug/L	6	GW-2	--	--	--	--
Fluorene	86-73-7	T	ug/L	10	GW-2	--	--	--	--
Naphthalene	91-20-3	T	ug/L	1.4	GW-2	--	--	--	--
Phenanthrene	85-01-8	T	ug/L			--	--	--	--
Pyrene	129-00-0	T	ug/L	8	GW-2	--	--	--	--
Benz(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2	--	--	--	--
Benz(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2	--	--	--	--
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2	--	--	--	--
Benzo(i)fluoranthene	205-82-3	T	ug/L			--	--	--	--
Benzo(j,k)fluoranthene	Benz-ik-fluor	T	ug/L			--	--	--	--
Benzo(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2	--	--	--	--
Chrysene	218-01-9	T	ug/L	0.016	GW-2	--	--	--	--
Dibenzo(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2	--	--	--	--
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2	--	--	--	--
Total Benzofluoranthenes	TOTBFA	T	ug/L			--	--	--	--
Total HPAHs	T-HPAH	T	ug/L			--	--	--	--
Total LPAHs	T-LPAH	T	ug/L			--	--	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	SWRX-POST	SWRX-POST	SWRX-POST	SWRX-POST	SWRX-POST
						01/23/2018 SPM-NPDES-SW-20180123	04/10/2018 SPM-NPDES-SW-20180410	10/05/2018 SPM-NPDES-SW-20181005	11/02/2018 SPM-NPDES-SW-20181102	01/03/2019 SPM-NPDES-SW-20190103
Metals										
Antimony	7440-36-0	T	ug/L	90	GW-2	--	--	--	--	--
Arsenic	7440-38-2	D	ug/L	0.14	GW-2	--	--	--	--	--
Arsenic	7440-38-2	T	ug/L	0.14	GW-2	--	--	--	--	--
Beryllium	7440-41-7	T	ug/L	75.6	GW-2	--	--	--	--	--
Cadmium	7440-43-9	D	ug/L	7.9	GW-2	--	--	--	--	--
Cadmium	7440-43-9	T	ug/L	7.9	GW-2	--	--	--	--	--
Chromium	7440-47-3	D	ug/L	27.4	GW-2	--	--	--	--	--
Chromium	7440-47-3	T	ug/L	27.4	GW-2	--	--	--	--	--
Copper	7440-50-8	D	ug/L	50	SPM Boatyard Permit	--	--	--	--	--
Copper	7440-50-8	T	ug/L	50	SPM Boatyard Permit	6.2	7.3	14	3.1	4.2
Lead	7439-92-1	D	ug/L	5.6	GW-2	--	--	--	--	--
Lead	7439-92-1	T	ug/L	5.6	GW-2	--	--	--	--	--
Mercury	7439-97-6	D	ug/L	0.025	GW-2	--	--	--	--	--
Mercury	7439-97-6	T	ug/L	0.025	GW-2	--	--	--	--	--
Nickel	7440-02-0	D	ug/L	8.2	GW-2	--	--	--	--	--
Nickel	7440-02-0	T	ug/L	8.2	GW-2	--	--	--	--	--
Selenium	7782-49-2	T	ug/L	71	GW-2	--	--	--	--	--
Silver	7440-22-4	T	ug/L	1.9	GW-2	--	--	--	--	--
Thallium	7440-28-0	T	ug/L	0.0619	GW-2	--	--	--	--	--
Zinc	7440-66-6	D	ug/L	85	SPM Boatyard Permit	--	--	--	--	--
Zinc	7440-66-6	T	ug/L	85	SPM Boatyard Permit	110	28	27	9.8	9.8
Butyl Tin Ions										
Dibutyltin Ion	14488-53-0	T	ug/L	--	--	--	--	--	--	--
Monobutyltin	78763-54-9	T	ug/L	--	--	--	--	--	--	--
Tetrabutyltin	1461-25-2	T	ug/L	--	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	T	ug/L	0.0074	GW-2	--	--	--	--	--
Polychlorinated Biphenyl Aroclors										
Aroclor 1016	12674-11-2	T	ug/L	--	--	--	--	--	--	--
Aroclor 1221	11104-28-2	T	ug/L	--	--	--	--	--	--	--
Aroclor 1232	11141-16-5	T	ug/L	--	--	--	--	--	--	--
Aroclor 1242	53469-21-9	T	ug/L	--	--	--	--	--	--	--
Aroclor 1248	12672-29-6	T	ug/L	--	--	--	--	--	--	--
Aroclor 1254	11097-69-1	T	ug/L	--	--	--	--	--	--	--
Aroclor 1260	11096-82-5	T	ug/L	--	--	--	--	--	--	--
Aroclor 1262	37324-23-5	T	ug/L	--	--	--	--	--	--	--
Aroclor 1268	11100-14-4	T	ug/L	--	--	--	--	--	--	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2	--	--	--	--	--
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2	--	--	--	--	--
Polychlorinated Biphenyl Congeners										
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2	--	--	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2	--	--	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2	--	--	--	--	--
Total Monochlorobiphenyls	MONOPCB	T	ug/L	--	--	--	--	--	--	--
Total Dichlorobiphenyls	DIPCB	T	ug/L	--	--	--	--	--	--	--
Total Trichlorobiphenyls	TRIPCB	T	ug/L	--	--	--	--	--	--	--
Total Tetrachlorobiphenyls	TETRAPCB	T	ug/L	--	--	--	--	--	--	--
Total Pentachlorobiphenyls	PENTAPCB	T	ug/L	--	--	--	--	--	--	--
Total Hexachlorobiphenyls	HEXAPCB	T	ug/L	--	--	--	--	--	--	--
Total Heptachlorobiphenyls	HEPTAPCB	T	ug/L	--	--	--	--	--	--	--
Total Octachlorobiphenyls	OCTAPCB	T	ug/L	--	--	--	--	--	--	--
Total Nonachlorobiphenyls	NONAPCB	T	ug/L	--	--	--	--	--	--	--
Total Decachlorobiphenyls	DECAPCB	T	ug/L	--	--	--	--	--	--	--
Dioxins/Furans										
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	T	ug/L	--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	T	ug/L	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	T	ug/L	2.76E-08	GW-2	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	T	ug/L	2.76E-08	GW-2	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	T	ug/L	2.76E-08	GW-2	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons										
1-Methylnaphthalene	90-12-0	T	ug/L	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	T	ug/L	--	--	--	--	--	--	--
Acenaphthene	83-32-9	T	ug/L	30	GW-2	--	--	--	--	--
Acenaphthylene	208-96-8	T	ug/L	--	--	--	--	--	--	--
Anthracene	120-12-7	T	ug/L	100	GW-2	--	--	--	--	--
Benzo(g,h,i)perylene	191-24-2	T	ug/L	--	--	--	--	--	--	--
Fluoranthene	206-44-0	T	ug/L	6	GW-2	--	--	--	--	--
Fluorene	86-73-7	T	ug/L	10	GW-2	--	--	--	--	--
Naphthalene	91-20-3	T	ug/L	1.4	GW-2	--	--	--	--	--
Phenanthrene	85-01-8	T	ug/L	--	--	--	--	--	--	--
Pyrene	129-00-0	T	ug/L	8	GW-2	--	--	--	--	--
Benz(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2	--	--	--	--	--
Benz(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2	--	--	--	--	--
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2	--	--	--	--	--
Benzo(i)fluoranthene	205-82-3	T	ug/L	--	--	--	--	--	--	--
Benzo(j,k)fluoranthene	Benz-ik-fluor	T	ug/L	--	--	--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2	--	--	--	--	--
Chrysene	218-01-9	T	ug/L	0.016	GW-2	--	--	--	--	--
Dibenzo(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2	--	--	--	--	--
Total Benzofluoranthenes	TOTBFA	T	ug/L	--	--	--	--	--	--	--
Total HPAHs	T-HPAH	T	ug/L	--	--	--	--	--	--	--
Total LPAHs	T-LPAH	T	ug/L	--	--	--	--	--	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	SWRX-POST	SWRX-POST	SWRX-POST	SWRX-POST	SWRX-POST
						04/05/2019 SPM-NPDES-SW-20190405	05/14/2019 SPM-NPDES-SW-20190514	10/16/2019 SPM-NPDES-SW-20191016	12/12/2019 SPM-NPDES-SW-20191212	01/10/2020 SPM-NPDES-SW-20200110
Metals										
Antimony	7440-36-0	T	ug/L	90	GW-2	--	--	--	--	--
Arsenic	7440-38-2	D	ug/L	0.14	GW-2	--	--	--	--	--
Arsenic	7440-38-2	T	ug/L	0.14	GW-2	--	--	--	--	--
Beryllium	7440-41-7	T	ug/L	75.6	GW-2	--	--	--	--	--
Cadmium	7440-43-9	D	ug/L	7.9	GW-2	--	--	--	--	--
Cadmium	7440-43-9	T	ug/L	7.9	GW-2	--	--	--	--	--
Chromium	7440-47-3	D	ug/L	27.4	GW-2	--	--	--	--	--
Chromium	7440-47-3	T	ug/L	27.4	GW-2	--	--	--	--	--
Copper	7440-50-8	D	ug/L	50	SPM Boatyard Permit	--	--	--	--	--
Copper	7440-50-8	T	ug/L	50	SPM Boatyard Permit	44	150	15	5.2	6.8
Lead	7439-92-1	D	ug/L	5.6	GW-2	--	--	--	--	--
Lead	7439-92-1	T	ug/L	5.6	GW-2	--	--	--	--	--
Mercury	7439-97-6	D	ug/L	0.025	GW-2	--	--	--	--	--
Mercury	7439-97-6	T	ug/L	0.025	GW-2	--	--	--	--	--
Nickel	7440-02-0	D	ug/L	8.2	GW-2	--	--	--	--	--
Nickel	7440-02-0	T	ug/L	8.2	GW-2	--	--	--	--	--
Selenium	7782-49-2	T	ug/L	71	GW-2	--	--	--	--	--
Silver	7440-22-4	T	ug/L	1.9	GW-2	--	--	--	--	--
Thallium	7440-28-0	T	ug/L	0.0619	GW-2	--	--	--	--	--
Zinc	7440-66-6	D	ug/L	85	SPM Boatyard Permit	--	--	--	--	--
Zinc	7440-66-6	T	ug/L	85	SPM Boatyard Permit	17	36	28	18	18
Butyl Tin Ions										
Dibutyltin Ion	14488-53-0	T	ug/L	--	--	--	--	--	--	--
Monobutyltin	78763-54-9	T	ug/L	--	--	--	--	--	--	--
Tetrabutyltin	1461-25-2	T	ug/L	--	--	--	--	--	--	--
Tributyltin Ion	36643-28-4	T	ug/L	0.0074	GW-2	--	--	--	--	--
Polychlorinated Biphenyl Aroclors										
Aroclor 1016	12674-11-2	T	ug/L	--	--	--	--	--	--	--
Aroclor 1221	11104-28-2	T	ug/L	--	--	--	--	--	--	--
Aroclor 1232	11141-16-5	T	ug/L	--	--	--	--	--	--	--
Aroclor 1242	53469-21-9	T	ug/L	--	--	--	--	--	--	--
Aroclor 1248	12672-29-6	T	ug/L	--	--	--	--	--	--	--
Aroclor 1254	11097-69-1	T	ug/L	--	--	--	--	--	--	--
Aroclor 1260	11096-82-5	T	ug/L	--	--	--	--	--	--	--
Aroclor 1262	37324-23-5	T	ug/L	--	--	--	--	--	--	--
Aroclor 1268	11100-14-4	T	ug/L	--	--	--	--	--	--	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2	--	--	--	--	--
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2	--	--	--	--	--
Polychlorinated Biphenyl Congeners										
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2	--	--	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2	--	--	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2	--	--	--	--	--
Total Monochlorobiphenyls	MONOPCB	T	ug/L	--	--	--	--	--	--	--
Total Dichlorobiphenyls	DIPCB	T	ug/L	--	--	--	--	--	--	--
Total Trichlorobiphenyls	TRIPCB	T	ug/L	--	--	--	--	--	--	--
Total Tetrachlorobiphenyls	TETRAPCB	T	ug/L	--	--	--	--	--	--	--
Total Pentachlorobiphenyls	PENTAPCB	T	ug/L	--	--	--	--	--	--	--
Total Hexachlorobiphenyls	HEXAPCB	T	ug/L	--	--	--	--	--	--	--
Total Heptachlorobiphenyls	HEPTAPCB	T	ug/L	--	--	--	--	--	--	--
Total Octachlorobiphenyls	OCTAPCB	T	ug/L	--	--	--	--	--	--	--
Total Nonachlorobiphenyls	NONAPCB	T	ug/L	--	--	--	--	--	--	--
Total Decachlorobiphenyls	DECAPCB	T	ug/L	--	--	--	--	--	--	--
Dioxins/Furans										
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	T	ug/L	--	--	--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	T	ug/L	--	--	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	T	ug/L	2.76E-08	GW-2	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	T	ug/L	2.76E-08	GW-2	--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	T	ug/L	2.76E-08	GW-2	--	--	--	--	--
Polycyclic Aromatic Hydrocarbons										
1-Methylnaphthalene	90-12-0	T	ug/L	--	--	--	--	--	--	--
2-Methylnaphthalene	91-57-6	T	ug/L	--	--	--	--	--	--	--
Acenaphthene	83-32-9	T	ug/L	30	GW-2	--	--	--	--	--
Acenaphthylene	208-96-8	T	ug/L	--	--	--	--	--	--	--
Anthracene	120-12-7	T	ug/L	100	GW-2	--	--	--	--	--
Benzo(g,h,i)perylene	191-24-2	T	ug/L	--	--	--	--	--	--	--
Fluoranthene	206-44-0	T	ug/L	6	GW-2	--	--	--	--	--
Fluorene	86-73-7	T	ug/L	10	GW-2	--	--	--	--	--
Naphthalene	91-20-3	T	ug/L	1.4	GW-2	--	--	--	--	--
Phenanthrene	85-01-8	T	ug/L	--	--	--	--	--	--	--
Pyrene	129-00-0	T	ug/L	8	GW-2	--	--	--	--	--
Benz(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2	--	--	--	--	--
Benz(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2	--	--	--	--	--
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2	--	--	--	--	--
Benzo(i)fluoranthene	205-82-3	T	ug/L	--	--	--	--	--	--	--
Benzo(j,k)fluoranthene	Benz-ik-fluor	T	ug/L	--	--	--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2	--	--	--	--	--
Chrysene	218-01-9	T	ug/L	0.016	GW-2	--	--	--	--	--
Dibenzo(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2	--	--	--	--	--
Total Benzofluoranthenes	TOTBFA	T	ug/L	--	--	--	--	--	--	--
Total HPAHs	T-HPAH	T	ug/L	--	--	--	--	--	--	--
Total LPAHs	T-LPAH	T	ug/L	--	--	--	--	--	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	SWRX-POST	SWRX-POST	SWRX-POST	SWRX-POST
						04/22/2020	05/17/2020	10/10/2020	11/03/2020
						SPM-SWRX-POST-SW-20200422	SPM-NPDES-SW-20200517	SPM-NPDES-SW-20201010	SPM-NPDES-SW-20201103
Metals									
Antimony	7440-36-0	T	ug/L	90	GW-2	--	--	--	--
Arsenic	7440-38-2	D	ug/L	0.14	GW-2	--	--	--	--
Arsenic	7440-38-2	T	ug/L	0.14	GW-2	--	--	--	--
Beryllium	7440-41-7	T	ug/L	75.6	GW-2	--	--	--	--
Cadmium	7440-43-9	D	ug/L	7.9	GW-2	--	--	--	--
Cadmium	7440-43-9	T	ug/L	7.9	GW-2	--	--	--	--
Chromium	7440-47-3	D	ug/L	27.4	GW-2	--	--	--	--
Chromium	7440-47-3	T	ug/L	27.4	GW-2	--	--	--	--
Copper	7440-50-8	D	ug/L	50	SPM Boatyard Permit	--	--	--	--
Copper	7440-50-8	T	ug/L	50	SPM Boatyard Permit	58	8.3	9.2	18
Lead	7439-92-1	D	ug/L	5.6	GW-2	--	--	--	--
Lead	7439-92-1	T	ug/L	5.6	GW-2	--	--	--	--
Mercury	7439-97-6	D	ug/L	0.025	GW-2	--	--	--	--
Mercury	7439-97-6	T	ug/L	0.025	GW-2	--	--	--	--
Nickel	7440-02-0	D	ug/L	8.2	GW-2	--	--	--	--
Nickel	7440-02-0	T	ug/L	8.2	GW-2	--	--	--	--
Selenium	7782-49-2	T	ug/L	71	GW-2	--	--	--	--
Silver	7440-22-4	T	ug/L	1.9	GW-2	--	--	--	--
Thallium	7440-28-0	T	ug/L	0.0619	GW-2	--	--	--	--
Zinc	7440-66-6	D	ug/L	85	SPM Boatyard Permit	--	--	--	--
Zinc	7440-66-6	T	ug/L	85	SPM Boatyard Permit	34	31	27	18
Butyl Tin Ions									
Dibutyltin Ion	14488-53-0	T	ug/L			--	--	--	--
Monobutyltin	78763-54-9	T	ug/L			--	--	--	--
Tetrabutyltin	1461-25-2	T	ug/L			--	--	--	--
Tributyltin Ion	36643-28-4	T	ug/L	0.0074	GW-2	--	--	--	--
Polychlorinated Biphenyl Aroclors									
Aroclor 1016	12674-11-2	T	ug/L			--	--	--	--
Aroclor 1221	11104-28-2	T	ug/L			--	--	--	--
Aroclor 1232	11141-16-5	T	ug/L			--	--	--	--
Aroclor 1242	53469-21-9	T	ug/L			--	--	--	--
Aroclor 1248	12672-29-6	T	ug/L			--	--	--	--
Aroclor 1254	11097-69-1	T	ug/L			--	--	--	--
Aroclor 1260	11096-82-5	T	ug/L			--	--	--	--
Aroclor 1262	37324-23-5	T	ug/L			--	--	--	--
Aroclor 1268	11100-14-4	T	ug/L			--	--	--	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2	--	--	--	--
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2	--	--	--	--
Polychlorinated Biphenyl Congeners									
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2	--	--	--	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2	--	--	--	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2	--	--	--	--
Total Monochlorobiphenyls	MONOPCB	T	ug/L			--	--	--	--
Total Dichlorobiphenyls	DIPCB	T	ug/L			--	--	--	--
Total Trichlorobiphenyls	TRIPCB	T	ug/L			--	--	--	--
Total Tetrachlorobiphenyls	TETRAPCB	T	ug/L			--	--	--	--
Total Pentachlorobiphenyls	PENTAPCB	T	ug/L			--	--	--	--
Total Hexachlorobiphenyls	HEXAPCB	T	ug/L			--	--	--	--
Total Heptachlorobiphenyls	HEPTAPCB	T	ug/L			--	--	--	--
Total Octachlorobiphenyls	OCTAPCB	T	ug/L			--	--	--	--
Total Nonachlorobiphenyls	NONAPCB	T	ug/L			--	--	--	--
Total Decachlorobiphenyls	DECAPCB	T	ug/L			--	--	--	--
Dioxins/Furans									
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	T	ug/L			--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	T	ug/L			--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	T	ug/L	2.76E-08	GW-2	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	T	ug/L	2.76E-08	GW-2	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	T	ug/L	2.76E-08	GW-2	--	--	--	--
Polycyclic Aromatic Hydrocarbons									
1-Methylnaphthalene	90-12-0	T	ug/L			--	--	--	--
2-Methylnaphthalene	91-57-6	T	ug/L			--	--	--	--
Acenaphthene	83-32-9	T	ug/L	30	GW-2	--	--	--	--
Acenaphthylene	208-96-8	T	ug/L			--	--	--	--
Anthracene	120-12-7	T	ug/L	100	GW-2	--	--	--	--
Benzo(g,h,i)perylene	191-24-2	T	ug/L			--	--	--	--
Fluoranthene	206-44-0	T	ug/L	6	GW-2	--	--	--	--
Fluorene	86-73-7	T	ug/L	10	GW-2	--	--	--	--
Naphthalene	91-20-3	T	ug/L	1.4	GW-2	--	--	--	--
Phenanthrene	85-01-8	T	ug/L			--	--	--	--
Pyrene	129-00-0	T	ug/L	8	GW-2	--	--	--	--
Benz(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2	--	--	--	--
Benzo(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2	--	--	--	--
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2	--	--	--	--
Benzo(i)fluoranthene	205-82-3	T	ug/L			--	--	--	--
Benzo(j,k)fluoranthene	Benz-ik-fluor	T	ug/L			--	--	--	--
Benzo(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2	--	--	--	--
Chrysene	218-01-9	T	ug/L	0.016	GW-2	--	--	--	--
Dibenzo(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2	--	--	--	--
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2	--	--	--	--
Total Benzo(a)fluoranthenes	TOTBFA	T	ug/L			--	--	--	--
Total HPAHs	T-HPAH	T	ug/L			--	--	--	--
Total LPAHs	T-LPAH	T	ug/L			--	--	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location	SWRX-POST	SWRX-POST	SWRX-POST	SWRX-PRE	SWRX-PRE
						Date	01/28/2021	04/24/2021	05/27/2021	10/08/2014	04/12/2017
						Sample	SPM-NPDES-SW-20210128	SPM-NPDES-SW-20210424	SPM-NPDES-SW-20210527	SP-OWS-01 (WATER)	SPM-SWRX-PRE-SW-20170412
Metals											
Antimony	7440-36-0	T	ug/L	90	GW-2		--	--	--	0.31 J	--
Arsenic	7440-38-2	D	ug/L	0.14	GW-2		--	--	--	--	--
Arsenic	7440-38-2	T	ug/L	0.14	GW-2		--	--	--	2	--
Beryllium	7440-41-7	T	ug/L	75.6	GW-2		--	--	--	< 0.4 U	--
Cadmium	7440-43-9	D	ug/L	7.9	GW-2		--	--	--	--	--
Cadmium	7440-43-9	T	ug/L	7.9	GW-2		--	--	--	0.27 J	--
Chromium	7440-47-3	D	ug/L	27.4	GW-2		--	--	--	--	--
Chromium	7440-47-3	T	ug/L	27.4	GW-2		--	--	--	0.52	--
Copper	7440-50-8	D	ug/L	50	SPM Boatyard Permit		--	--	--	--	--
Copper	7440-50-8	T	ug/L	50	SPM Boatyard Permit		7.4	130	34	88	--
Lead	7439-92-1	D	ug/L	5.6	GW-2		--	--	--	--	--
Lead	7439-92-1	T	ug/L	5.6	GW-2		--	3.4	0.86	3.6	--
Mercury	7439-97-6	D	ug/L	0.025	GW-2		--	--	--	--	--
Mercury	7439-97-6	T	ug/L	0.025	GW-2		--	--	--	< 0.2 U	--
Nickel	7440-02-0	D	ug/L	8.2	GW-2		--	--	--	--	--
Nickel	7440-02-0	T	ug/L	8.2	GW-2		--	--	--	1.3 J	--
Selenium	7782-49-2	T	ug/L	71	GW-2		--	--	--	< 1 U	--
Silver	7440-22-4	T	ug/L	1.9	GW-2		--	--	--	< 0.4 U	--
Thallium	7440-28-0	T	ug/L	0.0619	GW-2		--	--	--	< 1 U	--
Zinc	7440-66-6	D	ug/L	85	SPM Boatyard Permit		--	--	--	--	--
Zinc	7440-66-6	T	ug/L	85	SPM Boatyard Permit		26	98	74	92	--
Butyl Tin Ions											
Dibutyltin Ion	14488-53-0	T	ug/L				--	--	--	--	--
Monobutyltin	78763-54-9	T	ug/L				--	--	--	--	--
Tetrabutyltin	1461-25-2	T	ug/L				--	--	--	--	--
Tributyltin Ion	36643-28-4	T	ug/L	0.0074	GW-2		--	--	--	--	--
Polychlorinated Biphenyl Aroclors											
Aroclor 1016	12674-11-2	T	ug/L				--	--	--	--	< 0.054 U
Aroclor 1221	11104-28-2	T	ug/L				--	--	--	--	< 0.054 U
Aroclor 1232	11141-16-5	T	ug/L				--	--	--	--	< 0.054 U
Aroclor 1242	53469-21-9	T	ug/L				--	--	--	--	< 0.054 U
Aroclor 1248	12672-29-6	T	ug/L				--	--	--	--	< 0.054 U
Aroclor 1254	11097-69-1	T	ug/L				--	--	--	--	< 0.054 U
Aroclor 1260	11096-82-5	T	ug/L				--	--	--	--	< 0.054 U
Aroclor 1262	37324-23-5	T	ug/L				--	--	--	--	--
Aroclor 1268	11100-14-4	T	ug/L				--	--	--	--	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2		--	--	--	--	< 0.189 UJ
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2		--	--	--	--	< 0.054 UJ
Polychlorinated Biphenyl Congeners											
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2		--	--	--	0.014 J	0.0137
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2		--	--	--	0.00000658	0.0000134
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2		--	--	--	0.00000705	0.0000138
Total Monochlorobiphenyls	MONOPCB	T	ug/L				--	--	--	0.0000227 J	0.0000257
Total Dichlorobiphenyls	DIPCB	T	ug/L				--	--	--	0.0000823 J	0.000325
Total Trichlorobiphenyls	TRIPCB	T	ug/L				--	--	--	0.000431 J	0.000692
Total Tetrachlorobiphenyls	TETRAPCB	T	ug/L				--	--	--	0.00196 J	0.00225
Total Pentachlorobiphenyls	PENTAPCB	T	ug/L				--	--	--	0.00534 J	0.00399
Total Hexachlorobiphenyls	HEXAPCB	T	ug/L				--	--	--	0.00406 J	0.00364
Total Heptachlorobiphenyls	HEPTAPCB	T	ug/L				--	--	--	0.00172	0.00222
Total Octachlorobiphenyls	OCTAPCB	T	ug/L				--	--	--	0.000359 J	0.000506
Total Nonachlorobiphenyls	NONAPCB	T	ug/L				--	--	--	0.000264 J	0.0000449
Total Decachlorobiphenyls	DECAPCB	T	ug/L				--	--	--	0.0000656	0.0000658
Dioxins/Furans											
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	T	ug/L				--	--	--	0.00000599 J	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	T	ug/L				--	--	--	0.00000104 J	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	T	ug/L	2.76E-08	GW-2		--	--	--	0.00000414 J	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	T	ug/L	2.76E-08	GW-2		--	--	--	0.00000703 J	--
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	T	ug/L	2.76E-08	GW-2		--	--	--	0.00000992 J	--
Polycyclic Aromatic Hydrocarbons											
1-Methylnaphthalene	90-12-0	T	ug/L				--	--	--	< 0.057 U	--
2-Methylnaphthalene	91-57-6	T	ug/L				--	--	--	0.042 J	--
Acenaphthene	83-32-9	T	ug/L	30	GW-2		--	--	--	< 0.095 U	--
Acenaphthylene	208-96-8	T	ug/L				--	--	--	< 0.076 U	--
Anthracene	120-12-7	T	ug/L	100	GW-2		--	--	--	< 0.038 U	--
Benzo(g,h,i)perylene	191-24-2	T	ug/L				--	--	--	< 0.057 UJ	--
Fluoranthene	206-44-0	T	ug/L	6	GW-2		--	--	--	0.1	--
Fluorene	86-73-7	T	ug/L	10	GW-2		--	--	--	0.033 J	--
Naphthalene	91-20-3	T	ug/L	1.4	GW-2		--	--	--	< 0.38 U	--
Phenanthrene	85-01-8	T	ug/L				--	--	--	0.11	--
Pyrene	129-00-0	T	ug/L	8	GW-2		--	--	--	0.061	--
Benz(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2		--	--	--	< 0.057 U	--
Benzo(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2		--	--	--	< 0.038 U	--
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2		--	--	--	0.033 J	--
Benzo(i)fluoranthene	205-82-3	T	ug/L				--	--	--	--	--
Benzo(j,k)fluoranthene	Benz-ik-fluor	T	ug/L				--	--	--	--	--
Benzo(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2		--	--	--	< 0.057 U	--
Chrysene	218-01-9	T	ug/L	0.016	GW-2		--	--	--	0.039	--
Dibenzo(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2		--	--	--	< 0.057 U	--
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2		--	--	--	< 0.057 UJ	--
Total Benzo(a)fluoranthenes	TOTBFA	T	ug/L				--	--	--	0.033 J	--
Total HPAHs	T-HPAH	T	ug/L				--	--	--	0.23	--
Total LPAHs	T-LPAH	T	ug/L				--	--	--	0.14	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location	SWRX-PRE	SWRX-PRE	SWRX-PRE	SWRX-PRE	SWRX-PRE
						Date	05/16/2017	06/08/2017	09/19/2017	03/04/2021	05/27/2021
						Sample	SPM-SWRX-PRE-SW-20170516	SPM-SWRX-PRE-SW-20170608	SPM-SWRX-PRE-SW-20170919	PRERX-SW-210304	PRERX-SW-210527
Metals											
Antimony	7440-36-0	T	ug/L	90	GW-2		--	< 5.6 U	--	--	--
Arsenic	7440-38-2	D	ug/L	0.14	GW-2		--	--	--	4.8 J	6.46
Arsenic	7440-38-2	T	ug/L	0.14	GW-2		--	< 3.3 U	--	6.95	7.89
Beryllium	7440-41-7	T	ug/L	75.6	GW-2		--	< 11 U	--	--	--
Cadmium	7440-43-9	D	ug/L	7.9	GW-2		--	--	--	0.944 J	0.319
Cadmium	7440-43-9	T	ug/L	7.9	GW-2		--	< 4.4 U	--	1.22	0.631
Chromium	7440-47-3	D	ug/L	27.4	GW-2		--	--	--	1.47 J	< 0.5 U
Chromium	7440-47-3	T	ug/L	27.4	GW-2		--	< 11 U	--	2.5	< 0.5 U
Copper	7440-50-8	D	ug/L	50	SPM Boatyard Permit		--	--	--	238 J	300
Copper	7440-50-8	T	ug/L	50	SPM Boatyard Permit		--	970	--	411	455
Lead	7439-92-1	D	ug/L	5.6	GW-2		--	--	--	4.65 J	0.997
Lead	7439-92-1	T	ug/L	5.6	GW-2		--	18	--	17	4.9
Mercury	7439-97-6	D	ug/L	0.025	GW-2		--	--	--	< 0.02 UJ	0.00433
Mercury	7439-97-6	T	ug/L	0.025	GW-2		--	< 0.5 U	--	0.021	0.00703
Nickel	7440-02-0	D	ug/L	8.2	GW-2		--	--	--	4.7 J	2.33
Nickel	7440-02-0	T	ug/L	8.2	GW-2		--	< 22 U	--	5.27	2.97
Selenium	7782-49-2	T	ug/L	71	GW-2		--	< 5.6 U	--	--	--
Silver	7440-22-4	T	ug/L	1.9	GW-2		--	< 11 U	--	--	--
Thallium	7440-28-0	T	ug/L	0.0619	GW-2		--	< 5.6 U	--	--	--
Zinc	7440-66-6	D	ug/L	85	SPM Boatyard Permit		--	--	--	345 J	183
Zinc	7440-66-6	T	ug/L	85	SPM Boatyard Permit		--	650	--	401	314
Butyl Tin Ions											
Dibutyltin Ion	14488-53-0	T	ug/L				--	--	--	0.0166	0.0218
Monobutyltin	78763-54-9	T	ug/L				--	--	--	0.029 J	0.0564
Tetrabutyltin	1461-25-2	T	ug/L				--	--	--	--	< 0.03 U
Tributyltin Ion	36643-28-4	T	ug/L	0.0074	GW-2		--	--	--	0.0197	0.0174
Polychlorinated Biphenyl Aroclors											
Aroclor 1016	12674-11-2	T	ug/L				< 0.047 U	< 0.047 U	< 0.048 U	< 0.01 U	< 0.01 U
Aroclor 1221	11104-28-2	T	ug/L				< 0.047 U	< 0.047 U	< 0.048 U	< 0.01 U	< 0.01 U
Aroclor 1232	11141-16-5	T	ug/L				< 0.047 U	< 0.047 U	< 0.048 U	< 0.01 U	< 0.01 U
Aroclor 1242	53469-21-9	T	ug/L				< 0.047 U	< 0.047 U	< 0.048 U	< 0.01 U	< 0.01 U
Aroclor 1248	12672-29-6	T	ug/L				< 0.047 U	< 0.047 U	< 0.048 U	< 0.01 U	< 0.01 U
Aroclor 1254	11097-69-1	T	ug/L				< 0.047 U	< 0.047 U	< 0.048 U	0.034	0.012
Aroclor 1260	11096-82-5	T	ug/L				< 0.047 U	< 0.047 U	< 0.048 U	0.014	0.007 J
Aroclor 1262	37324-23-5	T	ug/L				--	--	--	< 0.01 U	< 0.01 U
Aroclor 1268	11100-14-4	T	ug/L				--	--	--	< 0.01 U	< 0.01 U
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2		< 0.165 UJ	< 0.165 UJ	< 0.168 UJ	0.083	0.0540 J
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2		< 0.047 UJ	< 0.047 UJ	< 0.048 U	0.0480	0.0190 J
Polychlorinated Biphenyl Congeners											
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2		0.00556	0.0226	0.00849	0.0654	0.0171
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2		0.00000529 J	0.00000346 J	0.00000866 J	0.00000285	0.000000616
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2		0.00000563 J	0.00000346 J	0.00000942 J	0.00000292	0.000000383
Total Monochlorobiphenyls	MONOPCB	T	ug/L				0.00000299	0.0000136	0.00000639	< 0.00000691 J	< 0.00000494 U
Total Dichlorobiphenyls	DIPCB	T	ug/L				0.000131	0.000358	0.00017 J	0.000306	0.000107
Total Trichlorobiphenyls	TRIPCB	T	ug/L				0.000162	0.000686	0.000278 J	0.00141 J	0.000828 J
Total Tetrachlorobiphenyls	TETRAPCB	T	ug/L				0.000559	0.00262	0.00106	0.00579 J	0.00158 J
Total Pentachlorobiphenyls	PENTAPCB	T	ug/L				0.00163	0.0064	0.00266	0.0286	0.0074 J
Total Hexachlorobiphenyls	HEXAPCB	T	ug/L				0.00169	0.00694	0.00251 J	0.0205 J	0.00567 J
Total Heptachlorobiphenyls	HEPTAPCB	T	ug/L				0.00107	0.00447	0.00143	0.00648 J	0.00199 J
Total Octachlorobiphenyls	OCTAPCB	T	ug/L				0.000292	0.00103	0.00036	0.00193 J	0.000281 J
Total Nonachlorobiphenyls	NONAPCB	T	ug/L				0.0000176	0.0000709	0.0000219 J	0.000308	0.0000937 J
Total Decachlorobiphenyls	DECAPCB	T	ug/L				0.00000727	0.00000872	0.00000315	0.0000307	0.00000699
Dioxins/Furans											
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	T	ug/L				--	--	--	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	T	ug/L				--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	T	ug/L	2.76E-08	GW-2		--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	T	ug/L	2.76E-08	GW-2		--	--	--	--	--
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	T	ug/L	2.76E-08	GW-2		--	--	--	--	--
Polycyclic Aromatic Hydrocarbons											
1-Methylnaphthalene	90-12-0	T	ug/L				--	< 0.096 U	--	< 0.1 U	0.028
2-Methylnaphthalene	91-57-6	T	ug/L				--	< 0.096 U	--	< 0.1 U	< 0.01 U
Acenaphthene	83-32-9	T	ug/L	30	GW-2		--	< 0.096 U	--	< 0.1 U	< 0.01 U
Acenaphthylene	208-96-8	T	ug/L				--	< 0.096 U	--	< 0.1 U	< 0.01 U
Anthracene	120-12-7	T	ug/L	100	GW-2		--	< 0.096 U	--	< 0.1 U	< 0.01 U
Benzo(g,h,i)perylene	191-24-2	T	ug/L				--	0.02	--	< 0.1 U	0.004 J
Fluoranthene	206-44-0	T	ug/L	6	GW-2		--	0.13	--	0.02 J	0.022
Fluorene	86-73-7	T	ug/L	10	GW-2		--	< 0.096 U	--	< 0.1 U	0.004 J
Naphthalene	91-20-3	T	ug/L	1.4	GW-2		--	< 0.096 U	--	< 0.1 U	< 0.01 U
Phenanthrene	85-01-8	T	ug/L				--	< 0.096 U	--	< 0.1 U	0.007 J
Pyrene	129-00-0	T	ug/L	8	GW-2		--	< 0.096 U	--	< 0.1 U	0.016
Benz(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2		--	0.029	--	< 0.1 U	0.002 J
Benz(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2		--	0.017	--	< 0.1 U	< 0.01 U
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2		--	0.052	--	< 0.1 U	0.007 J
Benzo(i)fluoranthene	205-82-3	T	ug/L				--	--	--	< 0.1 U	< 0.01 U
Benzo(k)fluoranthene	Benz-ik-fluor	T	ug/L				--	0.01	--	--	--
Benzo(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2		--	--	--	< 0.1 U	< 0.01 U
Chrysene	218-01-9	T	ug/L	0.016	GW-2		--	0.072	--	< 0.1 U	0.012
Dibenzo(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2		--	< 0.0096 U	--	< 0.1 U	< 0.01 UJ
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2		--	0.019	--	< 0.1 U	0.002 J
Total Benzofluoranthenes	TOTBFA	T	ug/L				--	--	--	< 0.2 U	0.011
Total HPAHs	T-HPAH	T	ug/L				--	0.349	--	0.0200 J	0.0650 J
Total LPAHs	T-LPAH	T	ug/L				--	< 0.096 U	--	0.0200	0.0110 J

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location Date Sample	SWRX-PRE 05/27/2021 PRERX-SW-FD-210527
Metals							
Antimony	7440-36-0	T	ug/L	90	GW-2		--
Arsenic	7440-38-2	D	ug/L	0.14	GW-2		6.31
Arsenic	7440-38-2	T	ug/L	0.14	GW-2		7.13
Beryllium	7440-41-7	T	ug/L	75.6	GW-2		--
Cadmium	7440-43-9	D	ug/L	7.9	GW-2		0.324
Cadmium	7440-43-9	T	ug/L	7.9	GW-2		0.617
Chromium	7440-47-3	D	ug/L	27.4	GW-2		< 0.5 U
Chromium	7440-47-3	T	ug/L	27.4	GW-2		< 0.5 U
Copper	7440-50-8	D	ug/L	50	SPM Boatyard Permit		283
Copper	7440-50-8	T	ug/L	50	SPM Boatyard Permit		457
Lead	7439-92-1	D	ug/L	5.6	GW-2		0.958
Lead	7439-92-1	T	ug/L	5.6	GW-2		6.61
Mercury	7439-97-6	D	ug/L	0.025	GW-2		0.00459
Mercury	7439-97-6	T	ug/L	0.025	GW-2		0.00814
Nickel	7440-02-0	D	ug/L	8.2	GW-2		2.18
Nickel	7440-02-0	T	ug/L	8.2	GW-2		2.88
Selenium	7782-49-2	T	ug/L	71	GW-2		--
Silver	7440-22-4	T	ug/L	1.9	GW-2		--
Thallium	7440-28-0	T	ug/L	0.0619	GW-2		--
Zinc	7440-66-6	D	ug/L	85	SPM Boatyard Permit		182
Zinc	7440-66-6	T	ug/L	85	SPM Boatyard Permit		308
Butyl Tin Ions							
Dibutyltin Ion	14488-53-0	T	ug/L				0.0174
Monobutyltin	78763-54-9	T	ug/L				0.0531
Tetrabutyltin	1461-25-2	T	ug/L				< 0.03 U
Tributyltin Ion	36643-28-4	T	ug/L	0.0074	GW-2		0.0159
Polychlorinated Biphenyl Aroclors							
Aroclor 1016	12674-11-2	T	ug/L				< 0.01 U
Aroclor 1221	11104-28-2	T	ug/L				< 0.01 U
Aroclor 1232	11141-16-5	T	ug/L				< 0.01 U
Aroclor 1242	53469-21-9	T	ug/L				< 0.01 U
Aroclor 1248	12672-29-6	T	ug/L				< 0.01 U
Aroclor 1254	11097-69-1	T	ug/L				0.015
Aroclor 1260	11096-82-5	T	ug/L				0.01 J
Aroclor 1262	37324-23-5	T	ug/L				< 0.01 U
Aroclor 1268	11100-14-4	T	ug/L				< 0.01 U
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	T	ug/L	7E-06	GW-2		0.0600 J
Total PCBs (Sum of Aroclors)	T-PCBs	T	ug/L	7E-06	GW-2		0.0250 J
Polychlorinated Biphenyl Congeners							
Total PCB Congeners	T-PCBCong	T	ug/L	7E-06	GW-2		--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	T	ug/L	4.43E-09	GW-2		--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	T	ug/L	4.43E-09	GW-2		--
Total Monochlorobiphenyls	MONOPCB	T	ug/L				--
Total Dichlorobiphenyls	DIPCB	T	ug/L				--
Total Trichlorobiphenyls	TRIPCB	T	ug/L				--
Total Tetrachlorobiphenyls	TETRAPCB	T	ug/L				--
Total Pentachlorobiphenyls	PENTAPCB	T	ug/L				--
Total Hexachlorobiphenyls	HEXAPCB	T	ug/L				--
Total Heptachlorobiphenyls	HEPTAPCB	T	ug/L				--
Total Octachlorobiphenyls	OCTAPCB	T	ug/L				--
Total Nonachlorobiphenyls	NONAPCB	T	ug/L				--
Total Decachlorobiphenyls	DECAPCB	T	ug/L				--
Dioxins/Furans							
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	T	ug/L				--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	T	ug/L				--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	T	ug/L	2.76E-08	GW-2		--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	T	ug/L	2.76E-08	GW-2		--
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	T	ug/L	2.76E-08	GW-2		--
Polycyclic Aromatic Hydrocarbons							
1-Methylnaphthalene	90-12-0	T	ug/L				0.026
2-Methylnaphthalene	91-57-6	T	ug/L				< 0.01 U
Acenaphthene	83-32-9	T	ug/L	30	GW-2		< 0.01 U
Acenaphthylene	208-96-8	T	ug/L				< 0.01 U
Anthracene	120-12-7	T	ug/L	100	GW-2		< 0.01 U
Benzo(g,h,i)perylene	191-24-2	T	ug/L				0.007 J
Fluoranthene	206-44-0	T	ug/L	6	GW-2		0.03
Fluorene	86-73-7	T	ug/L	10	GW-2		0.003 J
Naphthalene	91-20-3	T	ug/L	1.4	GW-2		< 0.01 U
Phenanthrene	85-01-8	T	ug/L				0.01
Pyrene	129-00-0	T	ug/L	8	GW-2		0.022
Benzo(a)anthracene	56-55-3	T	ug/L	0.00016	GW-2		0.004 J
Benzo(a)pyrene	50-32-8	T	ug/L	1.6E-05	GW-2		0.004 J
Benzo(b)fluoranthene	205-99-2	T	ug/L	0.00016	GW-2		0.012
Benzo(i)fluoranthene	205-82-3	T	ug/L				0.003 J
Benzo(k)fluoranthene	Benz-ik-fluor	T	ug/L				--
Benzo(k)fluoranthene	207-08-9	T	ug/L	0.0016	GW-2		0.004 J
Chrysene	218-01-9	T	ug/L	0.016	GW-2		0.017
Dibenzo(a,h)anthracene	53-70-3	T	ug/L	1.6E-05	GW-2		< 0.01 UJ
Indeno(1,2,3-cd)pyrene	193-39-5	T	ug/L	0.00016	GW-2		0.005 J
Total Benzofluoranthenes	TOTBFA	T	ug/L				0.019
Total HPAHs	T-HPAH	T	ug/L				0.105 J
Total LPAHs	T-LPAH	T	ug/L				0.0130 J

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location	CB-01	CB-02	CB-02	CB-02	CB-02
						Date Sample	09/19/2017 SPM-CB-01-SW-20170919	06/08/2017 SPM-CB-02-SW-20170608	09/19/2017 SPM-CB-02-SW-20170919	03/05/2021 CB-02-SW-210305	04/24/2021 SPM-CB-02-SW-20210424
Total PAHs (ND=0)	T-PAH	T	ug/L				--	< 0.096 U	--		0.0700 J
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2		--	< 0 U	--		< 0.1 U
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2		--	< 0.007248 U	--		< 0.0805 U
Total cPAHs TEQ (ND=1)	T-cPAH-1U	T	ug/L				--	--	--		--
Semivolatile Organic Compounds											
1,2-Dinitrobenzene	528-29-0	T	ug/L				--	< 0.96 U	--		--
1,2-Diphenylhydrazine	122-66-7	T	ug/L	0.02	GW-2		--	< 0.96 U	--		--
1,3-Dinitrobenzene	99-65-0	T	ug/L				--	< 0.96 U	--		--
1,4-Dinitrobenzene	100-25-4	T	ug/L				--	< 0.96 U	--		--
2,3,4,6-Tetrachlorophenol	58-90-2	T	ug/L				--	< 0.96 U	--		--
2,3,5,6-Tetrachlorophenol	935-95-5	T	ug/L				--	< 0.96 U	--		--
2,3-Dichloroaniline	608-27-5	T	ug/L				--	< 0.96 U	--		--
2,4,5-Trichlorophenol	95-95-4	T	ug/L	600	GW-2		--	< 0.96 U	--		< 1 U
2,4,6-Trichlorophenol	88-06-2	T	ug/L	0.28	GW-2		--	< 0.96 U	--		< 1 U
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2		--	< 0.96 U	--		< 1 U
2,4-Dimethylphenol	105-67-9	T	ug/L	97	GW-2		--	< 0.96 U	--		< 1 U
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2		--	< 4.8 U	--		< 2 UJ
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2		--	< 0.96 U	--		< 1 U
2,6-Dinitrotoluene	606-20-2	T	ug/L				--	< 0.96 U	--		< 1 U
2-Chloronaphthalene	91-58-7	T	ug/L	100	GW-2		--	< 0.96 U	--		< 0.2 U
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2		--	< 0.96 U	--		< 0.2 U
2-Methylphenol	95-48-7	T	ug/L				--	< 0.96 U	--		< 0.2 U
2-Nitroaniline	88-74-4	T	ug/L				--	< 0.96 U	--		< 1 U
2-Nitrophenol	88-75-5	T	ug/L				--	< 0.96 U	--		< 1 U
3 & 4 Methylphenol	65794-96-9	T	ug/L				--	< 0.96 U	--		--
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2		--	< 0.96 U	--		< 1 U
3-Nitroaniline	99-09-2	T	ug/L				--	< 0.96 U	--		< 1 U
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2		--	< 4.8 U	--		< 2 U
4-Bromophenyl phenyl ether	101-55-3	T	ug/L				--	< 0.96 U	--		< 0.2 U
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2		--	< 0.96 U	--		< 1 U
4-Chloroaniline	106-47-8	T	ug/L				--	< 0.96 U	--		< 1 UJ
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L				--	< 0.96 U	--		< 0.2 UJ
4-Methylphenol	106-44-5	T	ug/L				--	--	--		0.1 J
4-Nitroaniline	100-01-6	T	ug/L				--	< 0.96 U	--		< 1 U
4-Nitrophenol	100-02-7	T	ug/L				--	< 4.8 U	--		< 1 U
Aniline	62-53-3	T	ug/L				--	< 4.8 U	--		--
Benzidine	92-87-5	T	ug/L	2.3E-05	GW-2		--	< 4.8 U	--		--
Benzoic acid	65-85-0	T	ug/L				--	--	--		< 2 U
Benzyl alcohol	100-51-6	T	ug/L				--	< 0.96 U	--		< 0.2 U
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2		--	< 0.96 U	--		0.09 J
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2		--	--	--		< 0.2 U
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L				--	< 0.96 U	--		< 0.2 U
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2		--	< 0.96 U	--		< 0.2 U
bis(2-Chloroisopropyl)ether	39638-32-9	T	ug/L				--	< 0.96 U	--		--
Bis(2-ethylhexyl) adipate	103-23-1	T	ug/L				--	< 0.96 U	--		--
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2		--	59	--		24.7 J
Carbazole	86-74-8	T	ug/L				--	< 0.96 U	--		< 0.2 U
Dibenzofuran	132-64-9	T	ug/L				--	< 0.96 U	--		< 0.1 U
Diethyl phthalate	84-66-2	T	ug/L				--	< 0.96 U	--		< 0.2 U
Dimethyl phthalate	131-11-3	T	ug/L	600	GW-2		--	< 0.96 U	--		0.2
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2		--	1.9	--		0.9
Di-n-octyl phthalate	117-84-0	T	ug/L				--	< 0.96 U	--		1.1
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2		--	< 0.96 U	--		< 0.2 U
Hexachlorobutadiene	87-88-3	T	ug/L	0.01	GW-2		--	< 0.96 U	--		< 0.2 U
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2		--	< 0.96 U	--		< 1 UJ
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2		--	< 0.96 U	--		< 0.2 U
Isophorone	78-59-1	T	ug/L	110	GW-2		--	< 0.96 U	--		< 0.2 U
Nitrobenzene	98-95-3	T	ug/L	100	GW-2		--	< 0.96 U	--		< 0.2 U
N-Nitrosodimethylamine	62-75-9	T	ug/L	0.34	GW-2		--	< 0.96 U	--		--
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2		--	< 0.96 U	--		< 0.2 U
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.69	GW-2		--	< 0.96 U	--		< 0.2 U
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2		--	< 4.8 U	--		< 1 UJ
Perylene	198-55-0	T	ug/L				--	--	--		--
Phenol	108-95-2	T	ug/L	70000	GW-2		--	< 0.96 U	--		0.08 J
Pyridine	110-86-1	T	ug/L				--	< 0.96 U	--		--
Total Petroleum Hydrocarbons											
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2		--	--	--		< 100 U
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2		--	--	--		115
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2		--	--	--		380
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2		--	--	--		495
Volatile Organic Compounds											
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.037	GW-2		--	< 0.96 U	--		< 0.2 U
1,2-Dichlorobenzene	95-50-1	T	ug/L	800	GW-2		--	< 0.96 U	--		< 0.2 U
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2		--	< 0.96 U	--		< 0.2 U
1,4-Dichlorobenzene	106-46-7	T	ug/L	59.8	GW-2		--	< 0.96 U	--		< 0.2 U
Conventional											
Alkalinity as Bicarbonate	ALKHCO3	T	mg/L as CaCO3				--	--	--		--
Alkalinity as Carbonate	ALKCO3	T	mg/L as CaCO3				--	--	--		--
Alkalinity, Total	ALKT	T	ug/L				--	11000	--		--
Chloride	16887-00-6	T	ug/L				--	--	--		--
Dissolved Organic Carbon	DOC	T	ug/L				--	--	--		--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location	CB-02	CB-02	CB-05	CB-05	CB-05
						Date	05/27/2021	05/27/2021	09/19/2017	04/24/2021	05/27/2021
						Sample	SPM-CB-02-SW-20210527	CB-02-SW-210527	SPM-CB-05-SW-20170919	SPM-CB-05-SW-20210424	SPM-CB-05-SW-20210527
Total PAHs (ND=0)	T-PAH	T	ug/L				--	2.68 J	--	--	--
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2		--	0.0162 J	--	--	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2		--	0.0167 J	--	--	--
Total cPAHs TEQ (ND=1)	T-cPAH-1U	T	ug/L				--	--	--	--	--
Semivolatile Organic Compounds											
1,2-Dinitrobenzene	528-29-0	T	ug/L				--	--	--	--	--
1,2-Diphenylhydrazine	122-66-7	T	ug/L	0.02	GW-2		--	--	--	--	--
1,3-Dinitrobenzene	99-65-0	T	ug/L				--	--	--	--	--
1,4-Dinitrobenzene	100-25-4	T	ug/L				--	--	--	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	T	ug/L				--	--	--	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	T	ug/L				--	--	--	--	--
2,3-Dichloroaniline	608-27-5	T	ug/L				--	--	--	--	--
2,4,5-Trichlorophenol	95-95-4	T	ug/L	600	GW-2		--	< 1 U	--	--	--
2,4,6-Trichlorophenol	88-06-2	T	ug/L	0.28	GW-2		--	< 1 U	--	--	--
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2		--	< 1 U	--	--	--
2,4-Dimethylphenol	105-67-9	T	ug/L	97	GW-2		--	1.7	--	--	--
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2		--	< 2 UJ	--	--	--
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2		--	< 1 U	--	--	--
2,6-Dinitrotoluene	606-20-2	T	ug/L				--	< 1 U	--	--	--
2-Chloronaphthalene	91-58-7	T	ug/L	100	GW-2		--	< 0.01 U	--	--	--
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2		--	< 0.2 U	--	--	--
2-Methylphenol	95-48-7	T	ug/L				--	1.8	--	--	--
2-Nitroaniline	88-74-4	T	ug/L				--	< 1 U	--	--	--
2-Nitrophenol	88-75-5	T	ug/L				--	< 1 U	--	--	--
3 & 4 Methylphenol	65794-96-9	T	ug/L				--	--	--	--	--
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2		--	< 1 U	--	--	--
3-Nitroaniline	99-09-2	T	ug/L				--	< 1 U	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2		--	< 2 U	--	--	--
4-Bromophenyl phenyl ether	101-55-3	T	ug/L				--	< 0.2 U	--	--	--
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2		--	< 1 U	--	--	--
4-Chloroaniline	106-47-8	T	ug/L				--	< 1 UJ	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L				--	< 0.2 U	--	--	--
4-Methylphenol	106-44-5	T	ug/L				--	1.8	--	--	--
4-Nitroaniline	100-01-6	T	ug/L				--	< 1 U	--	--	--
4-Nitrophenol	100-02-7	T	ug/L				--	< 1 U	--	--	--
Aniline	62-53-3	T	ug/L				--	--	--	--	--
Benidine	92-87-5	T	ug/L	2.3E-05	GW-2		--	--	--	--	--
Benzoic acid	65-85-0	T	ug/L				--	< 2 U	--	--	--
Benzyl alcohol	100-51-6	T	ug/L				--	1.3	--	--	--
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2		--	0.08 J	--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2		--	< 0.2 U	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L				--	< 0.2 U	--	--	--
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2		--	< 0.2 U	--	--	--
bis(2-Chloroisopropyl)ether	39638-32-9	T	ug/L				--	--	--	--	--
Bis(2-ethylhexyl) adipate	103-23-1	T	ug/L				--	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2		--	6.9	--	--	--
Carbazole	86-74-8	T	ug/L				--	0.009 J	--	--	--
Dibenzofuran	132-64-9	T	ug/L				--	0.01	--	--	--
Diethyl phthalate	84-66-2	T	ug/L	200	GW-2		--	< 0.2 U	--	--	--
Dimethyl phthalate	131-11-3	T	ug/L	600	GW-2		--	0.1 J	--	--	--
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2		--	0.4	--	--	--
Di-n-octyl phthalate	117-84-0	T	ug/L				--	0.1 J	--	--	--
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2		--	< 0.2 U	--	--	--
Hexachlorobutadiene	87-88-3	T	ug/L	0.01	GW-2		--	< 0.2 U	--	--	--
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2		--	< 1 U	--	--	--
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2		--	< 0.2 U	--	--	--
Isophorone	78-59-1	T	ug/L	110	GW-2		--	< 0.2 U	--	--	--
Nitrobenzene	98-95-3	T	ug/L	100	GW-2		--	< 0.2 U	--	--	--
N-Nitrosodimethylamine	62-75-9	T	ug/L	0.34	GW-2		--	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2		--	< 0.2 U	--	--	--
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.69	GW-2		--	< 0.2 U	--	--	--
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2		--	< 1 U	--	--	--
Perylene	198-55-0	T	ug/L				--	< 0.01 U	--	--	--
Phenol	108-95-2	T	ug/L	70000	GW-2		--	1.1	--	--	--
Pyridine	110-86-1	T	ug/L				--	--	--	--	--
Total Petroleum Hydrocarbons											
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2		--	127	--	--	--
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2		--	< 100 U	--	--	--
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2		--	514	--	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2		--	514	--	--	--
Volatile Organic Compounds											
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.037	GW-2		--	< 0.2 U	--	--	--
1,2-Dichlorobenzene	95-50-1	T	ug/L	800	GW-2		--	< 0.2 U	--	--	--
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2		--	< 0.2 U	--	--	--
1,4-Dichlorobenzene	106-46-7	T	ug/L	59.8	GW-2		--	< 0.2 U	--	--	--
Conventional											
Alkalinity as Bicarbonate	ALKHCO3	T	mg/L as CaCO3				--	--	--	--	--
Alkalinity as Carbonate	ALKCO3	T	mg/L as CaCO3				--	--	--	--	--
Alkalinity, Total	ALKT	T	ug/L				--	--	--	--	--
Chloride	16887-00-6	T	ug/L				--	--	--	--	--
Dissolved Organic Carbon	DOC	T	ug/L				--	--	--	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location	CB-06	CB-06	CB-06	CB-06	CB-06
						Date Sample	06/08/2017 SPM-CB-06-SW-20170608	09/19/2017 SPM-CB-06-SW-20170919	03/04/2021 CB-06-SW-210304	04/24/2021 SPM-CB-06-SW-20210424	05/27/2021 SPM-CB-06-SW-20210527
Total PAHs (ND=0)	T-PAH	T	ug/L				0.0610	--	0.130 J	--	--
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2		0.00182	--	< 0.1 U	--	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2		0.00840	--	< 0.0805 U	--	--
Total cPAHs TEQ (ND=1)	T-cPAH-1U	T	ug/L				--	--	--	--	--
Semivolatile Organic Compounds											
1,2-Dinitrobenzene	528-29-0	T	ug/L				< 0.94 U	--	--	--	--
1,2-Diphenylhydrazine	122-66-7	T	ug/L	0.02	GW-2		< 0.94 U	--	--	--	--
1,3-Dinitrobenzene	99-65-0	T	ug/L				< 0.94 U	--	--	--	--
1,4-Dinitrobenzene	100-25-4	T	ug/L				< 0.94 U	--	--	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	T	ug/L				< 0.94 U	--	--	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	T	ug/L				< 0.94 U	--	--	--	--
2,3-Dichloroaniline	608-27-5	T	ug/L				< 0.94 U	--	--	--	--
2,4,5-Trichlorophenol	95-95-4	T	ug/L	600	GW-2		< 0.94 U	--	< 1 U	--	--
2,4,6-Trichlorophenol	88-06-2	T	ug/L	0.28	GW-2		< 0.94 U	--	< 1 U	--	--
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2		< 0.94 U	--	< 1 U	--	--
2,4-Dimethylphenol	105-67-9	T	ug/L	97	GW-2		< 0.94 U	--	< 1 U	--	--
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2		< 4.7 U	--	< 2 UJ	--	--
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2		< 0.94 U	--	< 1 U	--	--
2,6-Dinitrotoluene	606-20-2	T	ug/L				< 0.94 U	--	< 1 U	--	--
2-Chloronaphthalene	91-58-7	T	ug/L	100	GW-2		< 0.94 U	--	< 0.2 U	--	--
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2		< 0.94 U	--	< 0.2 U	--	--
2-Methylphenol	95-48-7	T	ug/L				< 0.94 U	--	< 0.2 U	--	--
2-Nitroaniline	88-74-4	T	ug/L				< 0.94 U	--	< 1 U	--	--
2-Nitrophenol	88-75-5	T	ug/L				< 0.94 U	--	< 1 U	--	--
3 & 4 Methylphenol	65794-96-9	T	ug/L				< 0.94 U	--	--	--	--
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2		< 0.94 U	--	< 1 U	--	--
3-Nitroaniline	99-09-2	T	ug/L				< 0.94 U	--	< 1 U	--	--
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2		< 4.7 U	--	< 2 U	--	--
4-Bromophenyl phenyl ether	101-55-3	T	ug/L				< 0.94 U	--	< 0.2 U	--	--
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2		< 0.94 U	--	< 1 U	--	--
4-Chloroaniline	106-47-8	T	ug/L				< 0.94 U	--	< 1 UJ	--	--
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L				< 0.94 U	--	< 0.2 UJ	--	--
4-Methylphenol	106-44-5	T	ug/L				--	--	< 0.2 U	--	--
4-Nitroaniline	100-01-6	T	ug/L				< 0.94 U	--	< 1 U	--	--
4-Nitrophenol	100-02-7	T	ug/L				< 4.7 U	--	< 1 U	--	--
Aniline	62-53-3	T	ug/L				< 4.7 U	--	--	--	--
Benidine	92-87-5	T	ug/L	2.3E-05	GW-2		< 4.7 U	--	--	--	--
Benzoic acid	65-85-0	T	ug/L				--	--	< 2 U	--	--
Benzyl alcohol	100-51-6	T	ug/L				< 0.94 U	--	0.2	--	--
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2		< 0.94 U	--	0.2 J	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2		--	--	< 0.2 U	--	--
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L				< 0.94 U	--	< 0.2 U	--	--
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2		< 0.94 U	--	< 0.2 U	--	--
bis(2-Chloroisopropyl)ether	39638-32-9	T	ug/L				< 0.94 U	--	--	--	--
Bis(2-ethylhexyl) adipate	103-23-1	T	ug/L				< 0.94 U	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2		1.9	--	6	--	--
Carbazole	86-74-8	T	ug/L				< 0.94 U	--	< 0.2 U	--	--
Dibenzofuran	132-64-9	T	ug/L				< 0.94 U	--	< 0.1 U	--	--
Diethyl phthalate	84-66-2	T	ug/L	200	GW-2		< 0.94 U	--	< 0.2 U	--	--
Dimethyl phthalate	131-11-3	T	ug/L	600	GW-2		17	--	0.2	--	--
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2		< 0.94 U	--	0.6	--	--
Di-n-octyl phthalate	117-84-0	T	ug/L				< 0.94 U	--	0.9	--	--
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2		< 0.94 U	--	< 0.2 U	--	--
Hexachlorobutadiene	87-88-3	T	ug/L	0.01	GW-2		< 0.94 U	--	< 0.2 U	--	--
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2		< 0.94 U	--	< 1 UJ	--	--
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2		< 0.94 U	--	< 0.2 U	--	--
Isophorone	78-59-1	T	ug/L	110	GW-2		< 0.94 U	--	< 0.2 U	--	--
Nitrobenzene	98-95-3	T	ug/L	100	GW-2		< 0.94 U	--	< 0.2 U	--	--
N-Nitrosodimethylamine	62-75-9	T	ug/L	0.34	GW-2		< 0.94 U	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2		< 0.94 U	--	< 0.2 U	--	--
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.69	GW-2		< 0.94 U	--	< 0.2 U	--	--
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2		< 4.7 U	--	0.3 J	--	--
Perylene	198-55-0	T	ug/L				--	--	--	--	--
Phenol	108-95-2	T	ug/L	70000	GW-2		< 0.94 U	--	0.1 J	--	--
Pyridine	110-86-1	T	ug/L				< 0.94 U	--	--	--	--
Total Petroleum Hydrocarbons											
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2		--	--	< 100 U	--	--
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2		--	--	397	--	--
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2		--	--	1830	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2		--	--	2230	--	--
Volatile Organic Compounds											
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.037	GW-2		< 0.94 U	--	< 0.2 U	--	--
1,2-Dichlorobenzene	95-50-1	T	ug/L	800	GW-2		< 0.94 U	--	< 0.2 U	--	--
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2		< 0.94 U	--	< 0.2 U	--	--
1,4-Dichlorobenzene	106-46-7	T	ug/L	59.8	GW-2		< 0.94 U	--	< 0.2 U	--	--
Conventional											
Alkalinity as Bicarbonate	ALKHCO3	T	mg/L as CaCO3				--	--	--	--	--
Alkalinity as Carbonate	ALKCO3	T	mg/L as CaCO3				--	--	--	--	--
Alkalinity, Total	ALKT	T	ug/L				9000	--	--	--	--
Chloride	16887-00-6	T	ug/L				--	--	--	--	--
Dissolved Organic Carbon	DOC	T	ug/L				--	--	--	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location	CB-06	SWRX-MID	SWRX-MID	SWRX-MID
						Date	05/27/2021	04/12/2017	05/16/2017	06/08/2017
						Sample	CB-06-SW-210527	SPM-SWRX-MID-SW-20170412	SPM-SWRX-MID-SW-20170516	SPM-SWRX-MID-SW-20170608
Total PAHs (ND=0)	T-PAH	T	ug/L				0.172 J	--	--	0.277
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2		0.0106 J	--	--	0.0255
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2		0.0106 J	--	--	0.0260
Total cPAHs TEQ (ND=1)	T-cPAH-1U	T	ug/L				--	--	--	--
Semivolatile Organic Compounds										
1,2-Dinitrobenzene	528-29-0	T	ug/L				--	--	--	< 0.99 U
1,2-Diphenylhydrazine	122-66-7	T	ug/L	0.02	GW-2		--	--	--	< 0.99 U
1,3-Dinitrobenzene	99-65-0	T	ug/L				--	--	--	< 0.99 U
1,4-Dinitrobenzene	100-25-4	T	ug/L				--	--	--	< 0.99 U
2,3,4,6-Tetrachlorophenol	58-90-2	T	ug/L				--	--	--	< 0.99 U
2,3,5,6-Tetrachlorophenol	935-95-5	T	ug/L				--	--	--	< 0.99 U
2,3-Dichloroaniline	608-27-5	T	ug/L				--	--	--	< 0.99 U
2,4,5-Trichlorophenol	95-95-4	T	ug/L	600	GW-2		< 1 UJ	--	--	< 0.99 U
2,4,6-Trichlorophenol	88-06-2	T	ug/L	0.28	GW-2		< 1 UJ	--	--	< 0.99 U
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2		< 1 UJ	--	--	< 0.99 U
2,4-Dimethylphenol	105-67-9	T	ug/L	97	GW-2		< 1 UJ	--	--	< 0.99 U
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2		< 2 UJ	--	--	< 4.9 U
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2		< 1 U	--	--	< 0.99 U
2,6-Dinitrotoluene	606-20-2	T	ug/L				< 1 U	--	--	< 0.99 U
2-Chloronaphthalene	91-58-7	T	ug/L	100	GW-2		< 0.01 U	--	--	< 0.99 U
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2		< 0.2 UJ	--	--	< 0.99 U
2-Methylphenol	95-48-7	T	ug/L				< 0.2 UJ	--	--	< 0.99 U
2-Nitroaniline	88-74-4	T	ug/L				< 1 U	--	--	< 0.99 U
2-Nitrophenol	88-75-5	T	ug/L				< 1 UJ	--	--	< 0.99 U
3 & 4 Methylphenol	65794-96-9	T	ug/L				--	--	--	< 0.99 U
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2		< 1 U	--	--	< 0.99 U
3-Nitroaniline	99-09-2	T	ug/L				< 1 U	--	--	< 0.99 U
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2		< 2 UJ	--	--	< 4.9 U
4-Bromophenyl phenyl ether	101-55-3	T	ug/L				< 0.2 U	--	--	< 0.99 U
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2		< 1 UJ	--	--	< 0.99 U
4-Chloroaniline	106-47-8	T	ug/L				< 1 UJ	--	--	< 0.99 U
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L				< 0.2 U	--	--	< 0.99 U
4-Methylphenol	106-44-5	T	ug/L				0.03 J	--	--	--
4-Nitroaniline	100-01-6	T	ug/L				< 1 U	--	--	< 0.99 U
4-Nitrophenol	100-02-7	T	ug/L				< 1 UJ	--	--	< 4.9 U
Aniline	62-53-3	T	ug/L				--	--	--	< 4.9 U
Benzidine	92-87-5	T	ug/L	2.3E-05	GW-2		--	--	--	< 4.9 U
Benzoic acid	65-85-0	T	ug/L				0.6 J	--	--	--
Benzyl alcohol	100-51-6	T	ug/L				0.09 J	--	--	1.1
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2		0.2 J	--	--	< 0.99 U
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2		< 0.2 U	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L				< 0.2 U	--	--	< 0.99 U
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2		< 0.2 U	--	--	< 0.99 U
bis(2-Chloroisopropyl)ether	39638-32-9	T	ug/L				--	--	--	< 0.99 U
Bis(2-ethylhexyl) adipate	103-23-1	T	ug/L				--	--	--	< 0.99 U
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2		21.7	--	--	2.9
Carbazole	86-74-8	T	ug/L				< 0.01 U	--	--	< 0.99 U
Dibenzofuran	132-64-9	T	ug/L				0.002 J	--	--	< 0.99 U
Diethyl phthalate	84-66-2	T	ug/L	200	GW-2		< 0.2 U	--	--	< 0.99 U
Dimethyl phthalate	131-11-3	T	ug/L	600	GW-2		0.2	--	--	1
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2		0.1 J	--	--	< 0.99 U
Di-n-octyl phthalate	117-84-0	T	ug/L				0.5	--	--	< 0.99 U
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2		< 0.2 U	--	--	< 0.99 U
Hexachlorobutadiene	87-88-3	T	ug/L	0.01	GW-2		< 0.2 U	--	--	< 0.99 U
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2		< 1 U	--	--	< 0.99 U
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2		< 0.2 U	--	--	< 0.99 U
Isophorone	78-59-1	T	ug/L	110	GW-2		< 0.2 U	--	--	< 0.99 U
Nitrobenzene	98-95-3	T	ug/L	100	GW-2		< 0.2 U	--	--	< 0.99 U
N-Nitrosodimethylamine	62-75-9	T	ug/L	0.34	GW-2		--	--	--	< 0.99 U
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2		< 0.2 U	--	--	< 0.99 U
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.69	GW-2		< 0.2 U	--	--	< 0.99 U
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2		0.5 J	--	--	< 4.9 U
Perylene	198-55-0	T	ug/L				< 0.01 U	--	--	--
Phenol	108-95-2	T	ug/L	70000	GW-2		0.1 J	--	--	< 0.99 U
Pyridine	110-86-1	T	ug/L				--	--	--	< 0.99 U
Total Petroleum Hydrocarbons										
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2		< 100 U	--	--	--
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2		104	--	--	--
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2		449	--	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2		553	--	--	--
Volatile Organic Compounds										
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.037	GW-2		< 0.2 U	--	--	< 0.99 U
1,2-Dichlorobenzene	95-50-1	T	ug/L	800	GW-2		< 0.2 U	--	--	< 0.99 U
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2		< 0.2 U	--	--	< 0.99 U
1,4-Dichlorobenzene	106-46-7	T	ug/L	59.8	GW-2		< 0.2 U	--	--	< 0.99 U
Conventional										
Alkalinity as Bicarbonate	ALKHCO3	T	mg/L as CaCO3				--	--	--	--
Alkalinity as Carbonate	ALKCO3	T	mg/L as CaCO3				--	--	--	--
Alkalinity, Total	ALKT	T	ug/L				--	--	--	13000
Chloride	16887-00-6	T	ug/L				--	--	--	--
Dissolved Organic Carbon	DOC	T	ug/L				--	--	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location	SWRX-MID	SWRX-POST	SWRX-POST	SWRX-POST
						Date	09/19/2017	12/01/2016	01/01/2017	04/12/2017
						Sample	SPM-SWRX-MID-SW-20170919	SPM-SWRX-POST-SW-20161201	SPM-SWRX-POST-SW-20170101	SPM-SWRX-POST-SW-20170412
Total PAHs (ND=0)	T-PAH	T	ug/L				--	--	--	--
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2		--	--	--	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2		--	--	--	--
Total cPAHs TEQ (ND=1)	T-cPAH-1U	T	ug/L				--	--	--	--
Semivolatile Organic Compounds										
1,2-Dinitrobenzene	528-29-0	T	ug/L				--	--	--	--
1,2-Diphenylhydrazine	122-66-7	T	ug/L	0.02	GW-2		--	--	--	--
1,3-Dinitrobenzene	99-65-0	T	ug/L				--	--	--	--
1,4-Dinitrobenzene	100-25-4	T	ug/L				--	--	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	T	ug/L				--	--	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	T	ug/L				--	--	--	--
2,3-Dichloroaniline	608-27-5	T	ug/L				--	--	--	--
2,4,5-Trichlorophenol	95-95-4	T	ug/L	600	GW-2		--	--	--	--
2,4,6-Trichlorophenol	88-06-2	T	ug/L	0.28	GW-2		--	--	--	--
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2		--	--	--	--
2,4-Dimethylphenol	105-67-9	T	ug/L	97	GW-2		--	--	--	--
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2		--	--	--	--
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2		--	--	--	--
2,6-Dinitrotoluene	606-20-2	T	ug/L				--	--	--	--
2-Chloronaphthalene	91-58-7	T	ug/L	100	GW-2		--	--	--	--
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2		--	--	--	--
2-Methylphenol	95-48-7	T	ug/L				--	--	--	--
2-Nitroaniline	88-74-4	T	ug/L				--	--	--	--
2-Nitrophenol	88-75-5	T	ug/L				--	--	--	--
3 & 4 Methylphenol	65794-96-9	T	ug/L				--	--	--	--
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2		--	--	--	--
3-Nitroaniline	99-09-2	T	ug/L				--	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2		--	--	--	--
4-Bromophenyl phenyl ether	101-55-3	T	ug/L				--	--	--	--
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2		--	--	--	--
4-Chloroaniline	106-47-8	T	ug/L				--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L				--	--	--	--
4-Methylphenol	106-44-5	T	ug/L				--	--	--	--
4-Nitroaniline	100-01-6	T	ug/L				--	--	--	--
4-Nitrophenol	100-02-7	T	ug/L				--	--	--	--
Aniline	62-53-3	T	ug/L				--	--	--	--
Benzidine	92-87-5	T	ug/L	2.3E-05	GW-2		--	--	--	--
Benzoic acid	65-85-0	T	ug/L				--	--	--	--
Benzyl alcohol	100-51-6	T	ug/L				--	--	--	--
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2		--	--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2		--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L				--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2		--	--	--	--
bis(2-Chloroisopropyl)ether	39638-32-9	T	ug/L				--	--	--	--
Bis(2-ethylhexyl) adipate	103-23-1	T	ug/L				--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2		--	--	--	--
Carbazole	86-74-8	T	ug/L				--	--	--	--
Dibenzofuran	132-64-9	T	ug/L				--	--	--	--
Diethyl phthalate	84-66-2	T	ug/L	200	GW-2		--	--	--	--
Dimethyl phthalate	131-11-3	T	ug/L	600	GW-2		--	--	--	--
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2		--	--	--	--
Di-n-octyl phthalate	117-84-0	T	ug/L				--	--	--	--
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2		--	--	--	--
Hexachlorobutadiene	87-88-3	T	ug/L	0.01	GW-2		--	--	--	--
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2		--	--	--	--
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2		--	--	--	--
Isophorone	78-59-1	T	ug/L	110	GW-2		--	--	--	--
Nitrobenzene	98-95-3	T	ug/L	100	GW-2		--	--	--	--
N-Nitrosodimethylamine	62-75-9	T	ug/L	0.34	GW-2		--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2		--	--	--	--
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.69	GW-2		--	--	--	--
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2		--	--	--	--
Perylene	198-55-0	T	ug/L				--	--	--	--
Phenol	108-95-2	T	ug/L	70000	GW-2		--	--	--	--
Pyridine	110-86-1	T	ug/L				--	--	--	--
Total Petroleum Hydrocarbons										
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2		--	--	--	--
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2		--	--	--	--
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2		--	--	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2		--	--	--	--
Volatile Organic Compounds										
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.037	GW-2		--	--	--	--
1,2-Dichlorobenzene	95-50-1	T	ug/L	800	GW-2		--	--	--	--
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2		--	--	--	--
1,4-Dichlorobenzene	106-46-7	T	ug/L	59.8	GW-2		--	--	--	--
Conventional										
Alkalinity as Bicarbonate	ALKHCO3	T	mg/L as CaCO3				--	--	--	--
Alkalinity as Carbonate	ALKCO3	T	mg/L as CaCO3				--	--	--	--
Alkalinity, Total	ALKT	T	ug/L				--	--	--	--
Chloride	16887-00-6	T	ug/L				--	--	--	--
Dissolved Organic Carbon	DOC	T	ug/L				--	--	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location	SWRX-POST	SWRX-POST	SWRX-POST	SWRX-POST
						Date	05/16/2017	06/08/2017	09/19/2017	10/18/2017
						Sample	SPM-SWRX-POST-SW-20170516	SPM-SWRX-POST-SW-20170608	SPM-SWRX-POST-SW-20170919	SPM-NPDES-SW-20171018
Total PAHs (ND=0)	T-PAH	T	ug/L				--	< 0.094 U	--	--
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2		--	< 0 U	--	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2		--	< 0.007097 U	--	--
Total cPAHs TEQ (ND=1)	T-cPAH-1U	T	ug/L				--	--	--	--
Semivolatile Organic Compounds										
1,2-Dinitrobenzene	528-29-0	T	ug/L				--	< 0.94 U	--	--
1,2-Diphenylhydrazine	122-66-7	T	ug/L	0.02	GW-2		--	< 0.94 U	--	--
1,3-Dinitrobenzene	99-65-0	T	ug/L				--	< 0.94 U	--	--
1,4-Dinitrobenzene	100-25-4	T	ug/L				--	< 0.94 U	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	T	ug/L				--	< 0.94 U	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	T	ug/L				--	< 0.94 U	--	--
2,3-Dichloroaniline	608-27-5	T	ug/L				--	< 0.94 U	--	--
2,4,5-Trichlorophenol	95-95-4	T	ug/L	600	GW-2		--	< 0.94 U	--	--
2,4,6-Trichlorophenol	88-06-2	T	ug/L	0.28	GW-2		--	< 0.94 U	--	--
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2		--	< 0.94 U	--	--
2,4-Dimethylphenol	105-67-9	T	ug/L	97	GW-2		--	< 0.94 U	--	--
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2		--	< 4.7 U	--	--
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2		--	< 0.94 U	--	--
2,6-Dinitrotoluene	606-20-2	T	ug/L				--	< 0.94 U	--	--
2-Chloronaphthalene	91-58-7	T	ug/L	100	GW-2		--	< 0.94 U	--	--
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2		--	< 0.94 U	--	--
2-Methylphenol	95-48-7	T	ug/L				--	< 0.94 U	--	--
2-Nitroaniline	88-74-4	T	ug/L				--	< 0.94 U	--	--
2-Nitrophenol	88-75-5	T	ug/L				--	< 0.94 U	--	--
3 & 4 Methylphenol	65794-96-9	T	ug/L				--	< 0.94 U	--	--
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2		--	< 0.94 U	--	--
3-Nitroaniline	99-09-2	T	ug/L				--	< 0.94 U	--	--
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2		--	< 4.7 U	--	--
4-Bromophenyl phenyl ether	101-55-3	T	ug/L				--	< 0.94 U	--	--
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2		--	< 0.94 U	--	--
4-Chloroaniline	106-47-8	T	ug/L				--	< 0.94 U	--	--
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L				--	< 0.94 U	--	--
4-Methylphenol	106-44-5	T	ug/L				--	--	--	--
4-Nitroaniline	100-01-6	T	ug/L				--	< 0.94 U	--	--
4-Nitrophenol	100-02-7	T	ug/L				--	< 4.7 U	--	--
Aniline	62-53-3	T	ug/L				--	< 4.7 U	--	--
Benzidine	92-87-5	T	ug/L	2.3E-05	GW-2		--	< 4.7 U	--	--
Benzoic acid	65-85-0	T	ug/L				--	--	--	--
Benzyl alcohol	100-51-6	T	ug/L				--	< 0.94 U	--	--
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2		--	< 0.94 U	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2		--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L				--	< 0.94 U	--	--
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2		--	< 0.94 U	--	--
bis(2-Chloroisopropyl)ether	39638-32-9	T	ug/L				--	< 0.94 U	--	--
Bis(2-ethylhexyl) adipate	103-23-1	T	ug/L				--	< 0.94 U	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2		--	< 0.94 U	--	--
Carbazole	86-74-8	T	ug/L				--	< 0.94 U	--	--
Dibenzofuran	132-64-9	T	ug/L				--	< 0.94 U	--	--
Diethyl phthalate	84-66-2	T	ug/L	200	GW-2		--	< 0.94 U	--	--
Dimethyl phthalate	131-11-3	T	ug/L	600	GW-2		--	< 0.94 U	--	--
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2		--	< 0.94 U	--	--
Di-n-octyl phthalate	117-84-0	T	ug/L				--	< 0.94 U	--	--
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2		--	< 0.94 U	--	--
Hexachlorobutadiene	87-88-3	T	ug/L	0.01	GW-2		--	< 0.94 U	--	--
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2		--	< 0.94 U	--	--
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2		--	< 0.94 U	--	--
Isophorone	78-59-1	T	ug/L	110	GW-2		--	< 0.94 U	--	--
Nitrobenzene	98-95-3	T	ug/L	100	GW-2		--	< 0.94 U	--	--
N-Nitrosodimethylamine	62-75-9	T	ug/L	0.34	GW-2		--	< 0.94 U	--	--
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2		--	< 0.94 U	--	--
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.69	GW-2		--	< 0.94 U	--	--
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2		--	< 4.7 U	--	--
Perylene	198-55-0	T	ug/L				--	--	--	--
Phenol	108-95-2	T	ug/L	70000	GW-2		--	< 0.94 U	--	--
Pyridine	110-86-1	T	ug/L				--	< 0.94 U	--	--
Total Petroleum Hydrocarbons										
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2		--	--	--	--
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2		--	--	--	--
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2		--	--	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2		--	--	--	--
Volatile Organic Compounds										
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.037	GW-2		--	< 0.94 U	--	--
1,2-Dichlorobenzene	95-50-1	T	ug/L	800	GW-2		--	< 0.94 U	--	--
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2		--	< 0.94 U	--	--
1,4-Dichlorobenzene	106-46-7	T	ug/L	59.8	GW-2		--	< 0.94 U	--	--
Conventional										
Alkalinity as Bicarbonate	ALKHCO3	T	mg/L as CaCO3				--	--	--	--
Alkalinity as Carbonate	ALKCO3	T	mg/L as CaCO3				--	--	--	--
Alkalinity, Total	ALKT	T	ug/L				--	17000	--	--
Chloride	16887-00-6	T	ug/L				--	--	--	--
Dissolved Organic Carbon	DOC	T	ug/L				--	--	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location	SWRX-POST	SWRX-POST	SWRX-POST	SWRX-POST
						Date	10/18/2017	11/03/2017	11/03/2017	01/05/2018
						Sample	SPM-SWRX-POST-SW-20171018	SPM-NPDES-SW-20171103	SPM-SWRX-POST-SW-20171103	SPM-NPDES-SW-20180105
Total PAHs (ND=0)	T-PAH	T	ug/L				--	--	--	--
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2		--	--	--	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2		--	--	--	--
Total cPAHs TEQ (ND=1)	T-cPAH-1U	T	ug/L				--	--	--	--
Semivolatile Organic Compounds										
1,2-Dinitrobenzene	528-29-0	T	ug/L				--	--	--	--
1,2-Diphenylhydrazine	122-66-7	T	ug/L	0.02	GW-2		--	--	--	--
1,3-Dinitrobenzene	99-65-0	T	ug/L				--	--	--	--
1,4-Dinitrobenzene	100-25-4	T	ug/L				--	--	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	T	ug/L				--	--	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	T	ug/L				--	--	--	--
2,3-Dichloroaniline	608-27-5	T	ug/L				--	--	--	--
2,4,5-Trichlorophenol	95-95-4	T	ug/L	600	GW-2		--	--	--	--
2,4,6-Trichlorophenol	88-06-2	T	ug/L	0.28	GW-2		--	--	--	--
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2		--	--	--	--
2,4-Dimethylphenol	105-67-9	T	ug/L	97	GW-2		--	--	--	--
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2		--	--	--	--
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2		--	--	--	--
2,6-Dinitrotoluene	606-20-2	T	ug/L				--	--	--	--
2-Chloronaphthalene	91-58-7	T	ug/L	100	GW-2		--	--	--	--
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2		--	--	--	--
2-Methylphenol	95-48-7	T	ug/L				--	--	--	--
2-Nitroaniline	88-74-4	T	ug/L				--	--	--	--
2-Nitrophenol	88-75-5	T	ug/L				--	--	--	--
3 & 4 Methylphenol	65794-96-9	T	ug/L				--	--	--	--
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2		--	--	--	--
3-Nitroaniline	99-09-2	T	ug/L				--	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2		--	--	--	--
4-Bromophenyl phenyl ether	101-55-3	T	ug/L				--	--	--	--
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2		--	--	--	--
4-Chloroaniline	106-47-8	T	ug/L				--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L				--	--	--	--
4-Methylphenol	106-44-5	T	ug/L				--	--	--	--
4-Nitroaniline	100-01-6	T	ug/L				--	--	--	--
4-Nitrophenol	100-02-7	T	ug/L				--	--	--	--
Aniline	62-53-3	T	ug/L				--	--	--	--
Benzidine	92-87-5	T	ug/L	2.3E-05	GW-2		--	--	--	--
Benzoic acid	65-85-0	T	ug/L				--	--	--	--
Benzyl alcohol	100-51-6	T	ug/L				--	--	--	--
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2		--	--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2		--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L				--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2		--	--	--	--
bis(2-Chloroisopropyl)ether	39638-32-9	T	ug/L				--	--	--	--
Bis(2-ethylhexyl) adipate	103-23-1	T	ug/L				--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2		--	--	--	--
Carbazole	86-74-8	T	ug/L				--	--	--	--
Dibenzofuran	132-64-9	T	ug/L				--	--	--	--
Diethyl phthalate	84-66-2	T	ug/L	200	GW-2		--	--	--	--
Dimethyl phthalate	131-11-3	T	ug/L	600	GW-2		--	--	--	--
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2		--	--	--	--
Di-n-octyl phthalate	117-84-0	T	ug/L				--	--	--	--
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2		--	--	--	--
Hexachlorobutadiene	87-88-3	T	ug/L	0.01	GW-2		--	--	--	--
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2		--	--	--	--
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2		--	--	--	--
Isophorone	78-59-1	T	ug/L	110	GW-2		--	--	--	--
Nitrobenzene	98-95-3	T	ug/L	100	GW-2		--	--	--	--
N-Nitrosodimethylamine	62-75-9	T	ug/L	0.34	GW-2		--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2		--	--	--	--
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.69	GW-2		--	--	--	--
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2		--	--	--	--
Perylene	198-55-0	T	ug/L				--	--	--	--
Phenol	108-95-2	T	ug/L	70000	GW-2		--	--	--	--
Pyridine	110-86-1	T	ug/L				--	--	--	--
Total Petroleum Hydrocarbons										
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2		--	--	--	--
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2		--	--	--	--
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2		--	--	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2		--	--	--	--
Volatile Organic Compounds										
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.037	GW-2		--	--	--	--
1,2-Dichlorobenzene	95-50-1	T	ug/L	800	GW-2		--	--	--	--
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2		--	--	--	--
1,4-Dichlorobenzene	106-46-7	T	ug/L	59.8	GW-2		--	--	--	--
Conventional										
Alkalinity as Bicarbonate	ALKHCO3	T	mg/L as CaCO3				--	--	--	--
Alkalinity as Carbonate	ALKCO3	T	mg/L as CaCO3				--	--	--	--
Alkalinity, Total	ALKT	T	ug/L				--	--	--	--
Chloride	16887-00-6	T	ug/L				--	--	--	--
Dissolved Organic Carbon	DOC	T	ug/L				--	--	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location	SWRX-POST	SWRX-POST	SWRX-POST	SWRX-POST	SWRX-POST
						Date	01/23/2018	04/10/2018	10/05/2018	11/02/2018	01/03/2019
						Sample	SPM-NPDES-SW-20180123	SPM-NPDES-SW-20180410	SPM-NPDES-SW-20181005	SPM-NPDES-SW-20181102	SPM-NPDES-SW-20190103
Total PAHs (ND=0)	T-PAH	T	ug/L				--	--	--	--	--
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2		--	--	--	--	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2		--	--	--	--	--
Total cPAHs TEQ (ND=1)	T-cPAH-1U	T	ug/L				--	--	--	--	--
Semivolatile Organic Compounds											
1,2-Dinitrobenzene	528-29-0	T	ug/L				--	--	--	--	--
1,2-Diphenylhydrazine	122-66-7	T	ug/L	0.02	GW-2		--	--	--	--	--
1,3-Dinitrobenzene	99-65-0	T	ug/L				--	--	--	--	--
1,4-Dinitrobenzene	100-25-4	T	ug/L				--	--	--	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	T	ug/L				--	--	--	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	T	ug/L				--	--	--	--	--
2,3-Dichloroaniline	608-27-5	T	ug/L				--	--	--	--	--
2,4,5-Trichlorophenol	95-95-4	T	ug/L	600	GW-2		--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	T	ug/L	0.28	GW-2		--	--	--	--	--
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2		--	--	--	--	--
2,4-Dimethylphenol	105-67-9	T	ug/L	97	GW-2		--	--	--	--	--
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2		--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2		--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	T	ug/L				--	--	--	--	--
2-Chloronaphthalene	91-58-7	T	ug/L	100	GW-2		--	--	--	--	--
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2		--	--	--	--	--
2-Methylphenol	95-48-7	T	ug/L				--	--	--	--	--
2-Nitroaniline	88-74-4	T	ug/L				--	--	--	--	--
2-Nitrophenol	88-75-5	T	ug/L				--	--	--	--	--
3 & 4 Methylphenol	65794-96-9	T	ug/L				--	--	--	--	--
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2		--	--	--	--	--
3-Nitroaniline	99-09-2	T	ug/L				--	--	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2		--	--	--	--	--
4-Bromophenyl phenyl ether	101-55-3	T	ug/L				--	--	--	--	--
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2		--	--	--	--	--
4-Chloroaniline	106-47-8	T	ug/L				--	--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L				--	--	--	--	--
4-Methylphenol	106-44-5	T	ug/L				--	--	--	--	--
4-Nitroaniline	100-01-6	T	ug/L				--	--	--	--	--
4-Nitrophenol	100-02-7	T	ug/L				--	--	--	--	--
Aniline	62-53-3	T	ug/L				--	--	--	--	--
Benzidine	92-87-5	T	ug/L	2.3E-05	GW-2		--	--	--	--	--
Benzoic acid	65-85-0	T	ug/L				--	--	--	--	--
Benzyl alcohol	100-51-6	T	ug/L				--	--	--	--	--
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2		--	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2		--	--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L				--	--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2		--	--	--	--	--
bis(2-Chloroisopropyl)ether	39638-32-9	T	ug/L				--	--	--	--	--
Bis(2-ethylhexyl) adipate	103-23-1	T	ug/L				--	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2		--	--	--	--	--
Carbazole	86-74-8	T	ug/L				--	--	--	--	--
Dibenzofuran	132-64-9	T	ug/L				--	--	--	--	--
Diethyl phthalate	84-66-2	T	ug/L	200	GW-2		--	--	--	--	--
Dimethyl phthalate	131-11-3	T	ug/L	600	GW-2		--	--	--	--	--
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2		--	--	--	--	--
Di-n-octyl phthalate	117-84-0	T	ug/L				--	--	--	--	--
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2		--	--	--	--	--
Hexachlorobutadiene	87-88-3	T	ug/L	0.01	GW-2		--	--	--	--	--
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2		--	--	--	--	--
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2		--	--	--	--	--
Isophorone	78-59-1	T	ug/L	110	GW-2		--	--	--	--	--
Nitrobenzene	98-95-3	T	ug/L	100	GW-2		--	--	--	--	--
N-Nitrosodimethylamine	62-75-9	T	ug/L	0.34	GW-2		--	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2		--	--	--	--	--
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.69	GW-2		--	--	--	--	--
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2		--	--	--	--	--
Perylene	198-55-0	T	ug/L				--	--	--	--	--
Phenol	108-95-2	T	ug/L	70000	GW-2		--	--	--	--	--
Pyridine	110-86-1	T	ug/L				--	--	--	--	--
Total Petroleum Hydrocarbons											
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2		--	--	--	--	--
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2		--	--	--	--	--
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2		--	--	--	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2		--	--	--	--	--
Volatile Organic Compounds											
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.037	GW-2		--	--	--	--	--
1,2-Dichlorobenzene	95-50-1	T	ug/L	800	GW-2		--	--	--	--	--
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2		--	--	--	--	--
1,4-Dichlorobenzene	106-46-7	T	ug/L	59.8	GW-2		--	--	--	--	--
Conventional											
Alkalinity as Bicarbonate	ALKHCO3	T	mg/L as CaCO3				--	--	--	--	--
Alkalinity as Carbonate	ALKCO3	T	mg/L as CaCO3				--	--	--	--	--
Alkalinity, Total	ALKT	T	ug/L				--	--	--	--	--
Chloride	16887-00-6	T	ug/L				--	--	--	--	--
Dissolved Organic Carbon	DOC	T	ug/L				--	--	--	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location	SWRX-POST	SWRX-POST	SWRX-POST	SWRX-POST	SWRX-POST
						Date	04/05/2019	05/14/2019	10/16/2019	12/12/2019	01/10/2020
						Sample	SPM-NPDES-SW-20190405	SPM-NPDES-SW-20190514	SPM-NPDES-SW-20191016	SPM-NPDES-SW-20191212	SPM-NPDES-SW-20200110
Total PAHs (ND=0)	T-PAH	T	ug/L				--	--	--	--	--
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2		--	--	--	--	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2		--	--	--	--	--
Total cPAHs TEQ (ND=1)	T-cPAH-1U	T	ug/L				--	--	--	--	--
Semivolatile Organic Compounds											
1,2-Dinitrobenzene	528-29-0	T	ug/L				--	--	--	--	--
1,2-Diphenylhydrazine	122-66-7	T	ug/L	0.02	GW-2		--	--	--	--	--
1,3-Dinitrobenzene	99-65-0	T	ug/L				--	--	--	--	--
1,4-Dinitrobenzene	100-25-4	T	ug/L				--	--	--	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	T	ug/L				--	--	--	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	T	ug/L				--	--	--	--	--
2,3-Dichloroaniline	608-27-5	T	ug/L				--	--	--	--	--
2,4,5-Trichlorophenol	95-95-4	T	ug/L	600	GW-2		--	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	T	ug/L	0.28	GW-2		--	--	--	--	--
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2		--	--	--	--	--
2,4-Dimethylphenol	105-67-9	T	ug/L	97	GW-2		--	--	--	--	--
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2		--	--	--	--	--
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2		--	--	--	--	--
2,6-Dinitrotoluene	606-20-2	T	ug/L				--	--	--	--	--
2-Chloronaphthalene	91-58-7	T	ug/L	100	GW-2		--	--	--	--	--
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2		--	--	--	--	--
2-Methylphenol	95-48-7	T	ug/L				--	--	--	--	--
2-Nitroaniline	88-74-4	T	ug/L				--	--	--	--	--
2-Nitrophenol	88-75-5	T	ug/L				--	--	--	--	--
3 & 4 Methylphenol	65794-96-9	T	ug/L				--	--	--	--	--
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2		--	--	--	--	--
3-Nitroaniline	99-09-2	T	ug/L				--	--	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2		--	--	--	--	--
4-Bromophenyl phenyl ether	101-55-3	T	ug/L				--	--	--	--	--
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2		--	--	--	--	--
4-Chloroaniline	106-47-8	T	ug/L				--	--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L				--	--	--	--	--
4-Methylphenol	106-44-5	T	ug/L				--	--	--	--	--
4-Nitroaniline	100-01-6	T	ug/L				--	--	--	--	--
4-Nitrophenol	100-02-7	T	ug/L				--	--	--	--	--
Aniline	62-53-3	T	ug/L				--	--	--	--	--
Benzidine	92-87-5	T	ug/L	2.3E-05	GW-2		--	--	--	--	--
Benzoic acid	65-85-0	T	ug/L				--	--	--	--	--
Benzyl alcohol	100-51-6	T	ug/L				--	--	--	--	--
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2		--	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2		--	--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L				--	--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2		--	--	--	--	--
bis(2-Chloroisopropyl)ether	39638-32-9	T	ug/L				--	--	--	--	--
Bis(2-ethylhexyl) adipate	103-23-1	T	ug/L				--	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2		--	--	--	--	--
Carbazole	86-74-8	T	ug/L				--	--	--	--	--
Dibenzofuran	132-64-9	T	ug/L				--	--	--	--	--
Diethyl phthalate	84-66-2	T	ug/L	200	GW-2		--	--	--	--	--
Dimethyl phthalate	131-11-3	T	ug/L	600	GW-2		--	--	--	--	--
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2		--	--	--	--	--
Di-n-octyl phthalate	117-84-0	T	ug/L				--	--	--	--	--
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2		--	--	--	--	--
Hexachlorobutadiene	87-88-3	T	ug/L	0.01	GW-2		--	--	--	--	--
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2		--	--	--	--	--
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2		--	--	--	--	--
Isophorone	78-59-1	T	ug/L	110	GW-2		--	--	--	--	--
Nitrobenzene	98-95-3	T	ug/L	100	GW-2		--	--	--	--	--
N-Nitrosodimethylamine	62-75-9	T	ug/L	0.34	GW-2		--	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2		--	--	--	--	--
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.69	GW-2		--	--	--	--	--
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2		--	--	--	--	--
Perylene	198-55-0	T	ug/L				--	--	--	--	--
Phenol	108-95-2	T	ug/L	70000	GW-2		--	--	--	--	--
Pyridine	110-86-1	T	ug/L				--	--	--	--	--
Total Petroleum Hydrocarbons											
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2		--	--	--	--	--
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2		--	--	--	--	--
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2		--	--	--	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2		--	--	--	--	--
Volatile Organic Compounds											
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.037	GW-2		--	--	--	--	--
1,2-Dichlorobenzene	95-50-1	T	ug/L	800	GW-2		--	--	--	--	--
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2		--	--	--	--	--
1,4-Dichlorobenzene	106-46-7	T	ug/L	59.8	GW-2		--	--	--	--	--
Conventional											
Alkalinity as Bicarbonate	ALKHCO3	T	mg/L as CaCO3				--	--	--	--	--
Alkalinity as Carbonate	ALKCO3	T	mg/L as CaCO3				--	--	--	--	--
Alkalinity, Total	ALKT	T	ug/L				--	--	--	--	--
Chloride	16887-00-6	T	ug/L				--	--	--	--	--
Dissolved Organic Carbon	DOC	T	ug/L				--	--	--	--	--

Table B.4. Stormwater Chemical Analytical Results
 Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	SWRX-POST 04/22/2020	SWRX-POST 05/17/2020	SWRX-POST 10/10/2020	SWRX-POST 11/03/2020
						SPM-SWRX-POST-SW-20200422	SPM-NPDES-SW-20200517	SPM-NPDES-SW-20201010	SPM-NPDES-SW-20201103
Total PAHs (ND=0)	T-PAH	T	ug/L			--	--	--	--
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2	--	--	--	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2	--	--	--	--
Total cPAHs TEQ (ND=1)	T-cPAH-1U	T	ug/L			--	--	--	--
Semivolatile Organic Compounds									
1,2-Dinitrobenzene	528-29-0	T	ug/L			--	--	--	--
1,2-Diphenylhydrazine	122-66-7	T	ug/L	0.02	GW-2	--	--	--	--
1,3-Dinitrobenzene	99-65-0	T	ug/L			--	--	--	--
1,4-Dinitrobenzene	100-25-4	T	ug/L			--	--	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	T	ug/L			--	--	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	T	ug/L			--	--	--	--
2,3-Dichloroaniline	608-27-5	T	ug/L			--	--	--	--
2,4,5-Trichlorophenol	95-95-4	T	ug/L	600	GW-2	--	--	--	--
2,4,6-Trichlorophenol	88-06-2	T	ug/L	0.28	GW-2	--	--	--	--
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2	--	--	--	--
2,4-Dimethylphenol	105-67-9	T	ug/L	97	GW-2	--	--	--	--
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2	--	--	--	--
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2	--	--	--	--
2,6-Dinitrotoluene	606-20-2	T	ug/L			--	--	--	--
2-Chloronaphthalene	91-58-7	T	ug/L	100	GW-2	--	--	--	--
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2	--	--	--	--
2-Methylphenol	95-48-7	T	ug/L			--	--	--	--
2-Nitroaniline	88-74-4	T	ug/L			--	--	--	--
2-Nitrophenol	88-75-5	T	ug/L			--	--	--	--
3 & 4 Methylphenol	65794-96-9	T	ug/L			--	--	--	--
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2	--	--	--	--
3-Nitroaniline	99-09-2	T	ug/L			--	--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2	--	--	--	--
4-Bromophenyl phenyl ether	101-55-3	T	ug/L			--	--	--	--
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2	--	--	--	--
4-Chloroaniline	106-47-8	T	ug/L			--	--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L			--	--	--	--
4-Methylphenol	106-44-5	T	ug/L			--	--	--	--
4-Nitroaniline	100-01-6	T	ug/L			--	--	--	--
4-Nitrophenol	100-02-7	T	ug/L			--	--	--	--
Aniline	62-53-3	T	ug/L			--	--	--	--
Benidine	92-87-5	T	ug/L	2.3E-05	GW-2	--	--	--	--
Benzoic acid	65-85-0	T	ug/L			--	--	--	--
Benzyl alcohol	100-51-6	T	ug/L			--	--	--	--
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2	--	--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2	--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L			--	--	--	--
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2	--	--	--	--
bis(2-Chloroisopropyl)ether	39638-32-9	T	ug/L			--	--	--	--
Bis(2-ethylhexyl) adipate	103-23-1	T	ug/L			--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2	--	--	--	--
Carbazole	86-74-8	T	ug/L			--	--	--	--
Dibenzofuran	132-64-9	T	ug/L			--	--	--	--
Diethyl phthalate	84-66-2	T	ug/L	200	GW-2	--	--	--	--
Dimethyl phthalate	131-11-3	T	ug/L	600	GW-2	--	--	--	--
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2	--	--	--	--
Di-n-octyl phthalate	117-84-0	T	ug/L			--	--	--	--
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2	--	--	--	--
Hexachlorobutadiene	87-88-3	T	ug/L	0.01	GW-2	--	--	--	--
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2	--	--	--	--
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2	--	--	--	--
Isophorone	78-59-1	T	ug/L	110	GW-2	--	--	--	--
Nitrobenzene	98-95-3	T	ug/L	100	GW-2	--	--	--	--
N-Nitrosodimethylamine	62-75-9	T	ug/L	0.34	GW-2	--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2	--	--	--	--
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.69	GW-2	--	--	--	--
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2	--	--	--	--
Perylene	198-55-0	T	ug/L			--	--	--	--
Phenol	108-95-2	T	ug/L	70000	GW-2	--	--	--	--
Pyridine	110-86-1	T	ug/L			--	--	--	--
Total Petroleum Hydrocarbons									
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2	--	--	--	--
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2	--	--	--	--
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2	--	--	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2	--	--	--	--
Volatile Organic Compounds									
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.037	GW-2	--	--	--	--
1,2-Dichlorobenzene	95-50-1	T	ug/L	800	GW-2	--	--	--	--
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2	--	--	--	--
1,4-Dichlorobenzene	106-46-7	T	ug/L	59.8	GW-2	--	--	--	--
Conventional									
Alkalinity as Bicarbonate	ALKHCO3	T	mg/L as CaCO3			--	--	--	--
Alkalinity as Carbonate	ALKCO3	T	mg/L as CaCO3			--	--	--	--
Alkalinity, Total	ALKT	T	ug/L			--	--	--	--
Chloride	16887-00-6	T	ug/L			--	--	--	--
Dissolved Organic Carbon	DOC	T	ug/L			--	--	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location	SWRX-POST	SWRX-POST	SWRX-POST	SWRX-PRE	SWRX-PRE
						Date	01/28/2021	04/24/2021	05/27/2021	10/08/2014	04/12/2017
						Sample	SPM-NPDES-SW-20210128	SPM-NPDES-SW-20210424	SPM-NPDES-SW-20210527	SP-OWS-01 (WATER)	SPM-SWRX-PRE-SW-20170412
Total PAHs (ND=0)	T-PAH	T	ug/L				--	--	--	0.38	--
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2		--	--	--	0.0037 J	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2		--	--	--	0.034 J	--
Total cPAHs TEQ (ND=1)	T-cPAH-1U	T	ug/L				--	--	--	0.064 J	--
Semivolatile Organic Compounds											
1,2-Dinitrobenzene	528-29-0	T	ug/L				--	--	--	--	--
1,2-Diphenylhydrazine	122-66-7	T	ug/L	0.02	GW-2		--	--	--	--	--
1,3-Dinitrobenzene	99-65-0	T	ug/L				--	--	--	--	--
1,4-Dinitrobenzene	100-25-4	T	ug/L				--	--	--	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	T	ug/L				--	--	--	< 0 U	--
2,3,5,6-Tetrachlorophenol	935-95-5	T	ug/L				--	--	--	--	--
2,3-Dichloroaniline	608-27-5	T	ug/L				--	--	--	--	--
2,4,5-Trichlorophenol	95-95-4	T	ug/L	600	GW-2		--	--	--	< 0.38 U	--
2,4,6-Trichlorophenol	88-06-2	T	ug/L	0.28	GW-2		--	--	--	< 0.57 U	--
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2		--	--	--	< 0.38 U	--
2,4-Dimethylphenol	105-67-9	T	ug/L	97	GW-2		--	--	--	< 1.9 U	--
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2		--	--	--	< 4.7 U	--
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2		--	--	--	< 0.38 U	--
2,6-Dinitrotoluene	606-20-2	T	ug/L				--	--	--	< 0.38 U	--
2-Chloronaphthalene	91-58-7	T	ug/L	100	GW-2		--	--	--	< 0.057 U	--
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2		--	--	--	< 0.38 U	--
2-Methylphenol	95-48-7	T	ug/L				--	--	--	< 0.38 U	--
2-Nitroaniline	88-74-4	T	ug/L				--	--	--	< 0.38 U	--
2-Nitrophenol	88-75-5	T	ug/L				--	--	--	< 0.38 U	--
3 & 4 Methylphenol	65794-96-9	T	ug/L				--	--	--	--	--
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2		--	--	--	< 1.9 U	--
3-Nitroaniline	99-09-2	T	ug/L				--	--	--	< 0.38 U	--
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2		--	--	--	< 3.8 U	--
4-Bromophenyl phenyl ether	101-55-3	T	ug/L				--	--	--	< 0.38 U	--
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2		--	--	--	< 0.38 U	--
4-Chloroaniline	106-47-8	T	ug/L				--	--	--	< 0.38 U	--
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L				--	--	--	< 0.38 U	--
4-Methylphenol	106-44-5	T	ug/L				--	--	--	3.4	--
4-Nitroaniline	100-01-6	T	ug/L				--	--	--	< 0.57 U	--
4-Nitrophenol	100-02-7	T	ug/L				--	--	--	< 2.8 U	--
Aniline	62-53-3	T	ug/L				--	--	--	--	--
Benzidine	92-87-5	T	ug/L	2.3E-05	GW-2		--	--	--	--	--
Benzoic acid	65-85-0	T	ug/L				--	--	--	3.6	--
Benzyl alcohol	100-51-6	T	ug/L				--	--	--	< 0.38 U	--
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2		--	--	--	0.25 J	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2		--	--	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L				--	--	--	< 0.38 U	--
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2		--	--	--	< 0.38 U	--
bis(2-Chloroisopropyl) ether	39638-32-9	T	ug/L				--	--	--	--	--
Bis(2-ethylhexyl) adipate	103-23-1	T	ug/L				--	--	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2		--	--	--	< 2.8 U	--
Carbazole	86-74-8	T	ug/L				--	--	--	< 0.38 U	--
Dibenzofuran	132-64-9	T	ug/L				--	--	--	< 0.38 U	--
Diethyl phthalate	84-66-2	T	ug/L	200	GW-2		--	--	--	< 0.38 U	--
Dimethyl phthalate	131-11-3	T	ug/L	600	GW-2		--	--	--	0.31 J	--
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2		--	--	--	0.15 J	--
Di-n-octyl phthalate	117-84-0	T	ug/L				--	--	--	< 0.38 U	--
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2		--	--	--	< 0.38 U	--
Hexachlorobutadiene	87-88-3	T	ug/L	0.01	GW-2		--	--	--	< 0.57 U	--
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2		--	--	--	< 1.9 U	--
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2		--	--	--	< 0.57 U	--
Isophorone	78-59-1	T	ug/L	110	GW-2		--	--	--	< 0.38 U	--
Nitrobenzene	98-95-3	T	ug/L	100	GW-2		--	--	--	< 0.38 U	--
N-Nitrosodimethylamine	62-75-9	T	ug/L	0.34	GW-2		--	--	--	< 1.9 U	--
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2		--	--	--	< 0.38 U	--
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.69	GW-2		--	--	--	< 0.38 U	--
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2		--	--	--	< 0.66 U	--
Perylene	198-55-0	T	ug/L				--	--	--	--	--
Phenol	108-95-2	T	ug/L	70000	GW-2		--	--	--	< 0.57 U	--
Pyridine	110-86-1	T	ug/L				--	--	--	--	--
Total Petroleum Hydrocarbons											
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2		--	--	--	--	--
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2		--	--	--	--	--
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2		--	--	--	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2		--	--	--	--	--
Volatile Organic Compounds											
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.037	GW-2		--	--	--	< 0.38 U	--
1,2-Dichlorobenzene	95-50-1	T	ug/L	800	GW-2		--	--	--	< 0.38 U	--
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2		--	--	--	< 0.38 U	--
1,4-Dichlorobenzene	106-46-7	T	ug/L	59.8	GW-2		--	--	--	< 0.38 U	--
Conventional											
Alkalinity as Bicarbonate	ALKHCO3	T	mg/L as CaCO3				--	--	--	25	--
Alkalinity as Carbonate	ALKCO3	T	mg/L as CaCO3				--	--	--	5	--
Alkalinity, Total	ALKT	T	ug/L				--	--	--	25000	--
Chloride	16887-00-6	T	ug/L				--	--	--	5100	--
Dissolved Organic Carbon	DOC	T	ug/L				--	--	--	2100	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	Location	SWRX-PRE	SWRX-PRE	SWRX-PRE	SWRX-PRE	SWRX-PRE
						Date	05/16/2017	06/08/2017	09/19/2017	03/04/2021	05/27/2021
						Sample	SPM-SWRX-PRE-SW-20170516	SPM-SWRX-PRE-SW-20170608	SPM-SWRX-PRE-SW-20170919	PRERX-SW-210304	PRERX-SW-210527
Total PAHs (ND=0)	T-PAH	T	ug/L				--	0.349	--	0.0400 J	0.0760 J
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2		--	0.0287	--	< 0.1 U	0.00122 J
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2		--	0.0292	--	< 0.0805 U	0.00722 J
Total cPAHs TEQ (ND=1)	T-cPAH-1U	T	ug/L				--	--	--	--	--
Semivolatile Organic Compounds											
1,2-Dinitrobenzene	528-29-0	T	ug/L				--	< 0.96 U	--	--	--
1,2-Diphenylhydrazine	122-66-7	T	ug/L	0.02	GW-2		--	< 0.96 U	--	--	--
1,3-Dinitrobenzene	99-65-0	T	ug/L				--	< 0.96 U	--	--	--
1,4-Dinitrobenzene	100-25-4	T	ug/L				--	< 0.96 U	--	--	--
2,3,4,6-Tetrachlorophenol	58-90-2	T	ug/L				--	< 0.96 U	--	--	--
2,3,5,6-Tetrachlorophenol	935-95-5	T	ug/L				--	< 0.96 U	--	--	--
2,3-Dichloroaniline	608-27-5	T	ug/L				--	< 0.96 U	--	--	--
2,4,5-Trichlorophenol	95-95-4	T	ug/L	600	GW-2		--	< 0.96 U	--	< 1 U	< 1 U
2,4,6-Trichlorophenol	88-06-2	T	ug/L	0.28	GW-2		--	< 0.96 U	--	< 1 U	< 1 U
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2		--	< 0.96 U	--	< 1 U	< 1 U
2,4-Dimethylphenol	105-67-9	T	ug/L	97	GW-2		--	< 0.96 U	--	< 1 U	< 1 U
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2		--	< 4.8 U	--	< 2 UJ	< 2 UJ
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2		--	< 0.96 U	--	< 1 U	< 1 U
2,6-Dinitrotoluene	606-20-2	T	ug/L				--	< 0.96 U	--	< 1 U	< 1 U
2-Chloronaphthalene	91-58-7	T	ug/L	100	GW-2		--	< 0.96 U	--	< 0.2 U	< 0.01 U
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2		--	< 0.96 U	--	< 0.2 U	< 0.2 U
2-Methylphenol	95-48-7	T	ug/L				--	< 0.96 U	--	< 0.2 U	0.04 J
2-Nitroaniline	88-74-4	T	ug/L				--	< 0.96 U	--	< 1 U	< 1 U
2-Nitrophenol	88-75-5	T	ug/L				--	< 0.96 U	--	< 1 U	< 1 U
3 & 4 Methylphenol	65794-96-9	T	ug/L				--	< 0.96 U	--	--	--
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2		--	< 0.96 U	--	< 1 U	< 1 U
3-Nitroaniline	99-09-2	T	ug/L				--	< 0.96 U	--	< 1 U	< 1 U
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2		--	< 4.8 U	--	< 2 U	< 2 U
4-Bromophenyl phenyl ether	101-55-3	T	ug/L				--	< 0.96 U	--	< 0.2 U	< 0.2 U
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2		--	< 0.96 U	--	< 1 U	< 1 U
4-Chloroaniline	106-47-8	T	ug/L				--	< 0.96 U	--	< 1 UJ	< 1 UJ
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L				--	< 0.96 U	--	< 0.2 UJ	< 0.2 U
4-Methylphenol	106-44-5	T	ug/L				--	--	--	< 0.2 U	0.05 J
4-Nitroaniline	100-01-6	T	ug/L				--	< 0.96 U	--	< 1 U	< 1 U
4-Nitrophenol	100-02-7	T	ug/L				--	< 4.8 U	--	< 1 U	< 1 U
Aniline	62-53-3	T	ug/L				--	< 4.8 U	--	--	--
Benzidine	92-87-5	T	ug/L	2.3E-05	GW-2		--	< 4.8 U	--	--	--
Benzoic acid	65-85-0	T	ug/L				--	--	--	< 2 U	0.4 J
Benzyl alcohol	100-51-6	T	ug/L				--	< 0.96 U	--	< 0.2 U	0.2 J
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2		--	< 0.96 U	--	< 0.2 U	0.2 J
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2		--	--	--	< 0.2 U	< 0.2 U
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L				--	< 0.96 U	--	< 0.2 U	< 0.2 U
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2		--	< 0.96 U	--	< 0.2 U	< 0.2 U
bis(2-Chloroisopropyl)ether	39638-32-9	T	ug/L				--	< 0.96 U	--	--	--
Bis(2-ethylhexyl) adipate	103-23-1	T	ug/L				--	< 0.96 U	--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2		--	2.5	--	2.6	3.7
Carbazole	86-74-8	T	ug/L				--	< 0.96 U	--	< 0.2 U	0.008 J
Dibenzofuran	132-64-9	T	ug/L				--	< 0.96 U	--	< 0.1 U	0.002 J
Diethyl phthalate	84-66-2	T	ug/L	200	GW-2		--	< 0.96 U	--	< 0.2 U	< 0.2 U
Dimethyl phthalate	131-11-3	T	ug/L	600	GW-2		--	< 0.96 U	--	0.7	16.9
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2		--	< 0.96 U	--	0.7	0.2 J
Di-n-octyl phthalate	117-84-0	T	ug/L				--	< 0.96 U	--	0.3	0.2 J
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2		--	< 0.96 U	--	< 0.2 U	< 0.2 U
Hexachlorobutadiene	87-88-3	T	ug/L	0.01	GW-2		--	< 0.96 U	--	< 0.2 U	< 0.2 U
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2		--	< 0.96 U	--	< 1 UJ	< 1 U
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2		--	< 0.96 U	--	< 0.2 U	< 0.2 U
Isophorone	78-59-1	T	ug/L	110	GW-2		--	< 0.96 U	--	< 0.2 U	< 0.2 U
Nitrobenzene	98-95-3	T	ug/L	100	GW-2		--	< 0.96 U	--	< 0.2 U	< 0.2 U
N-Nitrosodimethylamine	62-75-9	T	ug/L	0.34	GW-2		--	< 0.96 U	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2		--	< 0.96 U	--	< 0.2 U	< 0.2 U
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.69	GW-2		--	< 0.96 U	--	< 0.2 U	< 0.2 U
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2		--	< 4.8 U	--	< 1 UJ	0.3 J
Perylene	198-55-0	T	ug/L				--	--	--	--	< 0.01 U
Phenol	108-95-2	T	ug/L	70000	GW-2		--	< 0.96 U	--	0.1 J	0.1 J
Pyridine	110-86-1	T	ug/L				--	< 0.96 U	--	--	--
Total Petroleum Hydrocarbons											
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2		--	--	--	< 100 U	< 100 U
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2		--	--	--	305	< 100 U
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2		--	--	--	380	< 200 U
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2		--	--	--	685	< 200 U
Volatile Organic Compounds											
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.037	GW-2		--	< 0.96 U	--	< 0.2 U	< 0.2 U
1,2-Dichlorobenzene	95-50-1	T	ug/L	800	GW-2		--	< 0.96 U	--	< 0.2 U	< 0.2 U
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2		--	< 0.96 U	--	< 0.2 U	< 0.2 U
1,4-Dichlorobenzene	106-46-7	T	ug/L	59.8	GW-2		--	< 0.96 U	--	< 0.2 U	< 0.2 U
Conventional											
Alkalinity as Bicarbonate	ALKHCO3	T	mg/L as CaCO3				--	--	--	--	--
Alkalinity as Carbonate	ALKCO3	T	mg/L as CaCO3				--	--	--	--	--
Alkalinity, Total	ALKT	T	ug/L				--	11000	--	--	--
Chloride	16887-00-6	T	ug/L				--	--	--	--	--
Dissolved Organic Carbon	DOC	T	ug/L				--	--	--	--	--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS 2022.02	Screening Level Source	SWRX-PRE 05/27/2021 PRERX-SW-FD-210527
Total PAHs (ND=0)	T-PAH	T	ug/L			0.118 J
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	T	ug/L	0.00969	GW-2	0.00667 J
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	T	ug/L	0.00969	GW-2	0.00717 J
Total cPAHs TEQ (ND=1)	T-cPAH-1U	T	ug/L			--
Semivolatile Organic Compounds						
1,2-Dinitrobenzene	528-29-0	T	ug/L			--
1,2-Diphenylhydrazine	122-66-7	T	ug/L	0.02	GW-2	--
1,3-Dinitrobenzene	99-65-0	T	ug/L			--
1,4-Dinitrobenzene	100-25-4	T	ug/L			--
2,3,4,6-Tetrachlorophenol	58-90-2	T	ug/L			--
2,3,5,6-Tetrachlorophenol	935-95-5	T	ug/L			--
2,3-Dichloroaniline	608-27-5	T	ug/L			--
2,4,5-Trichlorophenol	95-95-4	T	ug/L	600	GW-2	< 1 U
2,4,6-Trichlorophenol	88-06-2	T	ug/L	0.28	GW-2	< 1 U
2,4-Dichlorophenol	120-83-2	T	ug/L	10	GW-2	< 1 U
2,4-Dimethylphenol	105-67-9	T	ug/L	97	GW-2	< 1 U
2,4-Dinitrophenol	51-28-5	T	ug/L	100	GW-2	< 2 UJ
2,4-Dinitrotoluene	121-14-2	T	ug/L	0.18	GW-2	< 1 U
2,6-Dinitrotoluene	606-20-2	T	ug/L			< 1 U
2-Chloronaphthalene	91-58-7	T	ug/L	100	GW-2	< 0.01 U
2-Chlorophenol	95-57-8	T	ug/L	17	GW-2	< 0.2 U
2-Methylphenol	95-48-7	T	ug/L			0.03 J
2-Nitroaniline	88-74-4	T	ug/L			< 1 U
2-Nitrophenol	88-75-5	T	ug/L			< 1 U
3 & 4 Methylphenol	65794-96-9	T	ug/L			--
3,3'-Dichlorobenzidine	91-94-1	T	ug/L	0.0033	GW-2	< 1 U
3-Nitroaniline	99-09-2	T	ug/L			< 1 U
4,6-Dinitro-2-methylphenol	534-52-1	T	ug/L	7	GW-2	< 2 U
4-Bromophenyl phenyl ether	101-55-3	T	ug/L			< 0.2 U
4-Chloro-3-methylphenol	59-50-7	T	ug/L	36	GW-2	< 1 U
4-Chloroaniline	106-47-8	T	ug/L			< 1 UJ
4-Chlorophenyl phenyl ether	7005-72-3	T	ug/L			< 0.2 U
4-Methylphenol	106-44-5	T	ug/L			0.04 J
4-Nitroaniline	100-01-6	T	ug/L			< 1 U
4-Nitrophenol	100-02-7	T	ug/L			< 1 U
Aniline	62-53-3	T	ug/L			--
Benzidine	92-87-5	T	ug/L	2.3E-05	GW-2	--
Benzoic acid	65-85-0	T	ug/L			0.4 J
Benzyl alcohol	100-51-6	T	ug/L			0.2 J
Benzyl butyl phthalate	85-68-7	T	ug/L	0.013	GW-2	0.2 J
Bis(2-chloro-1-methylethyl) ether	108-60-1	T	ug/L	900	GW-2	< 0.2 U
Bis(2-chloroethoxy)methane	111-91-1	T	ug/L			< 0.2 U
Bis(2-chloroethyl) ether	111-44-4	T	ug/L	0.06	GW-2	< 0.2 U
bis(2-Chloroisopropyl) ether	39638-32-9	T	ug/L			--
Bis(2-ethylhexyl) adipate	103-23-1	T	ug/L			--
Bis(2-ethylhexyl) phthalate	117-81-7	T	ug/L	0.046	GW-2	3.3
Carbazole	86-74-8	T	ug/L			0.007 J
Dibenzofuran	132-64-9	T	ug/L			< 0.01 U
Diethyl phthalate	84-66-2	T	ug/L	200	GW-2	< 0.2 U
Dimethyl phthalate	131-11-3	T	ug/L	600	GW-2	15.7
Di-n-butyl phthalate	84-74-2	T	ug/L	8	GW-2	0.2 J
Di-n-octyl phthalate	117-84-0	T	ug/L			0.2 J
Hexachlorobenzene	118-74-1	T	ug/L	5E-06	GW-2	< 0.2 U
Hexachlorobutadiene	87-88-3	T	ug/L	0.01	GW-2	< 0.2 U
Hexachlorocyclopentadiene	77-47-4	T	ug/L	1	GW-2	< 1 U
Hexachloroethane	67-72-1	T	ug/L	0.02	GW-2	< 0.2 U
Isophorone	78-59-1	T	ug/L	110	GW-2	< 0.2 U
Nitrobenzene	98-95-3	T	ug/L	100	GW-2	< 0.2 U
N-Nitrosodimethylamine	62-75-9	T	ug/L	0.34	GW-2	--
N-Nitroso-di-n-propylamine	621-64-7	T	ug/L	0.058	GW-2	< 0.2 U
N-Nitrosodiphenylamine	86-30-6	T	ug/L	0.69	GW-2	< 0.2 U
Pentachlorophenol	87-86-5	T	ug/L	0.002	GW-2	0.2 J
Perylene	198-55-0	T	ug/L			< 0.01 U
Phenol	108-95-2	T	ug/L	70000	GW-2	0.1 J
Pyridine	110-86-1	T	ug/L			--
Total Petroleum Hydrocarbons						
Gasoline Range Organics	TPH-GRO	T	ug/L	800	GW-2	< 100 U
Diesel Range Organics	TPH-DRO	T	ug/L	500	GW-2	< 100 U
Motor Oil Range Organics	TPH-ORO	T	ug/L	500	GW-2	< 200 U
Diesel and Oil Extended Range Organics	TPH-EXT	T	ug/L	500	GW-2	< 200 U
Volatile Organic Compounds						
1,2,4-Trichlorobenzene	120-82-1	T	ug/L	0.037	GW-2	< 0.2 U
1,2-Dichlorobenzene	95-50-1	T	ug/L	800	GW-2	< 0.2 U
1,3-Dichlorobenzene	541-73-1	T	ug/L	2	GW-2	< 0.2 U
1,4-Dichlorobenzene	106-46-7	T	ug/L	59.8	GW-2	< 0.2 U
Conventional						
Alkalinity as Bicarbonate	ALKHCO3	T	mg/L as CaCO3			--
Alkalinity as Carbonate	ALKCO3	T	mg/L as CaCO3			--
Alkalinity, Total	ALKT	T	ug/L			--
Chloride	16887-00-6	T	ug/L			--
Dissolved Organic Carbon	DOC	T	ug/L			--

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

					Location Date Sample	CB-01 09/19/2017 SPM-CB-01-SW-20170919	CB-02 06/08/2017 SPM-CB-02-SW-20170608	CB-02 09/19/2017 SPM-CB-02-SW-20170919	CB-02 03/05/2021 CB-02-SW-210305	CB-02 04/24/2021 SPM-CB-02-SW-20210424
Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS _2022.02	Screening Level Source					
Hardness	Hard	T	ug/L			--	12000 12000	--	--	--
Nitrate as Nitrogen	14797-55-8	T	ug/L			--	--	--	--	--
Sulfate	14808-79-8	T	ug/L			--	--	--	--	--
Total Dissolved Solids	TDS	T	ug/L			--	60000	--	--	--
Total Organic Carbon	TOC	T	ug/L			--	16000	--	3040	--
Total Suspended Solids	TSS	T	ug/L			--	8000	--	6000	24000
(None)										
1-Chloropropane	540-54-5	T	ug/L			--	--	--	--	--
Field Parameters										
Temperature	Temp	T	deg C			--	16.41	--	--	--
Specific Conductance	Cond	T	umhos/cm			--	38	--	--	--
Dissolved Oxygen	DO	T	ug/L			--	3220	--	--	--
pH	pH	T	pH units			--	6.75	--	--	--
Oxidation Reduction Potential	ORP	T	mV			--	159	--	--	--
Turbidity	Turb	T	NTU			--	7.6	--	--	--
FOG										
Fats/Oils/Grease (Non-Polar)	FOG-NP	T	ug/L			--	--	--	--	--
Fats/Oils/Grease (Polar)	FOG-P	T	ug/L			--	--	--	--	--
Fats/Oils/Grease (Total)	FOG-TOT	T	ug/L			--	--	--	--	--

Bold - detected
Blue Shaded - Detected result exceeded screening level
 U - Analyte not detected at or above Reporting Limit (RL) shown
 J - Result value estimated
 UJ - Analyte not detected and the Reporting Limit (RL) is an estimate
 D - Dissolved Fraction (filtered) sample result
 T - Total Fraction (unfiltered) sample result
 cPAHs = carcinogenic polycyclic aromatic hydrocarbons
 HPAH = high molecular weight PAH
 LPAH = low molecular weight PAH
 "--" - indicates results not available
 ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components
 ND = 0 - calculated using 0 for non-detected components

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

					Location Date Sample	CB-02 05/27/2021 SPM-CB-02-SW-20210527	CB-02 05/27/2021 CB-02-SW-210527	CB-05 09/19/2017 SPM-CB-05-SW-20170919	CB-05 04/24/2021 SPM-CB-05-SW-20210424	CB-05 05/27/2021 SPM-CB-05-SW-20210527
Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS _2022.02	Screening Level Source					
Hardness	Hard	T	ug/L			--	--	--	--	--
Nitrate as Nitrogen	14797-55-8	T	ug/L			--	--	--	--	--
Sulfate	14808-79-8	T	ug/L			--	--	--	--	--
Total Dissolved Solids	TDS	T	ug/L			--	--	--	--	--
Total Organic Carbon	TOC	T	ug/L			--	7760	--	--	--
Total Suspended Solids	TSS	T	ug/L			4000	15000	--	8000	8000
(None)										
1-Chloropropane	540-54-5	T	ug/L			--	--	--	--	--
Field Parameters										
Temperature	Temp	T	deg C			--	--	--	--	--
Specific Conductance	Cond	T	umhos/cm			--	--	--	--	--
Dissolved Oxygen	DO	T	ug/L			--	--	--	--	--
pH	pH	T	pH units			--	--	--	--	--
Oxidation Reduction Potential	ORP	T	mV			--	--	--	--	--
Turbidity	Turb	T	NTU			--	--	--	--	--
FOG										
Fats/Oils/Grease (Non-Polar)	FOG-NP	T	ug/L			--	--	--	--	--
Fats/Oils/Grease (Polar)	FOG-P	T	ug/L			--	--	--	--	--
Fats/Oils/Grease (Total)	FOG-TOT	T	ug/L			--	--	--	--	--

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

D - Dissolved Fraction (filtered) sample result

T - Total Fraction (unfiltered) sample result

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

"--" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

					Location Date Sample	CB-06 06/08/2017 SPM-CB-06-SW-20170608	CB-06 09/19/2017 SPM-CB-06-SW-20170919	CB-06 03/04/2021 CB-06-SW-210304	CB-06 04/24/2021 SPM-CB-06-SW-20210424	CB-06 05/27/2021 SPM-CB-06-SW-20210527
Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS _2022.02	Screening Level Source					
Hardness	Hard	T	ug/L			9100 9100	--	--	--	--
Nitrate as Nitrogen	14797-55-8	T	ug/L			--	--	--	--	--
Sulfate	14808-79-8	T	ug/L			--	--	--	--	--
Total Dissolved Solids	TDS	T	ug/L			52000	--	--	--	--
Total Organic Carbon	TOC	T	ug/L			15000	--	5400	--	--
Total Suspended Solids	TSS	T	ug/L			18000	--	26000	24000	20000
(None)										
1-Chloropropane	540-54-5	T	ug/L			--	--	--	--	--
Field Parameters										
Temperature	Temp	T	deg C			19.1	--	--	--	--
Specific Conductance	Cond	T	umhos/cm			19	--	--	--	--
Dissolved Oxygen	DO	T	ug/L			4090	--	--	--	--
pH	pH	T	pH units			6.91	--	--	--	--
Oxidation Reduction Potential	ORP	T	mV			135	--	--	--	--
Turbidity	Turb	T	NTU			31.2	--	--	--	--
FOG										
Fats/Oils/Grease (Non-Polar)	FOG-NP	T	ug/L			--	--	--	--	--
Fats/Oils/Grease (Polar)	FOG-P	T	ug/L			--	--	--	--	--
Fats/Oils/Grease (Total)	FOG-TOT	T	ug/L			--	--	--	--	--

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

D - Dissolved Fraction (filtered) sample result

T - Total Fraction (unfiltered) sample result

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

"--" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

					Location Date Sample	CB-06 05/27/2021 CB-06-SW-210527	SWRX-MID 04/12/2017 SPM-SWRX-MID-SW-20170412	SWRX-MID 05/16/2017 SPM-SWRX-MID-SW-20170516	SWRX-MID 06/08/2017 SPM-SWRX-MID-SW-20170608
Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS _2022.02	Screening Level Source				
Hardness	Hard	T	ug/L			--	--	--	20000 20000
Nitrate as Nitrogen	14797-55-8	T	ug/L			--	--	--	--
Sulfate	14808-79-8	T	ug/L			--	--	--	--
Total Dissolved Solids	TDS	T	ug/L			--	--	--	45000
Total Organic Carbon	TOC	T	ug/L			10310	--	--	21000
Total Suspended Solids	TSS	T	ug/L			12000	--	--	14000
(None)									
1-Chloropropane	540-54-5	T	ug/L			--	--	--	--
Field Parameters									
Temperature	Temp	T	deg C			--	--	--	18.81
Specific Conductance	Cond	T	umhos/cm			--	--	--	78
Dissolved Oxygen	DO	T	ug/L			--	--	--	3350
pH	pH	T	pH units			--	--	--	6.68
Oxidation Reduction Potential	ORP	T	mV			--	--	--	108
Turbidity	Turb	T	NTU			--	--	--	19.7
FOG									
Fats/Oils/Grease (Non-Polar)	FOG-NP	T	ug/L			--	--	--	--
Fats/Oils/Grease (Polar)	FOG-P	T	ug/L			--	--	--	--
Fats/Oils/Grease (Total)	FOG-TOT	T	ug/L			--	--	--	--

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

D - Dissolved Fraction (filtered) sample result

T - Total Fraction (unfiltered) sample result

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

"--" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

					Location Date Sample	SWRX-MID 09/19/2017 SPM-SWRX-MID-SW-20170919	SWRX-POST 12/01/2016 SPM-SWRX-POST-SW-20161201	SWRX-POST 01/01/2017 SPM-SWRX-POST-SW-20170101	SWRX-POST 04/12/2017 SPM-SWRX-POST-SW-20170412
Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS _2022.02	Screening Level Source				
Hardness	Hard	T	ug/L			--	--	--	--
Nitrate as Nitrogen	14797-55-8	T	ug/L			--	--	--	--
Sulfate	14808-79-8	T	ug/L			--	--	--	--
Total Dissolved Solids	TDS	T	ug/L			--	--	--	--
Total Organic Carbon	TOC	T	ug/L			--	--	--	--
Total Suspended Solids	TSS	T	ug/L			--	--	--	--
(None)									
1-Chloropropane	540-54-5	T	ug/L			--	--	--	--
Field Parameters									
Temperature	Temp	T	deg C			--	--	--	--
Specific Conductance	Cond	T	umhos/cm			--	--	--	--
Dissolved Oxygen	DO	T	ug/L			--	--	--	--
pH	pH	T	pH units			--	--	--	--
Oxidation Reduction Potential	ORP	T	mV			--	--	--	--
Turbidity	Turb	T	NTU			--	--	--	--
FOG									
Fats/Oils/Grease (Non-Polar)	FOG-NP	T	ug/L			--	--	--	--
Fats/Oils/Grease (Polar)	FOG-P	T	ug/L			--	--	--	--
Fats/Oils/Grease (Total)	FOG-TOT	T	ug/L			--	--	--	--

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

D - Dissolved Fraction (filtered) sample result

T - Total Fraction (unfiltered) sample result

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

"--" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

					Location Date Sample	SWRX-POST 05/16/2017 SPM-SWRX-POST-SW-20170516	SWRX-POST 06/08/2017 SPM-SWRX-POST-SW-20170608	SWRX-POST 09/19/2017 SPM-SWRX-POST-SW-20170919	SWRX-POST 10/18/2017 SPM-NPDES-SW-20171018
Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS _2022.02	Screening Level Source				
Hardness	Hard	T	ug/L			--	22000 22000	--	--
Nitrate as Nitrogen	14797-55-8	T	ug/L			--	--	--	--
Sulfate	14808-79-8	T	ug/L			--	--	--	--
Total Dissolved Solids	TDS	T	ug/L			--	31000	--	--
Total Organic Carbon	TOC	T	ug/L			--	1500	--	--
Total Suspended Solids	TSS	T	ug/L			--	< 4000 U	--	--
(None)									
1-Chloropropane	540-54-5	T	ug/L			--	--	--	--
Field Parameters									
Temperature	Temp	T	deg C			--	17.72	--	--
Specific Conductance	Cond	T	umhos/cm			--	74	--	--
Dissolved Oxygen	DO	T	ug/L			--	460	--	--
pH	pH	T	pH units			--	6.12	--	--
Oxidation Reduction Potential	ORP	T	mV			--	123	--	--
Turbidity	Turb	T	NTU			--	3.4	--	--
FOG									
Fats/Oils/Grease (Non-Polar)	FOG-NP	T	ug/L			--	--	--	--
Fats/Oils/Grease (Polar)	FOG-P	T	ug/L			--	--	--	--
Fats/Oils/Grease (Total)	FOG-TOT	T	ug/L			--	--	--	--

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

D - Dissolved Fraction (filtered) sample result

T - Total Fraction (unfiltered) sample result

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

"--" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

					Location Date Sample	SWRX-POST 10/18/2017 SPM-SWRX-POST-SW-20171018	SWRX-POST 11/03/2017 SPM-NPDES-SW-20171103	SWRX-POST 11/03/2017 SPM-SWRX-POST-SW-20171103	SWRX-POST 01/05/2018 SPM-NPDES-SW-20180105
Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS _2022.02	Screening Level Source				
Hardness	Hard	T	ug/L			--	--	--	--
Nitrate as Nitrogen	14797-55-8	T	ug/L			--	--	--	--
Sulfate	14808-79-8	T	ug/L			--	--	--	--
Total Dissolved Solids	TDS	T	ug/L			--	--	--	--
Total Organic Carbon	TOC	T	ug/L			--	--	--	--
Total Suspended Solids	TSS	T	ug/L			--	--	--	--
(None)									
1-Chloropropane	540-54-5	T	ug/L			--	--	--	--
Field Parameters									
Temperature	Temp	T	deg C			--	--	--	--
Specific Conductance	Cond	T	umhos/cm			--	--	--	--
Dissolved Oxygen	DO	T	ug/L			--	--	--	--
pH	pH	T	pH units			--	--	--	--
Oxidation Reduction Potential	ORP	T	mV			--	--	--	--
Turbidity	Turb	T	NTU			--	--	--	--
FOG									
Fats/Oils/Grease (Non-Polar)	FOG-NP	T	ug/L			--	--	--	--
Fats/Oils/Grease (Polar)	FOG-P	T	ug/L			--	--	--	--
Fats/Oils/Grease (Total)	FOG-TOT	T	ug/L			--	--	--	--

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

D - Dissolved Fraction (filtered) sample result

T - Total Fraction (unfiltered) sample result

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

"--" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

					Location Date Sample	SWRX-POST 01/23/2018 SPM-NPDES-SW-20180123	SWRX-POST 04/10/2018 SPM-NPDES-SW-20180410	SWRX-POST 10/05/2018 SPM-NPDES-SW-20181005	SWRX-POST 11/02/2018 SPM-NPDES-SW-20181102	SWRX-POST 01/03/2019 SPM-NPDES-SW-20190103
Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS _2022.02	Screening Level Source					
Hardness	Hard	T	ug/L			--	--	--	--	--
Nitrate as Nitrogen	14797-55-8	T	ug/L			--	--	--	--	--
Sulfate	14808-79-8	T	ug/L			--	--	--	--	--
Total Dissolved Solids	TDS	T	ug/L			--	--	--	--	--
Total Organic Carbon	TOC	T	ug/L			--	--	--	--	--
Total Suspended Solids	TSS	T	ug/L			--	--	--	--	--
(None)										
1-Chloropropane	540-54-5	T	ug/L			--	--	--	--	--
Field Parameters										
Temperature	Temp	T	deg C			--	--	--	--	--
Specific Conductance	Cond	T	umhos/cm			--	--	--	--	--
Dissolved Oxygen	DO	T	ug/L			--	--	--	--	--
pH	pH	T	pH units			--	--	--	--	--
Oxidation Reduction Potential	ORP	T	mV			--	--	--	--	--
Turbidity	Turb	T	NTU			--	--	--	--	--
FOG										
Fats/Oils/Grease (Non-Polar)	FOG-NP	T	ug/L			--	--	--	--	--
Fats/Oils/Grease (Polar)	FOG-P	T	ug/L			--	--	--	--	--
Fats/Oils/Grease (Total)	FOG-TOT	T	ug/L			--	--	--	--	--

Bold - detected
Blue Shaded - Detected result exceeded screening level
 U - Analyte not detected at or above Reporting Limit (RL) shown
 J - Result value estimated
 UJ - Analyte not detected and the Reporting Limit (RL) is an estimate
 D - Dissolved Fraction (filtered) sample result
 T - Total Fraction (unfiltered) sample result
 cPAHs = carcinogenic polycyclic aromatic hydrocarbons
 HPAH = high molecular weight PAH
 LPAH = low molecular weight PAH
 "--" - indicates results not available
 ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components
 ND = 0 - calculated using 0 for non-detected components

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

					Location Date Sample	SWRX-POST 04/05/2019 SPM-NPDES-SW-20190405	SWRX-POST 05/14/2019 SPM-NPDES-SW-20190514	SWRX-POST 10/16/2019 SPM-NPDES-SW-20191016	SWRX-POST 12/12/2019 SPM-NPDES-SW-20191212	SWRX-POST 01/10/2020 SPM-NPDES-SW-20200110
Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS _2022.02	Screening Level Source					
Hardness	Hard	T	ug/L			--	--	--	--	--
Nitrate as Nitrogen	14797-55-8	T	ug/L			--	--	--	--	--
Sulfate	14808-79-8	T	ug/L			--	--	--	--	--
Total Dissolved Solids	TDS	T	ug/L			--	--	--	--	--
Total Organic Carbon	TOC	T	ug/L			--	--	--	--	--
Total Suspended Solids	TSS	T	ug/L			--	--	--	--	--
(None)										
1-Chloropropane	540-54-5	T	ug/L			--	--	--	--	--
Field Parameters										
Temperature	Temp	T	deg C			--	--	--	--	--
Specific Conductance	Cond	T	umhos/cm			--	--	--	--	--
Dissolved Oxygen	DO	T	ug/L			--	--	--	--	--
pH	pH	T	pH units			--	--	--	--	--
Oxidation Reduction Potential	ORP	T	mV			--	--	--	--	--
Turbidity	Turb	T	NTU			--	--	--	--	--
FOG										
Fats/Oils/Grease (Non-Polar)	FOG-NP	T	ug/L			--	--	--	--	--
Fats/Oils/Grease (Polar)	FOG-P	T	ug/L			--	--	--	--	--
Fats/Oils/Grease (Total)	FOG-TOT	T	ug/L			--	--	--	--	--

Bold - detected

Blue Shaded - Detected result exceeded screening level

U - Analyte not detected at or above Reporting Limit (RL) shown

J - Result value estimated

UJ - Analyte not detected and the Reporting Limit (RL) is an estimate

D - Dissolved Fraction (filtered) sample result

T - Total Fraction (unfiltered) sample result

cPAHs = carcinogenic polycyclic aromatic hydrocarbons

HPAH = high molecular weight PAH

LPAH = low molecular weight PAH

"--" - indicates results not available

ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components

ND = 0 - calculated using 0 for non-detected components

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

					Location Date Sample	SWRX-POST 04/22/2020 SPM-SWRX-POST-SW-20200422	SWRX-POST 05/17/2020 SPM-NPDES-SW-20200517	SWRX-POST 10/10/2020 SPM-NPDES-SW-20201010	SWRX-POST 11/03/2020 SPM-NPDES-SW-20201103
Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS _2022.02	Screening Level Source				
Hardness	Hard	T	ug/L			--	--	--	--
Nitrate as Nitrogen	14797-55-8	T	ug/L			--	--	--	--
Sulfate	14808-79-8	T	ug/L			--	--	--	--
Total Dissolved Solids	TDS	T	ug/L			--	--	--	--
Total Organic Carbon	TOC	T	ug/L			--	--	--	--
Total Suspended Solids	TSS	T	ug/L			--	--	--	--
(None)									
1-Chloropropane	540-54-5	T	ug/L			--	--	--	--
Field Parameters									
Temperature	Temp	T	deg C			--	--	--	--
Specific Conductance	Cond	T	umhos/cm			--	--	--	--
Dissolved Oxygen	DO	T	ug/L			--	--	--	--
pH	pH	T	pH units			--	--	--	--
Oxidation Reduction Potential	ORP	T	mV			--	--	--	--
Turbidity	Turb	T	NTU			--	--	--	--
FOG									
Fats/Oils/Grease (Non-Polar)	FOG-NP	T	ug/L			--	--	--	--
Fats/Oils/Grease (Polar)	FOG-P	T	ug/L			--	--	--	--
Fats/Oils/Grease (Total)	FOG-TOT	T	ug/L			--	--	--	--

Bold - detected
Blue Shaded - Detected result exceeded screening level
 U - Analyte not detected at or above Reporting Limit (RL) shown
 J - Result value estimated
 UJ - Analyte not detected and the Reporting Limit (RL) is an estimate
 D - Dissolved Fraction (filtered) sample result
 T - Total Fraction (unfiltered) sample result
 cPAHs = carcinogenic polycyclic aromatic hydrocarbons
 HPAH = high molecular weight PAH
 LPAH = low molecular weight PAH
 "--" - indicates results not available
 ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components
 ND = 0 - calculated using 0 for non-detected components

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS _2022.02	Location Date Sample Screening Level Source	SWRX-POST	SWRX-POST	SWRX-POST	SWRX-PRE	SWRX-PRE
						01/28/2021 SPM-NPDES-SW-20210128	04/24/2021 SPM-NPDES-SW-20210424	05/27/2021 SPM-NPDES-SW-20210527	10/08/2014 SP-OWS-01 (WATER)	04/12/2017 SPM-SWRX-PRE-SW-20170412
Hardness	Hard	T	ug/L			--	--	--	--	--
Nitrate as Nitrogen	14797-55-8	T	ug/L			--	--	--	< 900 U	--
Sulfate	14808-79-8	T	ug/L			--	--	--	2000	--
Total Dissolved Solids	TDS	T	ug/L			--	--	--	--	--
Total Organic Carbon	TOC	T	ug/L			--	--	--	1700	--
Total Suspended Solids	TSS	T	ug/L			--	< 4000 U	< 4000 U	< 3300 U	--
(None)										
1-Chloropropane	540-54-5	T	ug/L			--	--	--	0.38	--
Field Parameters										
Temperature	Temp	T	deg C			--	--	--	--	--
Specific Conductance	Cond	T	umhos/cm			--	--	--	81	--
Dissolved Oxygen	DO	T	ug/L			--	--	--	--	--
pH	pH	T	pH units			--	--	--	7.25	--
Oxidation Reduction Potential	ORP	T	mV			--	--	--	--	--
Turbidity	Turb	T	NTU			--	--	--	1.5	--
FOG										
Fats/Oils/Grease (Non-Polar)	FOG-NP	T	ug/L			--	--	--	< 4700 U	--
Fats/Oils/Grease (Polar)	FOG-P	T	ug/L			--	--	--	< 4700 U	--
Fats/Oils/Grease (Total)	FOG-TOT	T	ug/L			--	--	--	< 4700 U	--

Bold - detected
Blue Shaded - Detected result exceeded screening level
 U - Analyte not detected at or above Reporting Limit (RL) shown
 J - Result value estimated
 UJ - Analyte not detected and the Reporting Limit (RL) is an estimate
 D - Dissolved Fraction (filtered) sample result
 T - Total Fraction (unfiltered) sample result
 cPAHs = carcinogenic polycyclic aromatic hydrocarbons
 HPAH = high molecular weight PAH
 LPAH = low molecular weight PAH
 "--" - indicates results not available
 ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components
 ND = 0 - calculated using 0 for non-detected components

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

						Location Date Sample	SWRX-PRE 05/16/2017 SPM-SWRX-PRE-SW-20170516	SWRX-PRE 06/08/2017 SPM-SWRX-PRE-SW-20170608	SWRX-PRE 09/19/2017 SPM-SWRX-PRE-SW-20170919	SWRX-PRE 03/04/2021 PRERX-SW-210304	SWRX-PRE 05/27/2021 PRERX-SW-210527
Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS _2022.02	Screening Level Source						
Hardness	Hard	T	ug/L			--	14000 14000	--	--	--	
Nitrate as Nitrogen	14797-55-8	T	ug/L			--	--	--	--	--	
Sulfate	14808-79-8	T	ug/L			--	--	--	--	--	
Total Dissolved Solids	TDS	T	ug/L			--	21000	--	--	--	
Total Organic Carbon	TOC	T	ug/L			--	16000	--	7990	9610	
Total Suspended Solids	TSS	T	ug/L			--	13000	--	11000	6000 J	
(None)											
1-Chloropropane	540-54-5	T	ug/L			--	--	--	--	--	
Field Parameters											
Temperature	Temp	T	deg C			--	18.58	--	--	--	
Specific Conductance	Cond	T	umhos/cm			--	48	--	--	--	
Dissolved Oxygen	DO	T	ug/L			--	8150	--	--	--	
pH	pH	T	pH units			--	6.68	--	--	--	
Oxidation Reduction Potential	ORP	T	mV			--	120	--	--	--	
Turbidity	Turb	T	NTU			--	24	--	--	--	
FOG											
Fats/Oils/Grease (Non-Polar)	FOG-NP	T	ug/L			--	--	--	--	--	
Fats/Oils/Grease (Polar)	FOG-P	T	ug/L			--	--	--	--	--	
Fats/Oils/Grease (Total)	FOG-TOT	T	ug/L			--	--	--	--	--	

Bold - detected
Blue Shaded - Detected result exceeded screening level
 U - Analyte not detected at or above Reporting Limit (RL) shown
 J - Result value estimated
 UJ - Analyte not detected and the Reporting Limit (RL) is an estimate
 D - Dissolved Fraction (filtered) sample result
 T - Total Fraction (unfiltered) sample result
 cPAHs = carcinogenic polycyclic aromatic hydrocarbons
 HPAH = high molecular weight PAH
 LPAH = low molecular weight PAH
 "--" - indicates results not available
 ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components
 ND = 0 - calculated using 0 for non-detected components

Table B.4. Stormwater Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

					Location Date Sample	SWRX-PRE 05/27/2021 PRERX-SW-FD-210527
Analyte	CAS RN	Fraction	Unit	SPM_RI_STORMWATER_SLS _2022.02	Screening Level	Source
Hardness	Hard	T	ug/L			--
Nitrate as Nitrogen	14797-55-8	T	ug/L			--
Sulfate	14808-79-8	T	ug/L			--
Total Dissolved Solids	TDS	T	ug/L			--
Total Organic Carbon	TOC	T	ug/L			9330
Total Suspended Solids	TSS	T	ug/L			9000 J
(None)						
1-Chloropropane	540-54-5	T	ug/L			--
Field Parameters						
Temperature	Temp	T	deg C			--
Specific Conductance	Cond	T	umhos/cm			--
Dissolved Oxygen	DO	T	ug/L			--
pH	pH	T	pH units			--
Oxidation Reduction Potential	ORP	T	mV			--
Turbidity	Turb	T	NTU			--
FOG						
Fats/Oils/Grease (Non-Polar)	FOG-NP	T	ug/L			--
Fats/Oils/Grease (Polar)	FOG-P	T	ug/L			--
Fats/Oils/Grease (Total)	FOG-TOT	T	ug/L			--

Bold - detected
Blue Shaded - Detected result exceeded screening level
 U - Analyte not detected at or above Reporting Limit (RL) shown
 J - Result value estimated
 UJ - Analyte not detected and the Reporting Limit (RL) is an estimate
 D - Dissolved Fraction (filtered) sample result
 T - Total Fraction (unfiltered) sample result
 cPAHs = carcinogenic polycyclic aromatic hydrocarbons
 HPAH = high molecular weight PAH
 LPAH = low molecular weight PAH
 "--" - indicates results not available
 ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components
 ND = 0 - calculated using 0 for non-detected components

Table B.5. Catch Basin Solids Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_CB-SOLIDS_SLS_2022.02	SPM_RI_CB-SOLIDS_SLS_2022.02_alp_custom_field_1	Location	CB-01	CB-02	CB-02	CB-03
					Date Sample	02/11/2016	02/11/2016	04/20/2021	02/11/2016
					SPM-CB-01-02112016	SPM-CB-02-02112016	CB-02-210420	SPM-CB-03-02112016	
Metals									
Antimony	7440-36-0	mg/kg			--	--	--	--	--
Arsenic	7440-38-2	mg/kg	93	SMS 2nd LAET	--	--	18.4	--	--
Beryllium	7440-41-7	mg/kg			--	--	--	--	--
Cadmium	7440-43-9	mg/kg	6.7	SMS 2nd LAET	--	--	3.85	--	--
Chromium	7440-47-3	mg/kg	270	SMS 2nd LAET	--	--	116	--	--
Copper	7440-50-8	mg/kg	390	SMS 2nd LAET	--	--	1850	--	--
Lead	7439-92-1	mg/kg	530	SMS 2nd LAET	--	--	396	--	--
Mercury	7439-97-6	mg/kg	0.59	SMS 2nd LAET	--	--	0.178 J	--	--
Nickel	7440-02-0	mg/kg			--	--	68.7	--	--
Selenium	7782-49-2	mg/kg			--	--	--	--	--
Silver	7440-22-4	mg/kg	6.1	SMS 2nd LAET	--	--	--	--	--
Thallium	7440-28-0	mg/kg			--	--	--	--	--
Zinc	7440-66-6	mg/kg	960	SMS 2nd LAET	--	--	7330	--	--
Butyl Tin Ions									
Dibutyltin Ion	14488-53-0	mg/kg			--	--	0.262 J	--	--
Monobutyltin	78763-54-9	mg/kg			--	--	0.128 J	--	--
Tetrabutyltin	1461-25-2	mg/kg			--	--	< 0.00499 UJ	--	--
Tributyltin Ion	36643-28-4	mg/kg			--	--	0.91 J	--	--
Polychlorinated Biphenyl Aroclors									
Aroclor 1016	12674-11-2	mg/kg			< 4 U	< 0.04 U	< 0.0436 U	< 20 U	< 20 U
Aroclor 1221	11104-28-2	mg/kg			< 4 U	< 0.04 U	< 0.0436 U	< 20 U	< 20 U
Aroclor 1232	11141-16-5	mg/kg			< 4 U	< 0.04 U	< 0.0436 U	< 20 U	< 20 U
Aroclor 1242	53469-21-9	mg/kg			< 4 U	< 0.04 U	< 0.0436 U	< 20 U	< 20 U
Aroclor 1248	12672-29-6	mg/kg			< 4 U	< 0.04 U	0.0393 NJ	< 20 U	< 20 U
Aroclor 1254	11097-69-1	mg/kg			< 4 U	< 0.04 U	0.124	< 20 U	< 20 U
Aroclor 1260	11096-82-5	mg/kg			< 4 U	0.57	0.301	< 20 U	< 20 U
Aroclor 1262	37324-23-5	mg/kg			< 4 U	< 0.04 U	< 0.0436 U	< 20 U	< 20 U
Aroclor 1268	11100-14-4	mg/kg			< 4 U	< 0.04 U	< 0.0436 U	< 20 U	< 20 U
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	1	SMS 2nd LAET	< 18 U	0.730	0.595 J	< 90 U	< 90 U
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	1	SMS 2nd LAET	< 4 U	0.57	0.464	< 20 U	< 20 U
Polychlorinated Biphenyl Congeners									
Total PCB Congeners	T-PCBCong	mg/kg			0.158	0.403	--	--	0.0507
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg			0.0000159 J	0.0000135	--	--	0.00000504 J
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg			0.0000159 J	0.0000135	--	--	0.00000504 J
Dioxins/Furans									
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	mg/kg			--	--	0.0000761 J	--	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	mg/kg			--	--	0.0000192 J	--	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg			--	--	0.0000953 J	--	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg			--	--	0.0000953 J	--	--
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	mg/kg			--	--	--	--	--
Polycyclic Aromatic Hydrocarbons									
1-Methylnaphthalene	90-12-0	mg/kg			--	--	0.248	--	--
2-Methylnaphthalene	91-57-6	mg/kg	0.67	SMS 2nd LAET	--	--	0.385	--	--
Acenaphthene	83-32-9	mg/kg	0.5	SMS 2nd LAET	--	--	0.038 J	--	--
Acenaphthylene	208-96-8	mg/kg	1.3	SMS 2nd LAET	--	--	0.0743	--	--
Anthracene	120-12-7	mg/kg	0.96	SMS 2nd LAET	--	--	0.0858	--	--
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.72	SMS 2nd LAET	--	--	0.775	--	--
Fluoranthene	206-44-0	mg/kg	2.5	SMS 2nd LAET	--	--	1.6	--	--
Fluorene	86-73-7	mg/kg	0.54	SMS 2nd LAET	--	--	0.12	--	--
Naphthalene	91-20-3	mg/kg	2.1	SMS 2nd LAET	--	--	0.471	--	--
Phenanthrene	85-01-8	mg/kg	1.5	SMS 2nd LAET	--	--	0.674	--	--
Pyrene	129-00-0	mg/kg	3.3	SMS 2nd LAET	--	--	1.65	--	--
Benzo(a)anthracene	56-55-3	mg/kg	1.6	SMS 2nd LAET	--	--	0.372	--	--
Benzo(a)pyrene	50-32-8	mg/kg	1.6	SMS 2nd LAET	--	--	0.399	--	--
Benzo(b)fluoranthene	205-99-2	mg/kg			--	--	0.802	--	--
Benzo(i)fluoranthene	205-82-3	mg/kg			--	--	0.312	--	--
Benzo(k)fluoranthene	207-08-9	mg/kg			--	--	0.316	--	--
Chrysene	218-01-9	mg/kg	2.8	SMS 2nd LAET	--	--	1.08	--	--
Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.23	SMS 2nd LAET	--	--	0.0957	--	--

Table B.5. Catch Basin Solids Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_CB-SOLIDS_SLS_2022.02	SPM_RI_CB-SOLIDS_SLS_2022.02_alp_custom_field_1	Location	CB-04	CB-05	CB-06
					Date Sample	02/11/2016	02/11/2016	02/09/2016
					SPM-CB-04-02112016	SPM-CB-05-02112016	SPM-CB-06-02092016	
Metals								
Antimony	7440-36-0	mg/kg			--	--	--	--
Arsenic	7440-38-2	mg/kg	93	SMS 2nd LAET	--	--	--	--
Beryllium	7440-41-7	mg/kg			--	--	--	--
Cadmium	7440-43-9	mg/kg	6.7	SMS 2nd LAET	--	--	--	--
Chromium	7440-47-3	mg/kg	270	SMS 2nd LAET	--	--	--	--
Copper	7440-50-8	mg/kg	390	SMS 2nd LAET	--	--	--	--
Lead	7439-92-1	mg/kg	530	SMS 2nd LAET	--	--	--	--
Mercury	7439-97-6	mg/kg	0.59	SMS 2nd LAET	--	--	--	--
Nickel	7440-02-0	mg/kg			--	--	--	--
Selenium	7782-49-2	mg/kg			--	--	--	--
Silver	7440-22-4	mg/kg	6.1	SMS 2nd LAET	--	--	--	--
Thallium	7440-28-0	mg/kg			--	--	--	--
Zinc	7440-66-6	mg/kg	960	SMS 2nd LAET	--	--	--	--
Butyl Tin Ions								
Dibutyltin Ion	14488-53-0	mg/kg			--	--	--	--
Monobutyltin	78763-54-9	mg/kg			--	--	--	--
Tetrabutyltin	1461-25-2	mg/kg			--	--	--	--
Tributyltin Ion	36643-28-4	mg/kg			--	--	--	--
Polychlorinated Biphenyl Aroclors								
Aroclor 1016	12674-11-2	mg/kg			< 0.8 U	< 0.08 UJ	< 10 U	
Aroclor 1221	11104-28-2	mg/kg			< 0.8 U	< 0.08 UJ	< 10 U	
Aroclor 1232	11141-16-5	mg/kg			< 0.8 U	< 0.08 UJ	< 10 U	
Aroclor 1242	53469-21-9	mg/kg			< 0.8 U	< 0.08 UJ	< 10 U	
Aroclor 1248	12672-29-6	mg/kg			< 0.8 U	< 0.08 UJ	< 10 U	
Aroclor 1254	11097-69-1	mg/kg			< 0.8 U	0.35 J	< 10 U	
Aroclor 1260	11096-82-5	mg/kg			< 0.8 U	0.43 J	< 10 U	
Aroclor 1262	37324-23-5	mg/kg			< 0.8 U	< 0.08 UJ	< 10 U	
Aroclor 1268	11100-14-4	mg/kg			< 0.8 U	< 0.08 UJ	< 10 U	
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	1	SMS 2nd LAET	< 3.6 U	1.06 J	< 45 U	
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	1	SMS 2nd LAET	< 0.8 U	0.78	< 10 U	
Polychlorinated Biphenyl Congeners								
Total PCB Congeners	T-PCBCong	mg/kg			0.0634	0.453	1.19	
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg			0.0000419 J	0.000213 J	0.0000936	
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg			0.0000419 J	0.000213 J	0.0000936	
Dioxins/Furans								
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	mg/kg			--	--	--	
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	mg/kg			--	--	--	
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg			--	--	--	
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg			--	--	--	
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	mg/kg			--	--	--	
Polycyclic Aromatic Hydrocarbons								
1-Methylnaphthalene	90-12-0	mg/kg			--	--	--	
2-Methylnaphthalene	91-57-6	mg/kg	0.67	SMS 2nd LAET	--	--	--	
Acenaphthene	83-32-9	mg/kg	0.5	SMS 2nd LAET	--	--	--	
Acenaphthylene	208-96-8	mg/kg	1.3	SMS 2nd LAET	--	--	--	
Anthracene	120-12-7	mg/kg	0.96	SMS 2nd LAET	--	--	--	
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.72	SMS 2nd LAET	--	--	--	
Fluoranthene	206-44-0	mg/kg	2.5	SMS 2nd LAET	--	--	--	
Fluorene	86-73-7	mg/kg	0.54	SMS 2nd LAET	--	--	--	
Naphthalene	91-20-3	mg/kg	2.1	SMS 2nd LAET	--	--	--	
Phenanthrene	85-01-8	mg/kg	1.5	SMS 2nd LAET	--	--	--	
Pyrene	129-00-0	mg/kg	3.3	SMS 2nd LAET	--	--	--	
Benzo(a)anthracene	56-55-3	mg/kg	1.6	SMS 2nd LAET	--	--	--	
Benzo(a)pyrene	50-32-8	mg/kg	1.6	SMS 2nd LAET	--	--	--	
Benzo(b)fluoranthene	205-99-2	mg/kg			--	--	--	
Benzo(i)fluoranthene	205-82-3	mg/kg			--	--	--	
Benzo(k)fluoranthene	207-08-9	mg/kg			--	--	--	
Chrysene	218-01-9	mg/kg	2.8	SMS 2nd LAET	--	--	--	
Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.23	SMS 2nd LAET	--	--	--	

Table B.5. Catch Basin Solids Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_CB-SOLIDS_SLS_2022.02	SPM_RI_CB-SOLIDS_SLS_2022.02alp_custom_field_1	Location	CB-06	CB-07	CB-08	CB-09
					Date Sample	04/20/2021 CB-06-210420	02/11/2016 SPM-CB-07-02112016	02/11/2016 SPM-CB-08-02112016	10/08/2015 SP-CB-09
Metals									
Antimony	7440-36-0	mg/kg				--	--	--	20
Arsenic	7440-38-2	mg/kg	93	SMS 2nd LAET		13.9	--	--	22
Beryllium	7440-41-7	mg/kg				--	--	--	0.23 J
Cadmium	7440-43-9	mg/kg	6.7	SMS 2nd LAET		1.19	--	--	6.5
Chromium	7440-47-3	mg/kg	270	SMS 2nd LAET		26.3	--	--	160
Copper	7440-50-8	mg/kg	390	SMS 2nd LAET		771	--	--	1800
Lead	7439-92-1	mg/kg	530	SMS 2nd LAET		64.5	--	--	430
Mercury	7439-97-6	mg/kg	0.59	SMS 2nd LAET		0.06 J	--	--	0.19
Nickel	7440-02-0	mg/kg				27.3	--	--	180
Selenium	7782-49-2	mg/kg				--	--	--	1.2
Silver	7440-22-4	mg/kg	6.1	SMS 2nd LAET		--	--	--	2.1
Thallium	7440-28-0	mg/kg				--	--	--	0.3 J
Zinc	7440-66-6	mg/kg	960	SMS 2nd LAET		303	--	--	5600
Butyl Tin Ions									
Dibutyltin Ion	14488-53-0	mg/kg				0.0447 J	--	--	--
Monobutyltin	78763-54-9	mg/kg				0.0499 J	--	--	--
Tetrabutyltin	1461-25-2	mg/kg				< 0.00499 UJ	--	--	--
Tributyltin Ion	36643-28-4	mg/kg				0.0715 J	--	--	--
Polychlorinated Biphenyl Aroclors									
Aroclor 1016	12674-11-2	mg/kg				< 0.0199 U	< 0.08 UJ	< 0.04 UJ	< 0.022 U
Aroclor 1221	11104-28-2	mg/kg				< 0.0199 U	< 0.08 UJ	< 0.04 UJ	< 0.024 U
Aroclor 1232	11141-16-5	mg/kg				< 0.0199 U	< 0.08 UJ	< 0.04 UJ	< 0.024 U
Aroclor 1242	53469-21-9	mg/kg				< 0.0199 U	< 0.08 UJ	< 0.04 UJ	< 0.022 U
Aroclor 1248	12672-29-6	mg/kg				< 0.0199 U	< 0.08 UJ	< 0.04 UJ	< 0.022 U
Aroclor 1254	11097-69-1	mg/kg				0.102 J	0.34 J	< 0.04 UJ	< 0.022 U
Aroclor 1260	11096-82-5	mg/kg				0.11 J	< 0.08 UJ	0.48 J	0.54
Aroclor 1262	37324-23-5	mg/kg				< 0.0199 U	< 0.08 UJ	< 0.04 UJ	--
Aroclor 1268	11100-14-4	mg/kg				< 0.0199 U	< 0.08 UJ	< 0.04 UJ	--
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	1	SMS 2nd LAET		0.282 J	0.66 J	0.64 J	0.608 J
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	1	SMS 2nd LAET		0.212 J	0.34	0.48	0.54
Polychlorinated Biphenyl Congeners									
Total PCB Congeners	T-PCBCong	mg/kg				--	0.289	0.138	0.896 J
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg				--	0.0000198 J	0.0000757 J	0.0000170
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg				--	0.0000198 J	0.0000757 J	0.0000852
Dioxins/Furans									
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	mg/kg				--	--	--	0.00004718 J
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	mg/kg				--	--	--	0.0000119 J
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg				--	--	--	0.000059 J
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg				--	--	--	0.000059 J
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	mg/kg				--	--	--	0.000059 J
Polycyclic Aromatic Hydrocarbons									
1-Methylnaphthalene	90-12-0	mg/kg				0.0369 J	--	--	3.1
2-Methylnaphthalene	91-57-6	mg/kg	0.67	SMS 2nd LAET		0.0716	--	--	4.6
Acenaphthene	83-32-9	mg/kg	0.5	SMS 2nd LAET		0.0359 J	--	--	0.17 J
Acenaphthylene	208-96-8	mg/kg	1.3	SMS 2nd LAET		0.0195 J	--	--	< 0.088 U
Anthracene	120-12-7	mg/kg	0.96	SMS 2nd LAET		0.0503	--	--	0.19 J
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.72	SMS 2nd LAET		0.386	--	--	0.36
Fluoranthene	206-44-0	mg/kg	2.5	SMS 2nd LAET		1	--	--	1.6 J
Fluorene	86-73-7	mg/kg	0.54	SMS 2nd LAET		0.112	--	--	0.51
Naphthalene	91-20-3	mg/kg	2.1	SMS 2nd LAET		0.00974 J	--	--	2.2
Phenanthrene	85-01-8	mg/kg	1.5	SMS 2nd LAET		0.651	--	--	0.88 J
Pyrene	129-00-0	mg/kg	3.3	SMS 2nd LAET		0.77	--	--	2.2 J
Benzo(a)anthracene	56-55-3	mg/kg	1.6	SMS 2nd LAET		0.207	--	--	0.27 J
Benzo(a)pyrene	50-32-8	mg/kg	1.6	SMS 2nd LAET		0.208	--	--	0.37 J
Benzo(b)fluoranthene	205-99-2	mg/kg				0.442	--	--	--
Benzo(i)fluoranthene	205-82-3	mg/kg				0.123	--	--	--
Benzo(k)fluoranthene	207-08-9	mg/kg				0.122	--	--	--
Chrysene	218-01-9	mg/kg	2.8	SMS 2nd LAET		0.74	--	--	0.96 J
Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.23	SMS 2nd LAET		0.0509	--	--	< 0.18 U

Table B.5. Catch Basin Solids Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_CB-SOLIDS_SLS_2022.02	SPM_RI_CB-SOLIDS_SLS_2022.02_alp_custom_field_1	Location	CB-09	SWRX-PRE	SWRX-PRE
					Date Sample	02/11/2016	10/08/2014	04/20/2021
					SPM-CB-09-02112016	SP-OWS-01 (SOLID)	PRERX-210420	
Metals								
Antimony	7440-36-0	mg/kg			--		16	--
Arsenic	7440-38-2	mg/kg	93	SMS 2nd LAET	--		69	6.63
Beryllium	7440-41-7	mg/kg			--		0.21 J	--
Cadmium	7440-43-9	mg/kg	6.7	SMS 2nd LAET	--		16	0.96
Chromium	7440-47-3	mg/kg	270	SMS 2nd LAET	--		330	24.9
Copper	7440-50-8	mg/kg	390	SMS 2nd LAET	--		14000	1370
Lead	7439-92-1	mg/kg	530	SMS 2nd LAET	--		940	91.3
Mercury	7439-97-6	mg/kg	0.59	SMS 2nd LAET	--		1.7	0.199 J
Nickel	7440-02-0	mg/kg			--		230	17.2
Selenium	7782-49-2	mg/kg			--		1.6	--
Silver	7440-22-4	mg/kg	6.1	SMS 2nd LAET	--		1.2	--
Thallium	7440-28-0	mg/kg			--		< 1.1 U	--
Zinc	7440-66-6	mg/kg	960	SMS 2nd LAET	--		2900	383
Butyl Tin Ions								
Dibutyltin Ion	14488-53-0	mg/kg			--		--	0.742 J
Monobutyltin	78763-54-9	mg/kg			--		--	0.404 J
Tetrabutyltin	1461-25-2	mg/kg			--		--	0.0212 J
Tributyltin Ion	36643-28-4	mg/kg			--		--	2.06 J
Polychlorinated Biphenyl Aroclors								
Aroclor 1016	12674-11-2	mg/kg			< 0.4 U		0.21 J	< 0.0198 U
Aroclor 1221	11104-28-2	mg/kg			< 0.4 U		< 0.031 U	< 0.0198 U
Aroclor 1232	11141-16-5	mg/kg			< 0.4 U		< 0.031 U	< 0.0198 U
Aroclor 1242	53469-21-9	mg/kg			< 0.4 U		< 0.028 U	< 0.0198 U
Aroclor 1248	12672-29-6	mg/kg			< 0.4 U		< 0.028 U	< 0.0198 U
Aroclor 1254	11097-69-1	mg/kg			1.5		2.2	0.137
Aroclor 1260	11096-82-5	mg/kg			< 0.4 U		1.7 J	0.19
Aroclor 1262	37324-23-5	mg/kg			< 0.4 U		--	< 0.0198 U
Aroclor 1268	11100-14-4	mg/kg			< 0.4 U		--	< 0.0198 U
Total PCB Aroclors (ND=1/2 RL)	T-PCBs1/2U	mg/kg	1	SMS 2nd LAET	3.1		4.17 J	0.396
Total PCBs (Sum of Aroclors)	T-PCBs	mg/kg	1	SMS 2nd LAET	1.5		4.11	0.327
Polychlorinated Biphenyl Congeners								
Total PCB Congeners	T-PCBConq	mg/kg			0.735		3.96 J	--
Total PCB TEQ (ND = 0)	PCB-TEQ-0U	mg/kg			0.0000289 J		0.000229	--
Total PCB TEQ (ND = 1/2 RDL)	PCB-TEQ-1/2U	mg/kg			0.0000289 J		0.000243	--
Dioxins/Furans								
Total CDD TEQ (ND = 1/2 RDL)	CDD TEQ-1/2U	mg/kg			--		0.000775 J	--
Total CDF TEQ (ND = 1/2 RDL)	CDF TEQ-1/2U	mg/kg			--		0.000111 J	--
Total Dioxin/Furan TEQ (ND = 0)	DF-TEQ-0U	mg/kg			--		0.00089 J	--
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	DF-TEQ-1/2U	mg/kg			--		0.00089 J	--
Total Dioxin/Furan TEQ (ND = 1x RDL)	DF-TEQ-1U	mg/kg			--		0.00089 J	--
Polycyclic Aromatic Hydrocarbons								
1-Methylnaphthalene	90-12-0	mg/kg			--		2.8	0.0201 J
2-Methylnaphthalene	91-57-6	mg/kg	0.67	SMS 2nd LAET	--		4.7	0.0273 J
Acenaphthene	83-32-9	mg/kg	0.5	SMS 2nd LAET	--		< 0.057 U	0.00995 J
Acenaphthylene	208-96-8	mg/kg	1.3	SMS 2nd LAET	--		< 0.057 U	< 0.0498 U
Anthracene	120-12-7	mg/kg	0.96	SMS 2nd LAET	--		0.8	0.0244 J
Benzo(g,h,i)perylene	191-24-2	mg/kg	0.72	SMS 2nd LAET	--		1.4	0.192
Fluoranthene	206-44-0	mg/kg	2.5	SMS 2nd LAET	--		12	0.53
Fluorene	86-73-7	mg/kg	0.54	SMS 2nd LAET	--		0.95	0.0475 J
Naphthalene	91-20-3	mg/kg	2.1	SMS 2nd LAET	--		2	0.00342 J
Phenanthrene	85-01-8	mg/kg	1.5	SMS 2nd LAET	--		6.3	0.208
Pyrene	129-00-0	mg/kg	3.3	SMS 2nd LAET	--		11	0.463
Benzo(a)anthracene	56-55-3	mg/kg	1.6	SMS 2nd LAET	--		3.4	0.164
Benzo(a)pyrene	50-32-8	mg/kg	1.6	SMS 2nd LAET	--		3.8	0.201
Benzo(b)fluoranthene	205-99-2	mg/kg			--		--	0.284
Benzo(i)fluoranthene	205-82-3	mg/kg			--		--	0.133
Benzo(k)fluoranthene	207-08-9	mg/kg			--		--	0.132
Chrysene	218-01-9	mg/kg	2.8	SMS 2nd LAET	--		5.9	0.31
Dibenzo(a,h)anthracene	53-70-3	mg/kg	0.23	SMS 2nd LAET	--		0.44	0.042 J

Table B.5. Catch Basin Solids Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

				Location Date Sample	CB-01 02/11/2016 SPM-CB-01-02112016	CB-02 02/11/2016 SPM-CB-02-02112016	CB-02 04/20/2021 CB-02-210420	CB-03 02/11/2016 SPM-CB-03-02112016
Analyte	CAS RN	Unit	SPM_RI_CB- SOLIDS_SLS 2022.02	SPM_RI_CB- SOLIDS_SLS _2022.02_alp_custo m field 1				
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.69	SMS 2nd LAET	--	--	0.344	--
Total Benzofluoranthenes	TOTBFA	mg/kg	3.6	SMS 2nd LAET	--	--	1.43	--
Total HPAHs	T-HPAH	mg/kg	17	SMS 2nd LAET	--	--	7.75	--
Total LPAHs	T-LPAH	mg/kg	5.2	SMS 2nd LAET	--	--	1.46 J	--
Total PAHs (ND=0)	T-PAH	mg/kg			--	--	9.21 J	--
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	mg/kg			--	--	0.603	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg			--	--	0.603	--
Total cPAHs TEQ (ND=1)	T-cPAH-1U	mg/kg			--	--	--	--
Semivolatile Organic Compounds								
2,4,5-Trichlorophenol	95-95-4	mg/kg			--	--	< 0.999 U	--
2,4,6-Trichlorophenol	88-06-2	mg/kg			--	--	< 0.999 U	--
2,4-Dichlorophenol	120-83-2	mg/kg			--	--	< 0.999 U	--
2,4-Dimethylphenol	105-67-9	mg/kg	0.029	SMS 2nd LAET	--	--	< 0.999 U	--
2,4-Dinitrophenol	51-28-5	mg/kg			--	--	< 2 UJ	--
2,4-Dinitrotoluene	121-14-2	mg/kg			--	--	< 0.999 U	--
2,6-Dinitrotoluene	606-20-2	mg/kg			--	--	< 0.999 U	--
2-Chloronaphthalene	91-58-7	mg/kg			--	--	< 0.2 U	--
2-Chlorophenol	95-57-8	mg/kg			--	--	< 0.2 U	--
2-Methylphenol	95-48-7	mg/kg	0.063	SMS 2nd LAET	--	--	< 0.2 U	--
2-Nitroaniline	88-74-4	mg/kg			--	--	< 0.999 U	--
2-Nitrophenol	88-75-5	mg/kg			--	--	< 0.2 U	--
3,3'-Dichlorobenzidine	91-94-1	mg/kg			--	--	< 0.999 U	--
3-Nitroaniline	99-09-2	mg/kg			--	--	< 0.999 U	--
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg			--	--	< 2 UJ	--
4-Bromophenyl phenyl ether	101-55-3	mg/kg			--	--	< 0.2 U	--
4-Chloro-3-methylphenol	59-50-7	mg/kg			--	--	< 0.999 U	--
4-Chloroaniline	106-47-8	mg/kg			--	--	< 0.999 U	--
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg			--	--	< 0.2 UJ	--
4-Methylphenol	106-44-5	mg/kg	0.67	SMS 2nd LAET	--	--	12.4	--
4-Nitroaniline	100-01-6	mg/kg			--	--	< 0.999 U	--
4-Nitrophenol	100-02-7	mg/kg			--	--	< 0.999 UJ	--
Benzoic acid	65-85-0	mg/kg	0.65	SMS 2nd LAET	--	--	0.68 J	--
Benzyl alcohol	100-51-6	mg/kg	0.073	SMS 2nd LAET	--	--	5.89	--
Benzyl butyl phthalate	85-68-7	mg/kg	0.9	SMS 2nd LAET	--	--	0.7 J	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg			--	--	< 0.2 U	--
Bis(2-chloroethoxy)methane	111-91-1	mg/kg			--	--	< 0.2 U	--
Bis(2-chloroethyl) ether	111-44-4	mg/kg			--	--	< 0.2 U	--
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	1.9	SMS 2nd LAET	--	--	89.1	--
Carbazole	86-74-8	mg/kg			--	--	0.162 J	--
Dibenzofuran	132-64-9	mg/kg	0.54	SMS 2nd LAET	--	--	0.0476 J	--
Diethyl phthalate	84-66-2	mg/kg	1.2	SMS 2nd LAET	--	--	< 0.2 U	--
Dimethyl phthalate	131-11-3	mg/kg	0.16	SMS 2nd LAET	--	--	11.2 J	--
Di-n-butyl phthalate	84-74-2	mg/kg	1.4	SMS 2nd LAET	--	--	6.75	--
Di-n-octyl phthalate	117-84-0	mg/kg	6.2	SMS 2nd LAET	--	--	2.05	--
Hexachlorobenzene	118-74-1	mg/kg	0.07	SMS 2nd LAET	--	--	< 0.00199 UJ	--
Hexachlorobutadiene	87-68-3	mg/kg	0.12	SMS 2nd LAET	--	--	< 0.00199 UJ	--
Hexachlorocyclopentadiene	77-47-4	mg/kg			--	--	< 0.999 UJ	--
Hexachloroethane	67-72-1	mg/kg			--	--	< 0.2 U	--
Isophorone	78-59-1	mg/kg			--	--	< 0.2 U	--
Nitrobenzene	98-95-3	mg/kg			--	--	< 0.2 U	--
N-Nitrosodimethylamine	62-75-9	mg/kg			--	--	--	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg			--	--	< 0.2 U	--
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.04	SMS 2nd LAET	--	--	< 0.2 U	--
Pentachlorophenol	87-86-5	mg/kg	0.69	SMS 2nd LAET	--	--	< 0.999 U	--
Phenol	108-95-2	mg/kg	1.2	SMS 2nd LAET	--	--	1.62	--
Pesticides and Herbicides								
2,4'-DDD	53-19-0	mg/kg			--	--	< 0.00398 UJ	--
2,4'-DDE	3424-82-6	mg/kg			--	--	< 0.00398 UJ	--
2,4'-DDT	789-02-6	mg/kg			--	--	< 0.00398 UJ	--
4,4'-DDD	72-54-8	mg/kg			--	--	< 0.00398 UJ	--
4,4'-DDE	72-55-9	mg/kg			--	--	< 0.00398 UJ	--
4,4'-DDT	50-29-3	mg/kg			--	--	< 0.00398 UJ	--

Table B.5. Catch Basin Solids Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_CB-SOLIDS_SLS 2022.02	SPM_RI_CB-SOLIDS_SLS _2022.02_alp_cust m field_1	Location	CB-04	CB-05	CB-06
					Date	02/11/2016	02/11/2016	02/09/2016
					Sample	SPM-CB-04-02112016	SPM-CB-05-02112016	SPM-CB-06-02092016
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.69	SMS 2nd LAET		--	--	--
Total Benzofluoranthenes	TOTBFA	mg/kg	3.6	SMS 2nd LAET		--	--	--
Total HPAHs	T-HPAH	mg/kg	17	SMS 2nd LAET		--	--	--
Total LPAHs	T-LPAH	mg/kg	5.2	SMS 2nd LAET		--	--	--
Total PAHs (ND=0)	T-PAH	mg/kg				--	--	--
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	mg/kg				--	--	--
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg				--	--	--
Total cPAHs TEQ (ND=1)	T-cPAH-1U	mg/kg				--	--	--
Semivolatile Organic Compounds								
2,4,5-Trichlorophenol	95-95-4	mg/kg				--	--	--
2,4,6-Trichlorophenol	88-06-2	mg/kg				--	--	--
2,4-Dichlorophenol	120-83-2	mg/kg				--	--	--
2,4-Dimethylphenol	105-67-9	mg/kg	0.029	SMS 2nd LAET		--	--	--
2,4-Dinitrophenol	51-28-5	mg/kg				--	--	--
2,4-Dinitrotoluene	121-14-2	mg/kg				--	--	--
2,6-Dinitrotoluene	606-20-2	mg/kg				--	--	--
2-Chloronaphthalene	91-58-7	mg/kg				--	--	--
2-Chlorophenol	95-57-8	mg/kg				--	--	--
2-Methylphenol	95-48-7	mg/kg	0.063	SMS 2nd LAET		--	--	--
2-Nitroaniline	88-74-4	mg/kg				--	--	--
2-Nitrophenol	88-75-5	mg/kg				--	--	--
3,3'-Dichlorobenzidine	91-94-1	mg/kg				--	--	--
3-Nitroaniline	99-09-2	mg/kg				--	--	--
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg				--	--	--
4-Bromophenyl phenyl ether	101-55-3	mg/kg				--	--	--
4-Chloro-3-methylphenol	59-50-7	mg/kg				--	--	--
4-Chloroaniline	106-47-8	mg/kg				--	--	--
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg				--	--	--
4-Methylphenol	106-44-5	mg/kg	0.67	SMS 2nd LAET		--	--	--
4-Nitroaniline	100-01-6	mg/kg				--	--	--
4-Nitrophenol	100-02-7	mg/kg				--	--	--
Benzoic acid	65-85-0	mg/kg	0.65	SMS 2nd LAET		--	--	--
Benzyl alcohol	100-51-6	mg/kg	0.073	SMS 2nd LAET		--	--	--
Benzyl butyl phthalate	85-68-7	mg/kg	0.9	SMS 2nd LAET		--	--	--
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg				--	--	--
Bis(2-chloroethoxy)methane	111-91-1	mg/kg				--	--	--
Bis(2-chloroethyl) ether	111-44-4	mg/kg				--	--	--
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	1.9	SMS 2nd LAET		--	--	--
Carbazole	86-74-8	mg/kg				--	--	--
Dibenzofuran	132-64-9	mg/kg	0.54	SMS 2nd LAET		--	--	--
Diethyl phthalate	84-66-2	mg/kg	1.2	SMS 2nd LAET		--	--	--
Dimethyl phthalate	131-11-3	mg/kg	0.16	SMS 2nd LAET		--	--	--
Di-n-butyl phthalate	84-74-2	mg/kg	1.4	SMS 2nd LAET		--	--	--
Di-n-octyl phthalate	117-84-0	mg/kg	6.2	SMS 2nd LAET		--	--	--
Hexachlorobenzene	118-74-1	mg/kg	0.07	SMS 2nd LAET		--	--	--
Hexachlorobutadiene	87-68-3	mg/kg	0.12	SMS 2nd LAET		--	--	--
Hexachlorocyclopentadiene	77-47-4	mg/kg				--	--	--
Hexachloroethane	67-72-1	mg/kg				--	--	--
Isophorone	78-59-1	mg/kg				--	--	--
Nitrobenzene	98-95-3	mg/kg				--	--	--
N-Nitrosodimethylamine	62-75-9	mg/kg				--	--	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg				--	--	--
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.04	SMS 2nd LAET		--	--	--
Pentachlorophenol	87-86-5	mg/kg	0.69	SMS 2nd LAET		--	--	--
Phenol	108-95-2	mg/kg	1.2	SMS 2nd LAET		--	--	--
Pesticides and Herbicides								
2,4'-DDD	53-19-0	mg/kg				--	--	--
2,4'-DDE	3424-82-6	mg/kg				--	--	--
2,4'-DDT	789-02-6	mg/kg				--	--	--
4,4'-DDD	72-54-8	mg/kg				--	--	--
4,4'-DDE	72-55-9	mg/kg				--	--	--
4,4'-DDT	50-29-3	mg/kg				--	--	--

Table B.5. Catch Basin Solids Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_CB-SOLIDS_SLS 2022.02	Location Date Sample SPM_RI_CB-SOLIDS_SLS_2022.02_alp_custom field 1	CB-06	CB-07	CB-08	CB-09
					04/20/2021 CB-06-210420	02/11/2016 SPM-CB-07-02112016	02/11/2016 SPM-CB-08-02112016	10/08/2015 SP-CB-09
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.69	SMS 2nd LAET	0.184	--	--	0.25
Total Benzofluoranthenes	TOTBFA	mg/kg	3.6	SMS 2nd LAET	0.69	--	--	1 J
Total HPAHs	T-HPAH	mg/kg	17	SMS 2nd LAET	4.24	--	--	7
Total LPAHs	T-LPAH	mg/kg	5.2	SMS 2nd LAET	0.947 J	--	--	4
Total PAHs (ND=0)	T-PAH	mg/kg			5.18 J	--	--	11.0
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	mg/kg			0.316	--	--	0.53 J
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg			0.316	--	--	0.54 J
Total cPAHs TEQ (ND=1)	T-cPAH-1U	mg/kg			--	--	--	0.55 J
Semivolatile Organic Compounds								
2,4,5-Trichlorophenol	95-95-4	mg/kg			< 0.997 U	--	--	< 0.44 U
2,4,6-Trichlorophenol	88-06-2	mg/kg			< 0.997 U	--	--	< 0.66 U
2,4-Dichlorophenol	120-83-2	mg/kg			< 0.997 U	--	--	< 0.44 U
2,4-Dimethylphenol	105-67-9	mg/kg	0.029	SMS 2nd LAET	< 0.997 U	--	--	< 0.44 U
2,4-Dinitrophenol	51-28-5	mg/kg			< 1.99 UJ	--	--	< 4.4 U
2,4-Dinitrotoluene	121-14-2	mg/kg			< 0.997 U	--	--	< 0.44 U
2,6-Dinitrotoluene	606-20-2	mg/kg			< 0.997 U	--	--	< 0.44 U
2-Chloronaphthalene	91-58-7	mg/kg			< 0.199 U	--	--	< 0.088 UJ
2-Chlorophenol	95-57-8	mg/kg			< 0.199 U	--	--	< 0.44 UJ
2-Methylphenol	95-48-7	mg/kg	0.063	SMS 2nd LAET	< 0.199 UJ	--	--	< 0.44 UJ
2-Nitroaniline	88-74-4	mg/kg			< 0.997 U	--	--	< 0.44 U
2-Nitrophenol	88-75-5	mg/kg			< 0.199 U	--	--	< 0.44 U
3,3'-Dichlorobenzidine	91-94-1	mg/kg			< 0.997 U	--	--	< 0.88 U
3-Nitroaniline	99-09-2	mg/kg			< 0.997 U	--	--	< 0.44 U
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg			< 1.99 UJ	--	--	< 4.4 U
4-Bromophenyl phenyl ether	101-55-3	mg/kg			< 0.199 U	--	--	< 0.44 U
4-Chloro-3-methylphenol	59-50-7	mg/kg			< 0.997 U	--	--	< 0.44 U
4-Chloroaniline	106-47-8	mg/kg			< 0.997 U	--	--	< 0.44 U
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg			< 0.199 UJ	--	--	< 0.44 UJ
4-Methylphenol	106-44-5	mg/kg	0.67	SMS 2nd LAET	1.44	--	--	0.33 J
4-Nitroaniline	100-01-6	mg/kg			< 0.997 U	--	--	< 0.44 U
4-Nitrophenol	100-02-7	mg/kg			< 0.997 UJ	--	--	< 4.4 U
Benzoic acid	65-85-0	mg/kg	0.65	SMS 2nd LAET	< 1.99 UJ	--	--	< 11 U
Benzyl alcohol	100-51-6	mg/kg	0.073	SMS 2nd LAET	0.38	--	--	3.6 J
Benzyl butyl phthalate	85-68-7	mg/kg	0.9	SMS 2nd LAET	2.99 J	--	--	1.8
Bis(2-chloro-1-methylethyl) ether	108-60-1	mg/kg			< 0.199 U	--	--	--
Bis(2-chloroethoxy)methane	111-91-1	mg/kg			< 0.199 U	--	--	< 0.44 UJ
Bis(2-chloroethyl) ether	111-44-4	mg/kg			< 0.199 U	--	--	< 0.44 UJ
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	1.9	SMS 2nd LAET	33.2	--	--	37
Carbazole	86-74-8	mg/kg			0.135 J	--	--	< 0.44 UJ
Dibenzofuran	132-64-9	mg/kg	0.54	SMS 2nd LAET	0.054	--	--	< 0.44 UJ
Diethyl phthalate	84-66-2	mg/kg	1.2	SMS 2nd LAET	< 0.199 U	--	--	< 0.88 U
Dimethyl phthalate	131-11-3	mg/kg	0.16	SMS 2nd LAET	1.42	--	--	3.9 J
Di-n-butyl phthalate	84-74-2	mg/kg	1.4	SMS 2nd LAET	0.52	--	--	3.7
Di-n-octyl phthalate	117-84-0	mg/kg	6.2	SMS 2nd LAET	1.82	--	--	1.2 J
Hexachlorobenzene	118-74-1	mg/kg	0.07	SMS 2nd LAET	< 0.00197 U	--	--	< 0.22 U
Hexachlorobutadiene	87-68-3	mg/kg	0.12	SMS 2nd LAET	< 0.00197 U	--	--	< 0.22 U
Hexachlorocyclopentadiene	77-47-4	mg/kg			< 0.997 UJ	--	--	< 0.44 U
Hexachloroethane	67-72-1	mg/kg			< 0.199 U	--	--	< 0.44 UJ
Isophorone	78-59-1	mg/kg			< 0.199 U	--	--	< 0.44 U
Nitrobenzene	98-95-3	mg/kg			< 0.199 U	--	--	< 0.44 U
N-Nitrosodimethylamine	62-75-9	mg/kg			--	--	--	< 4.4 U
N-Nitroso-di-n-propylamine	621-64-7	mg/kg			< 0.199 U	--	--	< 0.44 U
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.04	SMS 2nd LAET	< 0.199 U	--	--	< 0.22 UJ
Pentachlorophenol	87-86-5	mg/kg	0.69	SMS 2nd LAET	0.341 J	--	--	< 0.88 U
Phenol	108-95-2	mg/kg	1.2	SMS 2nd LAET	0.198 J	--	--	0.37 J
Pesticides and Herbicides								
2,4'-DDD	53-19-0	mg/kg			< 0.00393 U	--	--	--
2,4'-DDE	3424-82-6	mg/kg			< 0.00393 U	--	--	--
2,4'-DDT	789-02-6	mg/kg			< 0.00393 U	--	--	--
4,4'-DDD	72-54-8	mg/kg			< 0.00393 U	--	--	--
4,4'-DDE	72-55-9	mg/kg			< 0.00393 U	--	--	--
4,4'-DDT	50-29-3	mg/kg			< 0.0197 U	--	--	--

Table B.5. Catch Basin Solids Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_CB-SOLIDS_SLS 2022.02	SPM_RI_CB-SOLIDS_SLS 2022.02_alp_custom field 1	Location	CB-09	SWRX-PRE	SWRX-PRE
					Date Sample	02/11/2016 SPM-CB-09-02112016	10/08/2014 SP-OWS-01 (SOLID)	04/20/2021 PRERX-210420
Indeno(1,2,3-cd)pyrene	193-39-5	mg/kg	0.69	SMS 2nd LAET	--	--	1.8	0.166
Total Benzofluoranthenes	TOTBFA	mg/kg	3.6	SMS 2nd LAET	--	--	11	0.54
Total HPAHs	T-HPAH	mg/kg	17	SMS 2nd LAET	--	--	50	2.48 J
Total LPAHs	T-LPAH	mg/kg	5.2	SMS 2nd LAET	--	--	10	0.312 J
Total PAHs (ND=0)	T-PAH	mg/kg			--	--	60.0	2.80 J
Total cPAHs TEQ (ND = 0)	T-cPAH-0U	mg/kg			--	--	5.5	0.283 J
Total cPAHs TEQ (ND = 1/2 RDL)	T-cPAH-1/2U	mg/kg			--	--	5.5	0.283 J
Total cPAHs TEQ (ND=1)	T-cPAH-1U	mg/kg			--	--	5.5	--
Semivolatile Organic Compounds								
2,4,5-Trichlorophenol	95-95-4	mg/kg			--	--	< 0.29 U	< 0.998 U
2,4,6-Trichlorophenol	88-06-2	mg/kg			--	--	< 0.43 U	< 0.998 U
2,4-Dichlorophenol	120-83-2	mg/kg			--	--	< 0.29 U	< 0.998 U
2,4-Dimethylphenol	105-67-9	mg/kg	0.029	SMS 2nd LAET	--	--	< 0.29 U	< 0.998 U
2,4-Dinitrophenol	51-28-5	mg/kg			--	--	< 2.9 U	< 2 UJ
2,4-Dinitrotoluene	121-14-2	mg/kg			--	--	< 0.29 U	< 0.998 U
2,6-Dinitrotoluene	606-20-2	mg/kg			--	--	< 0.29 U	< 0.998 U
2-Chloronaphthalene	91-58-7	mg/kg			--	--	< 0.057 U	< 0.2 U
2-Chlorophenol	95-57-8	mg/kg			--	--	< 0.29 U	< 0.2 U
2-Methylphenol	95-48-7	mg/kg	0.063	SMS 2nd LAET	--	--	< 0.29 U	< 0.2 U
2-Nitroaniline	88-74-4	mg/kg			--	--	< 0.29 U	< 0.998 U
2-Nitrophenol	88-75-5	mg/kg			--	--	< 0.29 U	< 0.2 U
3,3'-Dichlorobenzidine	91-94-1	mg/kg			--	--	< 0.57 U	< 0.998 U
3-Nitroaniline	99-09-2	mg/kg			--	--	< 0.29 U	< 0.998 U
4,6-Dinitro-2-methylphenol	534-52-1	mg/kg			--	--	< 2.9 U	< 2 UJ
4-Bromophenyl phenyl ether	101-55-3	mg/kg			--	--	< 0.29 U	< 0.2 U
4-Chloro-3-methylphenol	59-50-7	mg/kg			--	--	17	< 0.998 U
4-Chloroaniline	106-47-8	mg/kg			--	--	< 0.29 U	< 0.998 U
4-Chlorophenyl phenyl ether	7005-72-3	mg/kg			--	--	< 0.29 U	< 0.2 UJ
4-Methylphenol	106-44-5	mg/kg	0.67	SMS 2nd LAET	--	--	6.4	< 0.2 U
4-Nitroaniline	100-01-6	mg/kg			--	--	< 0.29 U	< 0.998 U
4-Nitrophenol	100-02-7	mg/kg			--	--	< 2.9 U	< 0.998 UJ
Benzoic acid	65-85-0	mg/kg	0.65	SMS 2nd LAET	--	--	9.7	< 2 UJ
Benzyl alcohol	100-51-6	mg/kg	0.073	SMS 2nd LAET	--	--	63	3.53
Benzyl butyl phthalate	85-68-7	mg/kg	0.9	SMS 2nd LAET	--	--	4.3	0.228 J
Bis(2-chloro-1-methyl) ether	108-60-1	mg/kg			--	--	--	< 0.2 U
Bis(2-chloroethoxy)methane	111-91-1	mg/kg			--	--	< 0.29 U	< 0.2 U
Bis(2-chloroethyl) ether	111-44-4	mg/kg			--	--	< 0.29 U	< 0.2 U
Bis(2-ethylhexyl) phthalate	117-81-7	mg/kg	1.9	SMS 2nd LAET	--	--	110	8.2 J
Carbazole	86-74-8	mg/kg			--	--	0.85	< 0.2 U
Dibenzofuran	132-64-9	mg/kg	0.54	SMS 2nd LAET	--	--	< 0.29 U	0.0154 J
Diethyl phthalate	84-66-2	mg/kg	1.2	SMS 2nd LAET	--	--	< 0.57 U	< 0.2 U
Dimethyl phthalate	131-11-3	mg/kg	0.16	SMS 2nd LAET	--	--	70	2.34
Di-n-butyl phthalate	84-74-2	mg/kg	1.4	SMS 2nd LAET	--	--	6.6	0.669
Di-n-octyl phthalate	117-84-0	mg/kg	6.2	SMS 2nd LAET	--	--	4.4	0.346
Hexachlorobenzene	118-74-1	mg/kg	0.07	SMS 2nd LAET	--	--	< 0.14 U	< 0.00198 U
Hexachlorobutadiene	87-68-3	mg/kg	0.12	SMS 2nd LAET	--	--	< 0.14 U	< 0.00198 U
Hexachlorocyclopentadiene	77-47-4	mg/kg			--	--	< 0.29 U	< 0.998 UJ
Hexachloroethane	67-72-1	mg/kg			--	--	< 0.29 U	< 0.2 U
Isophorone	78-59-1	mg/kg			--	--	< 0.29 U	< 0.2 U
Nitrobenzene	98-95-3	mg/kg			--	--	< 0.29 U	< 0.2 U
N-Nitrosodimethylamine	62-75-9	mg/kg			--	--	< 2.9 U	--
N-Nitroso-di-n-propylamine	621-64-7	mg/kg			--	--	< 0.29 U	< 0.2 U
N-Nitrosodiphenylamine	86-30-6	mg/kg	0.04	SMS 2nd LAET	--	--	< 0.14 U	< 0.2 U
Pentachlorophenol	87-86-5	mg/kg	0.69	SMS 2nd LAET	--	--	1.5	< 0.998 U
Phenol	108-95-2	mg/kg	1.2	SMS 2nd LAET	--	--	2.2	< 0.2 U
Pesticides and Herbicides								
2,4'-DDD	53-19-0	mg/kg			--	--	--	< 0.0356 U
2,4'-DDE	3424-82-6	mg/kg			--	--	--	< 0.00395 U
2,4'-DDT	789-02-6	mg/kg			--	--	--	< 0.00395 U
4,4'-DDD	72-54-8	mg/kg			--	--	--	< 0.00395 U
4,4'-DDE	72-55-9	mg/kg			--	--	--	< 0.00395 U
4,4'-DDT	50-29-3	mg/kg			--	--	--	< 0.087 U

Table B.5. Catch Basin Solids Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_CB-SOLIDS_SLS_2022.02	SPM_RI_CB-SOLIDS_SLS_2022.02_alp_custom field 1	Location	CB-01	CB-02	CB-02	CB-03
					Date Sample	02/11/2016	02/11/2016	04/20/2021	02/11/2016
					SPM-CB-01-02112016	SPM-CB-02-02112016	CB-02-210420	SPM-CB-03-02112016	
Aldrin	309-00-2	mg/kg			--	--	< 0.00199 UJ	--	
Alpha-BHC	319-84-6	mg/kg			--	--	< 0.00199 UJ	--	
Beta-BHC	319-85-7	mg/kg			--	--	< 0.00199 UJ	--	
cis-Chlordane	5103-71-9	mg/kg			--	--	< 0.00199 UJ	--	
cis-Nonachlor	5103-73-1	mg/kg			--	--	< 0.00398 UJ	--	
Delta-BHC	319-86-8	mg/kg			--	--	< 0.00199 UJ	--	
Dieldrin	60-57-1	mg/kg			--	--	< 0.00398 UJ	--	
Endosulfan I	959-98-8	mg/kg			--	--	< 0.00199 UJ	--	
Endosulfan II	33213-65-9	mg/kg			--	--	< 0.00398 UJ	--	
Endosulfan Sulfate	1031-07-8	mg/kg			--	--	< 0.00398 UJ	--	
Endrin	72-20-8	mg/kg			--	--	< 0.00398 UJ	--	
Endrin Aldehyde	7421-93-4	mg/kg			--	--	< 0.00398 UJ	--	
Endrin ketone	53494-70-5	mg/kg			--	--	< 0.00398 UJ	--	
Heptachlor	76-44-8	mg/kg			--	--	< 0.00199 UJ	--	
Heptachlor Epoxide	1024-57-3	mg/kg			--	--	< 0.0159 UJ	--	
Lindane	58-89-9	mg/kg			--	--	< 0.00199 UJ	--	
Methoxychlor	72-43-5	mg/kg			--	--	< 0.0199 UJ	--	
Mirex	2385-85-5	mg/kg			--	--	< 0.00398 UJ	--	
Oxychlordane	27304-13-8	mg/kg			--	--	< 0.00398 UJ	--	
trans-Chlordane	5103-74-2	mg/kg			--	--	< 0.00199 UJ	--	
trans-Nonachlor	39765-80-5	mg/kg			--	--	< 0.00398 UJ	--	
Total Petroleum Hydrocarbons									
Gasoline Range Organics	TPH-GRO	mg/kg			--	--	72.2	--	
Diesel Range Organics	TPH-DRO	mg/kg			--	--	2240 J	--	
Motor Oil Range Organics	TPH-ORO	mg/kg			--	--	10700 J	--	
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg			--	--	12900 J	--	
Volatile Organic Compounds									
1-Chloropropane	540-54-5	mg/kg			--	--	--	--	
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg			--	--	< 0.00395 U	--	
1,1,1-Trichloroethane	71-55-6	mg/kg			--	--	< 0.00395 U	--	
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg			--	--	< 0.00395 U	--	
1,1,2-Trichloroethane	79-00-5	mg/kg			--	--	< 0.00395 U	--	
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg			--	--	< 0.00791 U	--	
1,1-Dichloroethane	75-34-3	mg/kg			--	--	< 0.00395 U	--	
1,1-Dichloroethene	75-35-4	mg/kg			--	--	< 0.00395 U	--	
1,1-Dichloropropene	563-58-6	mg/kg			--	--	< 0.00395 U	--	
1,2,3-Trichlorobenzene	87-61-6	mg/kg			--	--	< 0.0198 U	--	
1,2,3-Trichloropropane	96-18-4	mg/kg			--	--	< 0.00791 U	--	
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.051	SMS 2nd LAET	--	--	< 0.0198 U	--	
1,2,4-Trimethylbenzene	95-63-6	mg/kg			--	--	0.18	--	
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg			--	--	< 0.0198 U	--	
1,2-Dibromoethane (EDB)	106-93-4	mg/kg			--	--	< 0.00395 U	--	
1,2-Dichlorobenzene	95-50-1	mg/kg	0.05	SMS 2nd LAET	--	--	< 0.00395 U	--	
1,2-Dichloroethane (EDC)	107-06-2	mg/kg			--	--	< 0.00395 U	--	
1,2-Dichloropropane	78-87-5	mg/kg			--	--	< 0.00395 U	--	
1,3,5-Trimethylbenzene	108-67-8	mg/kg			--	--	0.0539	--	
1,3-Dichlorobenzene	541-73-1	mg/kg			--	--	< 0.00395 U	--	
1,3-Dichloropropane	142-28-9	mg/kg			--	--	< 0.00395 U	--	
1,4-Dichloro-2-Butene	110-57-6	mg/kg			--	--	< 0.0198 U	--	
1,4-Dichlorobenzene	106-46-7	mg/kg	0.11	SMS 2nd LAET	--	--	< 0.00395 UJ	--	
2,2-Dichloropropane	594-20-7	mg/kg			--	--	< 0.00395 U	--	
2-Butanone	78-93-3	mg/kg			--	--	0.156	--	
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg			--	--	< 0.0198 U	--	
2-Chlorotoluene	95-49-8	mg/kg			--	--	< 0.00395 U	--	
2-Hexanone	591-78-6	mg/kg			--	--	< 0.0198 U	--	
2-Pentanone	107-87-9	mg/kg			--	--	< 0.0198 U	--	
4-Chlorotoluene	106-43-4	mg/kg			--	--	< 0.00395 U	--	
4-Methyl-2-pentanone	108-10-1	mg/kg			--	--	< 0.0198 U	--	
Acetone	67-64-1	mg/kg			--	--	1.99 J	--	
Acrolein	107-02-8	mg/kg			--	--	< 0.0198 U	--	
Acrylonitrile	107-13-1	mg/kg			--	--	< 0.0198 U	--	
Benzene	71-43-2	mg/kg			--	--	0.0218	--	

Table B.5. Catch Basin Solids Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_CB-SOLIDS_SLS_2022.02	Location Date Sample SPM_RI_CB-SOLIDS_SLS_2022.02_alp_custom field_1	CB-04	CB-05	CB-06
					02/11/2016 SPM-CB-04-02112016	02/11/2016 SPM-CB-05-02112016	02/09/2016 SPM-CB-06-02092016
Aldrin	309-00-2	mg/kg			--	--	--
Alpha-BHC	319-84-6	mg/kg			--	--	--
Beta-BHC	319-85-7	mg/kg			--	--	--
cis-Chlordane	5103-71-9	mg/kg			--	--	--
cis-Nonachlor	5103-73-1	mg/kg			--	--	--
Delta-BHC	319-86-8	mg/kg			--	--	--
Dieldrin	60-57-1	mg/kg			--	--	--
Endosulfan I	959-98-8	mg/kg			--	--	--
Endosulfan II	33213-65-9	mg/kg			--	--	--
Endosulfan Sulfate	1031-07-8	mg/kg			--	--	--
Endrin	72-20-8	mg/kg			--	--	--
Endrin Aldehyde	7421-93-4	mg/kg			--	--	--
Endrin ketone	53494-70-5	mg/kg			--	--	--
Heptachlor	76-44-8	mg/kg			--	--	--
Heptachlor Epoxide	1024-57-3	mg/kg			--	--	--
Lindane	58-89-9	mg/kg			--	--	--
Methoxychlor	72-43-5	mg/kg			--	--	--
Mirex	2385-85-5	mg/kg			--	--	--
Oxychlordane	27304-13-8	mg/kg			--	--	--
trans-Chlordane	5103-74-2	mg/kg			--	--	--
trans-Nonachlor	39765-80-5	mg/kg			--	--	--
Total Petroleum Hydrocarbons							
Gasoline Range Organics	TPH-GRO	mg/kg			--	--	--
Diesel Range Organics	TPH-DRO	mg/kg			--	--	--
Motor Oil Range Organics	TPH-ORO	mg/kg			--	--	--
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg			--	--	--
Volatile Organic Compounds							
1-Chloropropane	540-54-5	mg/kg			--	--	--
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg			--	--	--
1,1,1-Trichloroethane	71-55-6	mg/kg			--	--	--
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg			--	--	--
1,1,2-Trichloroethane	79-00-5	mg/kg			--	--	--
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg			--	--	--
1,1-Dichloroethane	75-34-3	mg/kg			--	--	--
1,1-Dichloroethene	75-35-4	mg/kg			--	--	--
1,1-Dichloropropene	563-58-6	mg/kg			--	--	--
1,2,3-Trichlorobenzene	87-61-6	mg/kg			--	--	--
1,2,3-Trichloropropane	96-18-4	mg/kg			--	--	--
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.051	SMS 2nd LAET	--	--	--
1,2,4-Trimethylbenzene	95-63-6	mg/kg			--	--	--
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg			--	--	--
1,2-Dibromoethane (EDB)	106-93-4	mg/kg			--	--	--
1,2-Dichlorobenzene	95-50-1	mg/kg	0.05	SMS 2nd LAET	--	--	--
1,2-Dichloroethane (EDC)	107-06-2	mg/kg			--	--	--
1,2-Dichloropropane	78-87-5	mg/kg			--	--	--
1,3,5-Trimethylbenzene	108-67-8	mg/kg			--	--	--
1,3-Dichlorobenzene	541-73-1	mg/kg			--	--	--
1,3-Dichloropropane	142-28-9	mg/kg			--	--	--
1,4-Dichloro-2-Butene	110-57-6	mg/kg			--	--	--
1,4-Dichlorobenzene	106-46-7	mg/kg	0.11	SMS 2nd LAET	--	--	--
2,2-Dichloropropane	594-20-7	mg/kg			--	--	--
2-Butanone	78-93-3	mg/kg			--	--	--
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg			--	--	--
2-Chlorotoluene	95-49-8	mg/kg			--	--	--
2-Hexanone	591-78-6	mg/kg			--	--	--
2-Pentanone	107-87-9	mg/kg			--	--	--
4-Chlorotoluene	106-43-4	mg/kg			--	--	--
4-Methyl-2-pentanone	108-10-1	mg/kg			--	--	--
Acetone	67-64-1	mg/kg			--	--	--
Acrolein	107-02-8	mg/kg			--	--	--
Acrylonitrile	107-13-1	mg/kg			--	--	--
Benzene	71-43-2	mg/kg			--	--	--

Table B.5. Catch Basin Solids Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_CB-SOLIDS_SLS_2022.02	SPM_RI_CB-SOLIDS_SLS_2022.02_alp_custom field 1	Location	CB-06	CB-07	CB-08	CB-09
					Date Sample	04/20/2021 CB-06-210420	02/11/2016 SPM-CB-07-02112016	02/11/2016 SPM-CB-08-02112016	10/08/2015 SP-CB-09
Aldrin	309-00-2	mg/kg				< 0.00197 U	--	--	--
Alpha-BHC	319-84-6	mg/kg				< 0.00197 U	--	--	--
Beta-BHC	319-85-7	mg/kg				< 0.00197 U	--	--	--
cis-Chlordane	5103-71-9	mg/kg				< 0.00197 U	--	--	--
cis-Nonachlor	5103-73-1	mg/kg				< 0.00393 U	--	--	--
Delta-BHC	319-86-8	mg/kg				< 0.00197 U	--	--	--
Dieldrin	60-57-1	mg/kg				< 0.00393 U	--	--	--
Endosulfan I	959-98-8	mg/kg				< 0.00197 U	--	--	--
Endosulfan II	33213-65-9	mg/kg				< 0.00393 U	--	--	--
Endosulfan Sulfate	1031-07-8	mg/kg				< 0.00393 U	--	--	--
Endrin	72-20-8	mg/kg				< 0.00393 U	--	--	--
Endrin Aldehyde	7421-93-4	mg/kg				< 0.00393 U	--	--	--
Endrin ketone	53494-70-5	mg/kg				< 0.00393 U	--	--	--
Heptachlor	76-44-8	mg/kg				< 0.00197 U	--	--	--
Heptachlor Epoxide	1024-57-3	mg/kg				< 0.00197 U	--	--	--
Lindane	58-89-9	mg/kg				< 0.00197 U	--	--	--
Methoxychlor	72-43-5	mg/kg				< 0.0197 U	--	--	--
Mirex	2385-85-5	mg/kg				< 0.00393 U	--	--	--
Oxychlordane	27304-13-8	mg/kg				< 0.00393 U	--	--	--
trans-Chlordane	5103-74-2	mg/kg				< 0.00197 U	--	--	--
trans-Nonachlor	39765-80-5	mg/kg				< 0.00393 U	--	--	--
Total Petroleum Hydrocarbons									
Gasoline Range Organics	TPH-GRO	mg/kg				88.5	--	--	480
Diesel Range Organics	TPH-DRO	mg/kg				2710 J	--	--	5300
Motor Oil Range Organics	TPH-ORO	mg/kg				12800 J	--	--	14000
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg				15500 J	--	--	19300
Volatile Organic Compounds									
1-Chloropropane	540-54-5	mg/kg				--	--	--	< 1.1 U
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg				< 0.00241 U	--	--	< 0.22 U
1,1,1-Trichloroethane	71-55-6	mg/kg				< 0.00241 U	--	--	< 0.22 U
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg				< 0.00241 U	--	--	< 0.056 U
1,1,2-Trichloroethane	79-00-5	mg/kg				< 0.00241 U	--	--	< 0.067 U
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg				< 0.00481 U	--	--	< 0.22 U
1,1-Dichloroethane	75-34-3	mg/kg				< 0.00241 U	--	--	< 0.22 U
1,1-Dichloroethene	75-35-4	mg/kg				< 0.00241 U	--	--	< 0.11 U
1,1-Dichloropropene	563-58-6	mg/kg				< 0.00241 U	--	--	< 0.22 U
1,2,3-Trichlorobenzene	87-61-6	mg/kg				< 0.012 U	--	--	< 0.22 U
1,2,3-Trichloropropane	96-18-4	mg/kg				< 0.00481 U	--	--	< 0.22 U
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.051	SMS 2nd LAET		< 0.012 U	--	--	< 0.22 UJ
1,2,4-Trimethylbenzene	95-63-6	mg/kg				0.0256	--	--	3.3
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg				< 0.012 U	--	--	< 1.1 U
1,2-Dibromoethane (EDB)	106-93-4	mg/kg				< 0.00241 U	--	--	< 0.089 U
1,2-Dichlorobenzene	95-50-1	mg/kg	0.05	SMS 2nd LAET		< 0.00241 U	--	--	< 0.24 UJ
1,2-Dichloroethane (EDC)	107-06-2	mg/kg				< 0.00241 U	--	--	< 0.089 U
1,2-Dichloropropane	78-87-5	mg/kg				< 0.00241 U	--	--	< 0.067 U
1,3,5-Trimethylbenzene	108-67-8	mg/kg				0.00638	--	--	0.61
1,3-Dichlorobenzene	541-73-1	mg/kg				< 0.00241 U	--	--	< 0.22 UJ
1,3-Dichloropropane	142-28-9	mg/kg				< 0.00241 U	--	--	< 0.22 U
1,4-Dichloro-2-Butene	110-57-6	mg/kg				< 0.012 U	--	--	< 1.1 U
1,4-Dichlorobenzene	106-46-7	mg/kg	0.11	SMS 2nd LAET		< 0.00241 UJ	--	--	< 0.22 UJ
2,2-Dichloropropane	594-20-7	mg/kg				< 0.00241 U	--	--	< 0.22 U
2-Butanone	78-93-3	mg/kg				0.145	--	--	< 2.2 U
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg				< 0.012 U	--	--	< 1.1 U
2-Chlorotoluene	95-49-8	mg/kg				< 0.00241 U	--	--	< 0.22 U
2-Hexanone	591-78-6	mg/kg				< 0.012 U	--	--	< 1.1 U
2-Pentanone	107-87-9	mg/kg				< 0.012 U	--	--	--
4-Chlorotoluene	106-43-4	mg/kg				< 0.00241 U	--	--	< 0.22 U
4-Methyl-2-pentanone	108-10-1	mg/kg				< 0.012 U	--	--	< 1.1 U
Acetone	67-64-1	mg/kg				0.72	--	--	< 2.2 U
Acrolein	107-02-8	mg/kg				< 0.012 U	--	--	< 6.7 U
Acrylonitrile	107-13-1	mg/kg				< 0.012 U	--	--	< 1.1 U
Benzene	71-43-2	mg/kg				0.00235 J	--	--	< 0.089 U

Table B.5. Catch Basin Solids Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_CB-SOLIDS_SLS_2022.02	SPM_RI_CB-SOLIDS_SLS_2022.02_alp_custom_field_1	Location	CB-09	SWRX-PRE	SWRX-PRE
					Date Sample	02/11/2016 SPM-CB-09-02112016	10/08/2014 SP-OWS-01 (SOLID)	04/20/2021 PRERX-210420
Aldrin	309-00-2	mg/kg				--	--	< 0.00198 U
Alpha-BHC	319-84-6	mg/kg				--	--	< 0.00198 U
Beta-BHC	319-85-7	mg/kg				--	--	< 0.0356 U
cis-Chlordane	5103-71-9	mg/kg				--	--	< 0.00198 U
cis-Nonachlor	5103-73-1	mg/kg				--	--	< 0.087 U
Delta-BHC	319-86-8	mg/kg				--	--	< 0.00198 U
Dieldrin	60-57-1	mg/kg				--	--	< 0.0435 U
Endosulfan I	959-98-8	mg/kg				--	--	< 0.00198 U
Endosulfan II	33213-65-9	mg/kg				--	--	< 0.00395 U
Endosulfan Sulfate	1031-07-8	mg/kg				--	--	< 0.00395 U
Endrin	72-20-8	mg/kg				--	--	< 0.00395 U
Endrin Aldehyde	7421-93-4	mg/kg				--	--	< 0.00395 U
Endrin ketone	53494-70-5	mg/kg				--	--	< 0.00395 U
Heptachlor	76-44-8	mg/kg				--	--	< 0.00198 U
Heptachlor Epoxide	1024-57-3	mg/kg				--	--	< 0.00198 U
Lindane	58-89-9	mg/kg				--	--	< 0.00198 U
Methoxychlor	72-43-5	mg/kg				--	--	< 0.0198 U
Mirex	2385-85-5	mg/kg				--	--	< 0.00395 U
Oxychlordane	27304-13-8	mg/kg				--	--	< 0.00395 U
trans-Chlordane	5103-74-2	mg/kg				--	--	< 0.00198 U
trans-Nonachlor	39765-80-5	mg/kg				--	--	< 0.00395 U
Total Petroleum Hydrocarbons								
Gasoline Range Organics	TPH-GRO	mg/kg				--	340	16.1
Diesel Range Organics	TPH-DRO	mg/kg				--	6600	476
Motor Oil Range Organics	TPH-ORO	mg/kg				--	16000	1220
Diesel and Oil Extended Range Organics	TPH-EXT	mg/kg				--	22600	1700
Volatile Organic Compounds								
1-Chloropropane	540-54-5	mg/kg				--	< 0.71 U	--
1,1,1,2-Tetrachloroethane	630-20-6	mg/kg				--	< 0.27 U	< 0.00104 U
1,1,1-Trichloroethane	71-55-6	mg/kg				--	< 0.27 U	0.00319
1,1,2,2-Tetrachloroethane	79-34-5	mg/kg				--	< 0.066 U	< 0.00104 U
1,1,2-Trichloroethane	79-00-5	mg/kg				--	< 0.08 U	< 0.00104 U
1,1,2-Trichlorotrifluoroethane	76-13-1	mg/kg				--	< 0.27 U	< 0.00208 U
1,1-Dichloroethane	75-34-3	mg/kg				--	< 0.27 U	< 0.00104 U
1,1-Dichloroethene	75-35-4	mg/kg				--	< 0.13 U	< 0.00104 U
1,1-Dichloropropene	563-58-6	mg/kg				--	< 0.27 U	< 0.00104 U
1,2,3-Trichlorobenzene	87-61-6	mg/kg				--	< 0.27 U	< 0.0052 U
1,2,3-Trichloropropane	96-18-4	mg/kg				--	< 0.27 U	< 0.00208 U
1,2,4-Trichlorobenzene	120-82-1	mg/kg	0.051	SMS 2nd LAET		--	< 0.14 U	< 0.0052 U
1,2,4-Trimethylbenzene	95-63-6	mg/kg				--	4.6	0.0145
1,2-Dibromo-3-chloropropane	96-12-8	mg/kg				--	< 1.3 U	< 0.0052 U
1,2-Dibromoethane (EDB)	106-93-4	mg/kg				--	< 0.11 U	< 0.00104 U
1,2-Dichlorobenzene	95-50-1	mg/kg	0.05	SMS 2nd LAET		--	< 0.16 U	< 0.00104 U
1,2-Dichloroethane (EDC)	107-06-2	mg/kg				--	< 0.11 U	< 0.00104 U
1,2-Dichloropropane	78-87-5	mg/kg				--	< 0.08 U	< 0.00104 U
1,3,5-Trimethylbenzene	108-67-8	mg/kg				--	2	0.00642
1,3-Dichlorobenzene	541-73-1	mg/kg				--	< 0.14 U	< 0.00104 U
1,3-Dichloropropane	142-28-9	mg/kg				--	< 0.27 U	< 0.00104 U
1,4-Dichloro-2-Butene	110-57-6	mg/kg				--	< 1.3 U	< 0.0052 U
1,4-Dichlorobenzene	106-46-7	mg/kg	0.11	SMS 2nd LAET		--	< 0.14 U	< 0.00104 U
2,2-Dichloropropane	594-20-7	mg/kg				--	< 0.27 U	< 0.00104 U
2-Butanone	78-93-3	mg/kg				--	< 2.7 U	0.0305
2-Chloroethyl Vinyl Ether	110-75-8	mg/kg				--	< 1.3 U	< 0.0052 U
2-Chlorotoluene	95-49-8	mg/kg				--	0.067 J	< 0.00104 U
2-Hexanone	591-78-6	mg/kg				--	< 1.3 U	< 0.0052 U
2-Pentanone	107-87-9	mg/kg				--	--	0.00389 J
4-Chlorotoluene	106-43-4	mg/kg				--	< 0.27 U	< 0.00104 U
4-Methyl-2-pentanone	108-10-1	mg/kg				--	0.9 J	0.00509 J
Acetone	67-64-1	mg/kg				--	< 2.7 U	0.386
Acrolein	107-02-8	mg/kg				--	< 8 U	< 0.0052 U
Acrylonitrile	107-13-1	mg/kg				--	< 1.3 U	< 0.0052 U
Benzene	71-43-2	mg/kg				--	< 0.11 U	0.00112

Aspect Consulting

6/22/2022

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Table B.5

RWP Addendum

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Table B.5. Catch Basin Solids Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_CB-SOLIDS_SLS_2022.02	Location Date Sample SPM_RI_CB-SOLIDS_SLS_2022.02_alp_custom field 1	CB-01	CB-02	CB-02	CB-03
					02/11/2016 SPM-CB-01-02112016	02/11/2016 SPM-CB-02-02112016	04/20/2021 CB-02-210420	02/11/2016 SPM-CB-03-02112016
Bromobenzene	108-86-1	mg/kg			--	--	< 0.00395 U	--
Bromochloromethane	74-97-5	mg/kg			--	--	< 0.00395 U	--
Bromodichloromethane	75-27-4	mg/kg			--	--	< 0.00395 U	--
Bromofom	75-25-2	mg/kg			--	--	< 0.00395 U	--
Bromomethane	74-83-9	mg/kg			--	--	0.00454	--
Carbon Disulfide	75-15-0	mg/kg			--	--	0.0382 J	--
Carbon Tetrachloride	56-23-5	mg/kg			--	--	< 0.00395 U	--
Chlorobenzene	108-90-7	mg/kg			--	--	< 0.00395 U	--
Chloroethane	75-00-3	mg/kg			--	--	< 0.00791 U	--
Chloroform	67-66-3	mg/kg			--	--	< 0.00395 U	--
Chloromethane	74-87-3	mg/kg			--	--	< 0.00395 U	--
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg			--	--	< 0.00395 U	--
cis-1,3-Dichloropropene	10061-01-5	mg/kg			--	--	< 0.00395 U	--
Dibromochloromethane	124-48-1	mg/kg			--	--	< 0.00395 U	--
Dibromomethane	74-95-3	mg/kg			--	--	< 0.00395 U	--
Dichlorodifluoromethane	75-71-8	mg/kg			--	--	< 0.00395 U	--
Ethylbenzene	100-41-4	mg/kg			--	--	0.0873	--
Isopropylbenzene	98-82-8	mg/kg			--	--	0.00881	--
m,p-Xylenes	179601-23-1	mg/kg			--	--	0.224	--
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg			--	--	< 0.00395 U	--
Methylene Chloride	75-09-2	mg/kg			--	--	< 0.0198 U	--
Methyliodide	74-88-4	mg/kg			--	--	< 0.00395 U	--
n-Butylbenzene	104-51-8	mg/kg			--	--	0.00361 J	--
n-Propylbenzene	103-65-1	mg/kg			--	--	0.0201	--
o-Xylene	95-47-6	mg/kg			--	--	0.118	--
p-Isopropyltoluene	99-87-6	mg/kg			--	--	0.0147 J	--
sec-Butylbenzene	135-98-8	mg/kg			--	--	0.00315 J	--
Styrene	100-42-5	mg/kg			--	--	0.00708	--
tert-Butylbenzene	98-06-6	mg/kg			--	--	< 0.00395 U	--
Tetrachloroethene (PCE)	127-18-4	mg/kg			--	--	0.0334 J	--
Toluene	108-88-3	mg/kg			--	--	3.97	--
Total Xylenes	1330-20-7	mg/kg			--	--	0.342	--
trans-1,2-Dichloroethene	156-60-5	mg/kg			--	--	< 0.00395 U	--
trans-1,3-Dichloropropene	10061-02-6	mg/kg			--	--	< 0.00395 U	--
Trichloroethene (TCE)	79-01-6	mg/kg			--	--	0.00359 J	--
Trichlorofluoromethane	75-69-4	mg/kg			--	--	< 0.00791 U	--
Vinyl Acetate	108-05-4	mg/kg			--	--	< 0.0198 U	--
Vinyl Chloride	75-01-4	mg/kg			--	--	< 0.00395 U	--
Conventionals								
Total Organic Carbon	TOC	%			7	7.735	18.1	5.84
Total Solids	TS	%			--	--	28.14	--

Bold - detected
 Blue Shaded - Detected result exceeded screening level
 U - Analyte not detected at or above Reporting Limit (RL) shown
 J - Result value estimated
 UJ - Analyte not detected and the Reporting Limit (RL) is an estimate
 cPAHs = carcinogenic polycyclic aromatic hydrocarbons
 HPAH = high molecular weight PAH
 LPAH = low molecular weight PAH
 TEQ = Toxic Equivalency
 "--" - indicates results not available
 ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components
 ND = 0 - calculated using 0 for non-detected components
 ND = 1 - calculated using 1 for non-detected components

Table B.5. Catch Basin Solids Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_CB-SOLIDS_SLS_2022.02	Location Date Sample SPM_RI_CB-SOLIDS_SLS_2022.02_alp_custom_field_1	CB-04	CB-05	CB-06
					02/11/2016 SPM-CB-04-02112016	02/11/2016 SPM-CB-05-02112016	02/09/2016 SPM-CB-06-02092016
Bromobenzene	108-86-1	mg/kg			--	--	--
Bromochloromethane	74-97-5	mg/kg			--	--	--
Bromodichloromethane	75-27-4	mg/kg			--	--	--
Bromofom	75-25-2	mg/kg			--	--	--
Bromomethane	74-83-9	mg/kg			--	--	--
Carbon Disulfide	75-15-0	mg/kg			--	--	--
Carbon Tetrachloride	56-23-5	mg/kg			--	--	--
Chlorobenzene	108-90-7	mg/kg			--	--	--
Chloroethane	75-00-3	mg/kg			--	--	--
Chloroform	67-66-3	mg/kg			--	--	--
Chloromethane	74-87-3	mg/kg			--	--	--
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg			--	--	--
cis-1,3-Dichloropropene	10061-01-5	mg/kg			--	--	--
Dibromochloromethane	124-48-1	mg/kg			--	--	--
Dibromomethane	74-95-3	mg/kg			--	--	--
Dichlorodifluoromethane	75-71-8	mg/kg			--	--	--
Ethylbenzene	100-41-4	mg/kg			--	--	--
Isopropylbenzene	98-82-8	mg/kg			--	--	--
m,p-Xylenes	179601-23-1	mg/kg			--	--	--
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg			--	--	--
Methylene Chloride	75-09-2	mg/kg			--	--	--
Methyliodide	74-88-4	mg/kg			--	--	--
n-Butylbenzene	104-51-8	mg/kg			--	--	--
n-Propylbenzene	103-65-1	mg/kg			--	--	--
o-Xylene	95-47-6	mg/kg			--	--	--
p-Isopropyltoluene	99-87-6	mg/kg			--	--	--
sec-Butylbenzene	135-98-8	mg/kg			--	--	--
Styrene	100-42-5	mg/kg			--	--	--
tert-Butylbenzene	98-06-6	mg/kg			--	--	--
Tetrachloroethene (PCE)	127-18-4	mg/kg			--	--	--
Toluene	108-88-3	mg/kg			--	--	--
Total Xylenes	1330-20-7	mg/kg			--	--	--
trans-1,2-Dichloroethene	156-60-5	mg/kg			--	--	--
trans-1,3-Dichloropropene	10061-02-6	mg/kg			--	--	--
Trichloroethene (TCE)	79-01-6	mg/kg			--	--	--
Trichlorofluoromethane	75-69-4	mg/kg			--	--	--
Vinyl Acetate	108-05-4	mg/kg			--	--	--
Vinyl Chloride	75-01-4	mg/kg			--	--	--
Conventionals							
Total Organic Carbon	TOC	%			12.1	11.9	8.54
Total Solids	TS	%			--	--	--

Bold - detected
 Blue Shaded - Detected result exceeded screening level
 U - Analyte not detected at or above Reporting Limit (RL) shown
 J - Result value estimated
 UJ - Analyte not detected and the Reporting Limit (RL) is an estimate
 cPAHs = carcinogenic polycyclic aromatic hydrocarbons
 HPAH = high molecular weight PAH
 LPAH = low molecular weight PAH
 TEQ = Toxic Equivalency
 "--" - indicates results not available
 ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components
 ND = 0 - calculated using 0 for non-detected components
 ND = 1 - calculated using 1 for non-detected components

Table B.5. Catch Basin Solids Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_CB-SOLIDS_SLS_2022.02	Location	CB-06	CB-07	CB-08	CB-09
				Date	04/20/2021	02/11/2016	02/11/2016	10/08/2015
				Sample	CB-06-210420	SPM-CB-07-02112016	SPM-CB-08-02112016	SP-CB-09
				SPM_RI_CB-SOLIDS_SLS_2022.02				
				SPM_RI_CB-SOLIDS_SLS_2022.02_alp_custom field 1				
Bromobenzene	108-86-1	mg/kg			< 0.00241 U	--	--	< 0.22 U
Bromochloromethane	74-97-5	mg/kg			< 0.00241 U	--	--	< 0.22 U
Bromodichloromethane	75-27-4	mg/kg			< 0.00241 U	--	--	< 0.22 U
Bromofom	75-25-2	mg/kg			< 0.00241 U	--	--	< 0.22 U
Bromomethane	74-83-9	mg/ka			0.0012 J	--	--	< 0.78 U
Carbon Disulfide	75-15-0	mg/ka			0.00873	--	--	< 0.22 U
Carbon Tetrachloride	56-23-5	mg/kg			< 0.00241 U	--	--	< 0.11 U
Chlorobenzene	108-90-7	mg/kg			< 0.00241 U	--	--	< 0.22 U
Chloroethane	75-00-3	mg/kg			< 0.00481 U	--	--	< 2.2 U
Chloroform	67-66-3	mg/kg			< 0.00241 U	--	--	< 0.22 U
Chloromethane	74-87-3	mg/kg			< 0.00241 U	--	--	< 0.56 U
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg			0.00224 J	--	--	< 0.22 U
cis-1,3-Dichloropropene	10061-01-5	mg/kg			< 0.00241 U	--	--	< 0.089 U
Dibromochloromethane	124-48-1	mg/kg			< 0.00241 U	--	--	< 0.22 U
Dibromomethane	74-95-3	mg/kg			< 0.00241 U	--	--	< 0.22 U
Dichlorodifluoromethane	75-71-8	mg/kg			< 0.00241 U	--	--	< 0.22 U
Ethylbenzene	100-41-4	mg/kg			0.0159	--	--	0.24
Isopropylbenzene	98-82-8	mg/kg			0.00226 J	--	--	0.05 J
m,p-Xylenes	179601-23-1	mg/ka			0.0191	--	--	0.43
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg			< 0.00241 U	--	--	< 0.22 U
Methylene Chloride	75-09-2	mg/ka			< 0.012 U	--	--	< 0.14 U
Methylolide	74-88-4	mg/kg			< 0.00241 U	--	--	< 1.1 U
n-Butylbenzene	104-51-8	mg/kg			< 0.00241 UJ	--	--	1.8
n-Propylbenzene	103-65-1	mg/kg			< 0.00241 U	--	--	0.18 J
o-Xylene	95-47-6	mg/kg			0.0107	--	--	0.23
p-Isopropyltoluene	99-87-6	mg/kg			0.253	--	--	0.29
sec-Butylbenzene	135-98-8	mg/kg			< 0.00241 U	--	--	0.16 J
Styrene	100-42-5	mg/kg			< 0.00241 U	--	--	0.22
tert-Butylbenzene	98-06-6	mg/ka			< 0.00241 U	--	--	< 0.22 U
Tetrachloroethene (PCE)	127-18-4	mg/ka			0.00087 J	--	--	< 0.11 U
Toluene	108-88-3	mg/ka			10.9	--	--	0.38
Total Xylenes	1330-20-7	mg/kg			0.0298	--	--	0.66
trans-1,2-Dichloroethene	156-60-5	mg/kg			< 0.00241 U	--	--	< 0.22 U
trans-1,3-Dichloropropene	10061-02-6	mg/kg			< 0.00241 U	--	--	< 0.089 U
Trichloroethene (TCE)	79-01-6	mg/ka			< 0.00241 U	--	--	< 0.089 U
Trichlorofluoromethane	75-69-4	mg/kg			< 0.00481 U	--	--	< 0.22 U
Vinyl Acetate	108-05-4	mg/kg			< 0.012 U	--	--	< 1.1 U
Vinyl Chloride	75-01-4	mg/kg			< 0.00241 U	--	--	< 0.089 U
Conventionals								
Total Organic Carbon	TOC	%			11.5	11	4.11	11
Total Solids	TS	%			35.23	--	--	44.7

Bold - detected
 Blue Shaded - Detected result exceeded screening level
 U - Analyte not detected at or above Reporting Limit (RL) shown
 J - Result value estimated
 UJ - Analyte not detected and the Reporting Limit (RL) is an estimate
 cPAHs = carcinogenic polycyclic aromatic hydrocarbons
 HPAH = high molecular weight PAH
 LPAH = low molecular weight PAH
 TEQ = Toxic Equivalency
 "--" - indicates results not available
 ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components
 ND = 0 - calculated using 0 for non-detected components
 ND = 1 - calculated using 1 for non-detected components

Table B.5. Catch Basin Solids Chemical Analytical Results

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	CAS RN	Unit	SPM_RI_CB-SOLIDS_SLS_2022.02	Location	CB-09	SWRX-PRE	SWRX-PRE
				Date	02/11/2016	10/08/2014	04/20/2021
				Sample	SPM-CB-09-02112016	SP-OWS-01 (SOLID)	PRERX-210420
				SPM_RI_CB-SOLIDS_SLS_2022.02_alp_custom field 1			
Bromobenzene	108-86-1	mg/kg			--	< 0.27 U	< 0.00104 U
Bromochloromethane	74-97-5	mg/kg			--	< 0.27 U	< 0.00104 U
Bromodichloromethane	75-27-4	mg/kg			--	< 0.27 U	< 0.00104 U
Bromofom	75-25-2	mg/kg			--	< 0.27 U	< 0.00104 U
Bromomethane	74-83-9	mg/kg			--	< 0.93 U	< 0.00104 UJ
Carbon Disulfide	75-15-0	mg/kg			--	< 0.27 U	0.00632
Carbon Tetrachloride	56-23-5	mg/kg			--	< 0.13 U	< 0.00104 U
Chlorobenzene	108-90-7	mg/kg			--	< 0.27 U	< 0.00104 U
Chloroethane	75-00-3	mg/kg			--	< 2.7 U	< 0.00208 UJ
Chloroform	67-66-3	mg/kg			--	< 0.27 U	0.00032 J
Chloromethane	74-87-3	mg/kg			--	< 0.66 U	< 0.00104 U
cis-1,2-Dichloroethene (cDCE)	156-59-2	mg/kg			--	< 0.27 U	< 0.00104 U
cis-1,3-Dichloropropene	10061-01-5	mg/kg			--	< 0.11 U	< 0.00104 U
Dibromochloromethane	124-48-1	mg/kg			--	< 0.27 U	< 0.00104 U
Dibromomethane	74-95-3	mg/kg			--	< 0.27 U	< 0.00104 U
Dichlorodifluoromethane	75-71-8	mg/kg			--	< 0.27 U	< 0.00104 U
Ethylbenzene	100-41-4	mg/kg			--	12	0.00962
Isopropylbenzene	98-82-8	mg/kg			--	0.83	0.00125
m,p-Xylenes	179601-23-1	mg/kg			--	5.2	0.00608
Methyl tert-butyl ether (MTBE)	1634-04-4	mg/kg			--	< 0.27 U	< 0.00104 U
Methylene Chloride	75-09-2	mg/kg			--	< 0.17 U	0.00512 J
Methyliodide	74-88-4	mg/kg			--	< 1.3 U	0.00226
n-Butylbenzene	104-51-8	mg/kg			--	1.2	< 0.00104 U
n-Propylbenzene	103-65-1	mg/kg			--	1.1	0.00148
o-Xylene	95-47-6	mg/kg			--	2.3	0.00512
p-Isopropyltoluene	99-87-6	mg/kg			--	0.4	0.00245
sec-Butylbenzene	135-98-8	mg/kg			--	0.37	0.00072 J
Styrene	100-42-5	mg/kg			--	9.3	0.00108
tert-Butylbenzene	98-06-6	mg/kg			--	< 0.27 U	< 0.00104 U
Tetrachloroethene (PCE)	127-18-4	mg/kg			--	0.81	< 0.00104 U
Toluene	108-88-3	mg/kg			--	8.8	0.0253
Total Xylenes	1330-20-7	mg/kg			--	7.5	0.0112
trans-1,2-Dichloroethene	156-60-5	mg/kg			--	< 0.27 U	< 0.00104 U
trans-1,3-Dichloropropene	10061-02-6	mg/kg			--	< 0.11 U	< 0.00104 U
Trichloroethene (TCE)	79-01-6	mg/kg			--	0.57	< 0.00104 U
Trichlorofluoromethane	75-69-4	mg/kg			--	< 0.27 U	< 0.00208 U
Vinyl Acetate	108-05-4	mg/kg			--	< 1.3 U	< 0.0052 U
Vinyl Chloride	75-01-4	mg/kg			--	< 0.11 U	< 0.00104 U
Conventionals							
Total Organic Carbon	TOC	%			5.85	23	1.42
Total Solids	TS	%			--	34.4	71.15

Bold - detected
 Blue Shaded - Detected result exceeded screening level
 U - Analyte not detected at or above Reporting Limit (RL) shown
 J - Result value estimated
 UJ - Analyte not detected and the Reporting Limit (RL) is an estimate
 cPAHs = carcinogenic polycyclic aromatic hydrocarbons
 HPAH = high molecular weight PAH
 LPAH = low molecular weight PAH
 TEQ = Toxic Equivalency
 "--" - indicates results not available
 ND = 1/2 RDL - calculated using 1/2 the reporting limit for non-detected components
 ND = 0 - calculated using 0 for non-detected components
 ND = 1 - calculated using 1 for non-detected components

Table B.6. Statistical Summary of All Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	Units	Preliminary Screening Level (PSL)	Number of Sampled Locations	Number of Samples (excluding Field Dups)	Number of Samples with Detected Concentration	Frequency of Detection	Minimum Detected Concentration	Average Detected Concentration	Maximum Detected Concentration	Number of Detected Exceedances of PSL	Frequency of Detected Exceedance	Maximum Exceedance Factor	Number of NonDetects with Reporting Limit Above Preliminary Screening Level	Min RL	Max RL	Date of Last Screening Level Exceedance
Metals																
Arsenic	mg/kg	7.3	30	52	52	100%	1.3	4.85	27.4	6	12%	4	0	0.2	0.26	3/11/2021
Cadmium	mg/kg	0.77	30	52	49	94%	0.04	2.02	31.4	10	19%	41	0	0.1	0.54	3/11/2021
Chromium	mg/kg	48.2	30	52	52	100%	6.04	43.2	465	8	15%	10	0	0.5	1.51	3/11/2021
Copper	mg/kg	36.4	30	52	52	100%	7.97	94.8	2470	19	37%	68	0	0.5	5.62	3/11/2021
Lead	mg/kg	50	30	52	52	100%	1.18	259	3180	17	33%	64	0	0.1	1.12	3/11/2021
Mercury	mg/kg	0.07	30	46	46	100%	0.00523	1.84	29.5	17	37%	421	0	0.0189	0.397	3/11/2021
Nickel	mg/kg	48	23	44	44	100%	6.57	14.9	52	1	2%	1	0	0.5	0.65	3/10/2021
Silver	mg/kg	0.323	7	8	8	100%	0.038	0.133	0.299		0%	1				
Zinc	mg/kg	86	30	52	52	100%	17.3	176	1510	20	38%	18	0	4.2	56.2	3/11/2021
Organometallic																
Dibutyltin Ion	mg/kg		14	22	12	55%	0.0024	0.0753	0.617		0%			0.00571	0.0578	
Monobutyltin	mg/kg		14	22	12	55%	0.00197	0.0402	0.243		0%			0.00402	0.0408	
Tetrabutyltin	mg/kg		14	22		0%					0%			0.00493	0.05	
Tributyltin Ion	mg/kg	0.0021	14	22	15	68%	0.00057	0.0944	1.12	10	45%	533	7	0.00381	0.0386	3/11/2021
Other SVOCs																
2,4,5-Trichlorophenol	mg/kg	0.00133	18	28		0%				0	0%		28	0.0994	0.998	3/11/2021
2,4,6-Trichlorophenol	mg/kg	6.97	18	28	1	4%	0.026	0.026	0.026		0%	0		0.0996	0.0996	
2,4-Dichlorophenol	mg/kg	0.0694	18	28		0%				0	0%		28	0.0994	0.998	3/11/2021
2,4-Dimethylphenol	mg/kg	0.029	25	36		0%				0	0%		36	0.045	5	3/11/2021
2,4-Dinitrophenol	mg/kg	0.4	18	28		0%				0	0%		1	0.199	2	3/5/2021
2,4-Dinitrotoluene	mg/kg	0.00279	18	28		0%				0	0%		28	0.0994	0.998	3/11/2021
2,6-Dinitrotoluene	mg/kg	0.667	18	28		0%				0	0%		1	0.0994	0.998	3/5/2021
2-Chloronaphthalene	mg/kg	5.36	18	28		0%					0%			0.0199	0.2	
2-Chlorophenol	mg/kg	0.2	18	28		0%					0%			0.0199	0.2	
2-Methylphenol	mg/kg	0.069	25	36	1	3%	0.0902	0.0902	0.0902	1	3%	1	6	0.02	0.02	3/5/2021
2-Nitroaniline	mg/kg	800	18	28		0%					0%			0.0994	0.998	
2-Nitrophenol	mg/kg		18	28		0%					0%			0.0199	0.2	
3,3'-Dichlorobenzidine	mg/kg	3.43E-05	18	28		0%				0	0%		28	0.0994	0.998	3/11/2021
3-Nitroaniline	mg/kg		18	28		0%					0%			0.0994	0.998	
4,6-Dinitro-2-methylphenol	mg/kg	0.134	18	28		0%				0	0%		28	0.199	2	3/11/2021
4-Bromophenyl phenyl ether	mg/kg		18	28		0%					0%			0.0199	0.2	
4-Chloro-3-methylphenol	mg/kg	0.498	18	28		0%				0	0%		1	0.0994	0.998	3/5/2021
4-Chloroaniline	mg/kg	5	18	28		0%					0%			0.0994	0.998	
4-Chlorophenyl phenyl ether	mg/kg		18	28		0%					0%			0.0199	0.2	
4-Methylphenol	mg/kg	0.67	25	36	2	6%	0.0189	0.02	0.021	0	0%	0	2	0.0199	0.02	10/1/2007
4-Nitroaniline	mg/kg	50	18	28	8	29%	0.125	2.03	9.12		0%	0		0.0994	0.998	
4-Nitrophenol	mg/kg	7	18	28		0%					0%			0.0994	0.998	
Benzoic acid	mg/kg	0.65	25	36	4	11%	0.0623	0.0827	0.112	0	0%	0	6	0.199	0.2	3/5/2021
Benzyl alcohol	mg/kg	0.057	25	36	4	11%	0.0149	0.179	0.531	2	6%	9	6	0.0199	0.02	3/11/2021
Benzyl butyl phthalate	mg/kg	0.00361	25	36	9	25%	0.0096	0.296	2.2	9	25%	609	27	0.0199	0.02	3/11/2021
Bis(2-chloro-1-methylethyl) ether	mg/kg	5.09	18	28	1	4%	0.0234	0.0234	0.0234		0%	0		0.0199	0.0199	
Bis(2-chloroethoxy)methane	mg/kg		18	28		0%					0%			0.0199	0.2	
Bis(2-chloroethyl) ether	mg/kg	0.000331	18	28		0%				0	0%		28	0.0199	0.2	3/11/2021
Bis(2-ethylhexyl) phthalate	mg/kg	0.102	25	36	15	42%	0.0466	0.836	7	7	19%	69	5	0.0497	0.05	3/11/2021
Carbazole	mg/kg		18	28	4	14%	0.0091	0.0302	0.0682		0%			0.0199	0.02	
Dibenzofuran	mg/kg	0.54	31	47	11	23%	0.00162	0.00648	0.0199	0	0%	0	2	0.00433	0.015	10/1/2007
Diethyl phthalate	mg/kg	0.2	25	36	6	17%	0.0185	0.227	0.982	2	6%	5	4	0.0199	0.02	3/9/2021
Dimethyl phthalate	mg/kg	0.071	25	36	13	36%	0.0095	0.16	0.543	8	22%	8	4	0.0199	0.2	3/11/2021
Di-n-butyl phthalate	mg/kg	0.283	25	36	18	50%	0.0054	0.227	1.3	4	11%	5	3	0.0199	0.2	3/11/2021
Di-n-octyl phthalate	mg/kg	6.2	25	36	2	6%	0.0165	0.0222	0.0279		0%	0		0.0199	0.02	
Hexachlorobenzene	mg/kg	8.02E-06	25	36		0%				0	0%		36	0.0005	0.99	3/11/2021
Hexachlorobutadiene	mg/kg	0.000212	30	48		0%				0	0%		48	0.0005	0.48	3/23/2021
Hexachlorocyclopentadiene	mg/kg	0.032	18	28		0%				0	0%		28	0.0994	0.998	3/11/2021
Hexachloroethane	mg/kg	0.000161	18	28	1	4%	0.0143	0.0143	0.0143	1	4%	89	27	0.02	0.02	3/11/2021
Isophorone	mg/kg	0.583	18	28	3	11%	0.0094	0.543	1.59	1	4%	3	0	0.02	0.02	3/4/2021
Nitrobenzene	mg/kg	0.638	18	28	7	25%	0.0111	0.0693	0.143		0%	0		0.0199	0.2	
N-Nitroso-di-n-propylamine	mg/kg	0.000551	18	28		0%				0	0%		28	0.0199	0.2	3/11/2021
N-Nitrosodiphenylamine	mg/kg	0.028	25	36	1	3%	0.0506	0.0506	0.0506	1	3%	2	6	0.02	0.02	3/5/2021
Pentachlorophenol	mg/kg	3.17E-05	25	36	8	22%	0.0652	0.956	2.8	8	22%	88328	28	0.0994	0.1	3/11/2021
Phenol	mg/kg	0.42	25	36	7	19%	0.0097	0.0287	0.0798	0	0%	0	4	0.0199	0.02	10/1/2007
PAHs																
1-Methylnaphthalene	mg/kg	34.5	24	39	12	31%	0.00237	0.0128	0.0277		0%	0		0.00433	0.0248	
2-Methylnaphthalene	mg/kg	0.67	31	47	13	28%	0.00543	0.505	3	3	6%	4	0	0.00446	0.0248	10/1/2007

Table B.6. Statistical Summary of All Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	Units	Preliminary Screening Level (PSL)	Number of Sampled Locations	Number of Samples (excluding Field Dups)	Number of Samples with Detected Concentration	Frequency of Detection	Minimum Detected Concentration	Average Detected Concentration	Maximum Detected Concentration	Number of Exceedances of PSL	Frequency of Detected Exceedance	Maximum Exceedance Factor	Number of NonDetects with Reporting Limit Above Preliminary Screening Level	Min RL	Max RL	Date of Last Screening Level Exceedance
Acenaphthene	mg/kg	0.5	31	47	15	32%	0.00068	0.0207	0.25	0	0%	1	2	0.00446	0.0248	10/1/2007
Acenaphthylene	mg/kg	1.3	31	47	20	43%	0.00122	0.00687	0.0632		0%	0		0.00446	0.0249	
Anthracene	mg/kg	0.96	31	47	28	60%	0.00093	0.0237	0.33	0	0%	0	1	0.00446	0.0249	10/1/2007
Benzo(g,h,i)perylene	mg/kg	0.67	31	47	33	70%	0.00129	0.0547	0.516	0	0%	1	2	0.00446	0.0249	10/1/2007
Fluoranthene	mg/kg	1.7	31	47	40	85%	0.0007	0.0667	0.5		0%	0		0.00433	0.0249	
Fluorene	mg/kg	0.54	31	47	15	32%	0.00092	0.0806	0.67	1	2%	1	0	0.00446	0.0248	10/1/2007
Naphthalene	mg/kg	0.0389	31	49	14	29%	0.00132	0.41	2.5	5	10%	64	2	0.00446	0.015	3/11/2021
Phenanthrene	mg/kg	1.5	31	47	38	81%	0.00152	0.13	1.4		0%	1		0.00433	0.0249	
Pyrene	mg/kg	2.6	31	47	40	85%	0.00097	0.091	0.82		0%	0		0.00433	0.0249	
Benzo(a)anthracene	mg/kg		31	47	36	77%	0.00083	0.033	0.24		0%			0.00433	0.0249	
Benzo(a)pyrene	mg/kg	0.00031	31	47	34	72%	0.00086	0.0312	0.276	34	72%	890	13	0.00433	0.0249	3/11/2021
Benzo(b)fluoranthene	mg/kg		31	47	33	70%	0.00144	0.0398	0.24		0%			0.00446	0.0249	
Benzo(j)fluoranthene	mg/kg		23	38	31	82%	0.00114	0.0193	0.135		0%			0.00446	0.0249	
Benzo(k)fluoranthene	mg/kg		31	47	31	66%	0.00081	0.0176	0.131		0%			0.00446	0.0249	
Chrysene	mg/kg		31	47	37	79%	0.00134	0.0622	0.49		0%			0.00433	0.0249	
Dibenzo(a,h)anthracene	mg/kg		31	47	30	64%	0.00123	0.00843	0.0657		0%			0.00446	0.0249	
Indeno(1,2,3-cd)pyrene	mg/kg		31	47	32	68%	0.00237	0.0383	0.373		0%			0.00446	0.0249	
Total Benzofluoranthenes	mg/kg	3.2	23	38	31	82%	0.00386	0.0748	0.489		0%	0		0.00891	0.0499	
Total HPAHs	mg/kg	12	31	47	40	85%	0.00167	0.41	2.64		0%	0		0.005	0.48	
Total LPAHs	mg/kg	5.2	31	47	40	85%	0.001	0.327	4.47		0%	1		0.00496	0.48	
Total PAHs (ND=0)	mg/kg		31	47	41	87%	0.001	0.719	6.39		0%			0.005	0.48	
Total cPAHs TEQ (ND = 0)	mg/kg	0.00031	31	47	37	79%	0.000956	0.0427	0.391	37	79%	1261	1		0.00497	3/11/2021
Total cPAHs TEQ (ND = 1/2 RDL)	mg/kg	0.00031	31	47	37	79%	0.00182	0.0665	0.67	37	79%	2161	10	0.00376745	0.74745	3/11/2021
Total cPAHs TEQ (ND multiplier Unk)	mg/kg	0.00031	1	1		0%				0	0%		1	0.06	0.06	1/17/2006
PCB Aroclors																
Aroclor 1016	mg/kg		76	100		0%					0%			0.0035	6.3	
Aroclor 1221	mg/kg		69	92		0%					0%			0.0035	6.3	
Aroclor 1232	mg/kg		69	92		0%					0%			0.0035	6.3	
Aroclor 1242	mg/kg		69	92	3	3%	3.9	4.4	5.2		0%			1.1	1.2	
Aroclor 1248	mg/kg		76	100		0%					0%			0.0035	6.3	
Aroclor 1254	mg/kg		76	100	48	48%	0.002	5.99	36.7		0%			0.0035	6.3	
Aroclor 1260	mg/kg		76	100	80	80%	0.0007	2.15	54		0%			0.0035	6.3	
Aroclor 1262	mg/kg		53	70		0%					0%			0.0035	1.39	
Aroclor 1268	mg/kg		53	70		0%					0%			0.0035	1.39	
Total PCB Aroclors (ND=1/2 RL)	mg/kg	1.1E-05	76	100	86	86%	0.015	6.47	79.8	86	86%	7254545	14	0.0039	0.08	3/11/2021
Total PCBs (Sum of Aroclors)	mg/kg	1.1E-05	76	100	86	86%	0.0009	5.5	66	86	86%	6000000	14	0.0039	0.08	3/11/2021
PCB Congeners																
Total PCB Congeners	mg/kg	1.1E-05	43	43	43	100%	0.00482	8.42	107	43	100%	9727273	0			3/9/2021
Total PCB TEQ (ND = 0)	mg/kg	6.93E-09	43	43	43	100%	1.9E-09	0.000183	0.00214	42	98%	308802	0			3/9/2021
Total PCB TEQ (ND = 1/2 RDL)	mg/kg	6.93E-09	43	43	43	100%	0.00000116	0.000183	0.00215	43	100%	310245	0			3/9/2021
Dioxins/Furans																
Total CDD TEQ (ND = 1/2 RDL)	mg/kg	2E-06	2	2	2	100%	0.0000146	0.000932	0.00185	2	100%	925	0			3/8/2021
Total CDF TEQ (ND = 1/2 RDL)	mg/kg	2E-06	2	2	2	100%	0.000011	0.000352	0.000692	2	100%	346	0			3/8/2021
Total Dioxin/Furan TEQ (ND = 0)	mg/kg	5.2E-06	2	2	2	100%	0.000025	0.00124	0.00246	2	100%	473	0			3/8/2021
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	mg/kg	5.2E-06	2	2	2	100%	0.0000256	0.00129	0.00255	2	100%	490	0			3/8/2021
Pesticides/Herbicides																
2,4'-DDD	mg/kg		18	26		0%					0%			0.00099	11.1	
2,4'-DDE	mg/kg		18	26		0%					0%			0.00099	39.9	
2,4'-DDT	mg/kg		18	26	7	27%	0.00051	1.3	3.6		0%			0.001	20	
4,4'-DDD	mg/kg	7.27E-06	18	26	5	19%	0.051	0.43	0.8	5	19%	110041	21	0.00099	0.02	3/11/2021
4,4'-DDE	mg/kg	1.52E-06	18	26	1	4%	0.37	0.37	0.37	1	4%	243421	25	0.00099	39.9	3/11/2021
4,4'-DDT	mg/kg	1.63E-05	18	26	6	23%	0.00087	1.2	4	6	23%	245399	20	0.001	39.9	3/11/2021
Aldrin	mg/kg	4.01E-08	18	26	7	27%	0.00079	0.935	3.5	7	27%	87281796	19	0.0005	0.00998	3/11/2021
Alpha-BHC	mg/kg	1.88E-06	11	18		0%				0	0%		18	0.0005	0.44	3/11/2021
Beta-BHC	mg/kg	6.55E-05	11	18		0%				0	0%		18	0.0005	0.01	3/11/2021
cis-Chlordane	mg/kg	0.0001	11	18		0%				0	0%		18	0.0005	5.99	3/11/2021
cis-Nonachlor	mg/kg		11	18		0%					0%			0.001	20	
Delta-BHC	mg/kg	6	11	18		0%					0%			0.0005	0.01	
Dieldrin	mg/kg	6.17E-07	18	26	3	12%	0.0021	0.59	0.92	3	12%	1491086	23	0.0398	0.0398	3/11/2021
Endosulfan I	mg/kg	0.00121	11	18		0%				0	0%		7	0.0005	0.01	3/11/2021
Endosulfan II	mg/kg	0.00121	11	18		0%				0	0%		8	0.001	3.99	3/11/2021
Endosulfan Sulfate	mg/kg	2.01	11	18		0%				0	0%		1	0.001	2.99	3/4/2021
Endrin	mg/kg	0.00044	11	18		0%				0	0%		18	0.001	9.98	3/11/2021
Endrin Aldehyde	mg/kg	0.00243	11	18		0%				0	0%		10	0.001	3.99	3/11/2021

Table B.6. Statistical Summary of All Soil Chemical Analytical Results - Vadose Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	Units	Preliminary Screening Level (PSL)	Number of Sampled Locations	Number of Samples (excluding Field Dups)	Number of Samples with Detected Concentration	Frequency of Detection	Minimum Detected Concentration	Average Detected Concentration	Maximum Detected Concentration	Number of Detected Exceedances of PSL	Frequency of Detected Exceedance	Maximum Exceedance Factor	Number of NonDetects with Reporting Limit Above Preliminary Screening Level	Min RL	Max RL	Date of Last Screening Level Exceedance
Endrin ketone	mg/kg		11	18		0%					0%			0.001	7.99	
Heptachlor	mg/kg	6.62E-08	18	26		0%				0	0%		26	0.0005	0.998	3/11/2021
Heptachlor Epoxide	mg/kg	4.94E-07	11	18		0%				0	0%		18	0.0005	0.01	3/11/2021
Lindane	mg/kg	0.00389	18	26		0%				0	0%		11	0.0005	0.1	3/11/2021
Methoxychlor	mg/kg	0.0321	11	18		0%				0	0%		6	0.00499	12	3/11/2021
Mirex	mg/kg	0.00714	11	18		0%				0	0%		6	0.001	1.6	3/11/2021
Oxychlorane	mg/kg		11	18		0%					0%			0.001	0.02	
Total Chlordane	mg/kg	2.27E-05	7	8		0%				0	0%		8	0.0099	5.2	10/1/2007
trans-Chlordane	mg/kg	0.0001	11	18	1	6%	0.00065	0.00065	0.00065	1	6%	7	17	0.0005	0.0005	3/11/2021
trans-Nonachlor	mg/kg		11	18		0%					0%			0.001	5.99	
TPHs																
Gasoline Range Organics	mg/kg	30	29	45	16	36%	7.88	31.7	150	5	11%	5	3	5.81	10.7	3/9/2021
Diesel Range Organics	mg/kg	260	34	50	17	34%	82.4	2420	12000	12	24%	46	0	54	600	3/11/2021
Motor Oil Range Organics	mg/kg	260	34	50	29	58%	81	4710	34000	19	38%	131	0	108	570	3/11/2021
Diesel and Oil Extended Range Orga	mg/kg	260	34	50	29	58%	94.5	6130	40300	20	40%	155	0	6.5	132	3/11/2021
Total TPHs	mg/kg		1	1	1	100%	190	190	190		0%					
VOCs																
1,1,1,2-Tetrachloroethane	mg/kg	38.5	27	44		0%					0%			0.00093	0.071	
1,1,1-Trichloroethane	mg/kg	371	27	44		0%					0%			0.00093	0.071	
1,1,2,2-Tetrachloroethane	mg/kg	0.00168	27	44		0%				0	0%		7	0.00093	0.071	3/9/2021
1,1,2-Trichloroethane	mg/kg	0.00498	27	44		0%				0	0%		3	0.00093	0.071	10/1/2007
1,1,2-Trichlorotrifluoroethane	mg/kg	2400000	23	40		0%					0%			0.00186	0.00441	
1,1-Dichloroethane	mg/kg	175	27	44	1	2%	0.00031	0.00031	0.00031		0%	0		0.00093	0.071	
1,1-Dichloroethene	mg/kg	26.1	27	44		0%					0%			0.00093	0.071	
1,1-Dichloropropene	mg/kg		27	44		0%					0%			0.00093	0.071	
1,2,3-Trichlorobenzene	mg/kg	20	27	44		0%					0%			0.00465	0.29	
1,2,3-Trichloropropane	mg/kg	0.0063	27	44		0%				0	0%		3	0.00186	0.071	10/1/2007
1,2,4-Trichlorobenzene	mg/kg	0.031	30	48		0%				0	0%		3	0.00465	0.48	10/1/2007
1,2,4-Trimethylbenzene	mg/kg	800	27	44	3	7%	0.00023	9	17		0%	0		0.00093	0.03	
1,2-Dibromo-3-chloropropane	mg/kg	0.23	27	44		0%				0	0%		2	0.00465	0.29	10/1/2007
1,2-Dibromoethane (EDB)	mg/kg	0.5	27	44		0%					0%			0.00093	0.29	
1,2-Dichlorobenzene	mg/kg	0.035	30	48	4	8%	0.0123	0.145	0.31	2	4%	9	1	0.02	0.02	10/1/2007
1,2-Dichloroethane (EDC)	mg/kg	0.351	27	44		0%					0%			0.00093	0.071	
1,2-Dichloropropane	mg/kg	0.0157	27	44		0%				0	0%		2	0.00093	0.071	10/1/2007
1,3,5-Trimethylbenzene	mg/kg	800	27	44	3	7%	0.058	3.3	6.6		0%	0		0.00093	0.017	
1,3-Dichlorobenzene	mg/kg	0.0232	27	44		0%				0	0%		2	0.00093	0.071	10/1/2007
1,3-Dichloropropane	mg/kg	1600	27	44		0%					0%			0.00093	0.071	
1,4-Dichloro-2-Butene	mg/kg		23	40		0%					0%			0.00465	0.011	
1,4-Dichlorobenzene	mg/kg	0.11	30	48	3	6%	0.0204	0.0321	0.038	0	0%	0	1	0.02	0.02	10/1/2007
2,2-Dichloropropane	mg/kg		27	44		0%					0%			0.00093	0.071	
2-Butanone	mg/kg	48000	27	44	17	39%	0.0035	0.0916	0.71		0%	0		0.00466	0.011	
2-Chloroethyl Vinyl Ether	mg/kg		23	40		0%					0%			0.00465	0.011	
2-Chlorotoluene	mg/kg	1600	27	44		0%					0%			0.00093	0.29	
2-Hexanone	mg/kg	400	27	44		0%					0%			0.00465	2.9	
2-Pentanone	mg/kg		23	40	2	5%	0.0113	0.0118	0.0123		0%			0.0068	0.00804	
4-Chlorotoluene	mg/kg		27	44		0%					0%			0.00093	0.29	
4-Methyl-2-pentanone	mg/kg	6400	27	44	3	7%	0.0028	0.69	1.4		0%	0		0.00465	0.03	
Acetone	mg/kg	72000	27	44	41	93%	0.0115	0.121	0.483		0%	0		0.0093	0.022	
Acrolein	mg/kg	0.00443	23	40		0%				0	0%		40	0.00465	0.011	3/23/2021
Acrylonitrile	mg/kg	0.000117	23	40		0%				0	0%		40	0.00465	0.011	3/23/2021
Benzene	mg/kg	0.00876	27	44	12	27%	0.00035	0.013	0.078	2	5%	9	0	0.00093	0.00136	10/1/2007
Bromobenzene	mg/kg	640	27	44		0%					0%			0.00093	0.29	
Bromochloromethane	mg/kg		27	44		0%					0%			0.00093	0.071	
Bromodichloromethane	mg/kg	0.0132	27	44		0%				0	0%		2	0.00093	0.071	10/1/2007
Bromoform	mg/kg	0.0785	27	44		0%					0%			0.00093	0.071	
Bromomethane	mg/kg	1.22	27	44	4	9%	0.00049	0.00204	0.00323		0%	0		0.00095	0.0022	
Carbon Disulfide	mg/kg	8000	27	44	8	18%	0.00012	0.00251	0.0129		0%	0		0.00093	0.00174	
Carbon Tetrachloride	mg/kg	0.00287	27	44		0%				0	0%		4	0.00093	0.071	10/1/2007
Chlorobenzene	mg/kg	1.72	27	44	1	2%	0.046	0.046	0.046		0%	0		0.00093	0.071	
Chloroethane	mg/kg		27	44		0%					0%			0.00186	0.071	
Chloroform	mg/kg	0.806	27	44		0%					0%			0.00093	0.071	
Chloromethane	mg/kg		27	44		0%					0%			0.00093	0.071	
cis-1,2-Dichloroethene (cDCE)	mg/kg	160	27	44	7	16%	0.00054	2.84	11		0%	0		0.00105	0.00127	
cis-1,3-Dichloropropene	mg/kg	0.00627	27	44		0%				0	0%		3	0.00093	0.071	10/1/2007

Table B.6. Statistical Summary of All Soil Chemical Analytical Results - Vadose Zone

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Analyte	Units	Preliminary Screening Level (PSL)	Number of Sampled Locations	Number of Samples (excluding Field Dups)	Number of Samples with Detected Concentration	Frequency of Detection	Minimum Detected Concentration	Average Detected Concentration	Maximum Detected Concentration	Number of Detected Exceedances of PSL	Frequency of Detected Exceedance	Maximum Exceedance Factor	Number of NonDetects with Reporting Limit Above Preliminary Screening Level	Min RL	Max RL	Date of Last Screening Level Exceedance
Dibromochloromethane	mg/kg	0.0103	27	44		0%				0	0%		2	0.00093	0.071	10/1/2007
Dibromomethane	mg/kg	800	27	44		0%					0%			0.00093	0.071	
Dichlorodifluoromethane	mg/kg	16000	27	44		0%					0%			0.00093	0.071	
Ethylbenzene	mg/kg	0.176	27	44	4	9%	0.00023	3.4	9.3	2	5%	53	0	0.00093	0.0022	10/1/2007
Isopropylbenzene	mg/kg	8000	27	44	3	7%	0.01	0.76	1.7		0%	0		0.00093	0.017	
m,p-Xylenes	mg/kg		27	44	8	18%	0.00088	8.13	44		0%			0.002	0.00331	
Methyl tert-butyl ether (MTBE)	mg/kg	556	23	40		0%					0%			0.00093	0.0022	
Methylene Chloride	mg/kg	0.435	27	44	7	16%	0.00682	0.0343	0.14		0%	0		0.0058	0.011	
Methyliodide	mg/kg		23	40	1	3%	0.00165	0.00165	0.00165		0%			0.001	0.001	
n-Butylbenzene	mg/kg	4000	27	44	2	5%	0.96	1.5	2		0%	0		0.00093	0.03	
n-Propylbenzene	mg/kg	8000	27	44	2	5%	0.67	1.2	1.8		0%	0		0.00093	0.03	
o-Xylene	mg/kg		27	44	5	11%	0.00049	7.6	24		0%			0.00107	0.00107	
p-Isopropyltoluene	mg/kg		27	44	3	7%	0.039	1.3	2.6		0%			0.00093	0.017	
sec-Butylbenzene	mg/kg	8000	27	44	2	5%	0.54	0.87	1.2		0%	0		0.00093	0.03	
Styrene	mg/kg	300	27	44	1	2%	0.037	0.037	0.037		0%	0		0.00093	0.068	
tert-Butylbenzene	mg/kg	8000	27	44	2	5%	0.042	0.065	0.087		0%	0		0.00093	0.03	
Tetrachloroethene (PCE)	mg/kg	0.0289	27	44	26	59%	0.00049	0.0723	0.878	8	18%	30	0	0.001	0.0663	3/11/2021
Toluene	mg/kg	0.72	27	44	21	48%	0.00034	0.54	7.2	2	5%	10	0	0.00093	0.0022	10/1/2007
Total Xylenes	mg/kg	0.944	23	40	3	8%	0.00105	0.00372	0.00847		0%	0		0.002	0.00331	
trans-1,2-Dichloroethene	mg/kg	5.17	27	44	2	5%	0.098	0.15	0.21		0%	0		0.00093	0.0075	
trans-1,3-Dichloropropene	mg/kg	0.00627	27	44		0%				0	0%		3	0.00093	0.071	10/1/2007
Trichloroethene (TCE)	mg/kg	0.0044	27	44	13	30%	0.0005	0.0261	0.17	3	7%	39	1	0.001	0.00166	3/1/2021
Trichlorofluoromethane	mg/kg	24000	27	44		0%					0%			0.00186	0.071	
Vinyl Acetate	mg/kg	80000	23	40		0%					0%			0.00465	0.011	
Vinyl Chloride	mg/kg	0.00106	27	44	4	9%	0.0014	0.24	0.87	4	9%	821	30	0.00093	0.0022	3/11/2021
Conventionals																
Total Organic Carbon	%		56	71	64	90%	0.0516	0.601	2.98		0%			0.02	0.02	
Total Solids	%		33	50	50	100%	75.1	88.11	95.5		0%			0.04	0.04	

Preliminary screening level: SPM_RI_VADOSE-SOILS_SLS_2022.02

Notes:

This table includes all samples collected to date.

Blank cells = not applicable

D - Dissolved

Dups - Duplicates

Max -Maximum

mg/Kg - milligrams per kilogram

Min - Minimum

ng/Kg - nanogram per kilogram

PAHs - Polycyclic Aromatic Hydrocarbons

PCB - Polychlorinated Biphenyl

PSL - Preliminary Screening Level

RL - Reporting Limit

SVOCs - Semivolatile Organic Compounds

T - Total

TPHs - Total Petroleum Hydrocarbons

VOCs - Volatile Organic Compounds

Many maximum and minimum reporting limits were not explicitly listed in the historical database. We have assumed the values given for non-detect results are the reporting limit where historical reporting limits were omitted. Therefore some of the maximum and minimum reporting limits are based on non-detect results only.

Table B.7. Statistical Summary of All Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	Unit	Preliminary Screening Level (PSL)	Number of Sampled Locations	Number of Samples (excluding Field Dups)	Number of Samples with Detected Concentration	Frequency of Detection	Minimum Detected Concentration	Average Detected Concentration	Maximum Detected Concentration	Number of Detected Exceedances of PSL	Frequency of Detected Exceedance	Maximum PSL Exceedance Factor	Number of NonDetects with Reporting Limit Above Preliminary Screening Level	Min RL	Max RL
Metals															
Arsenic	mg/kg	7.3	28	41	39	95%	1	2.97	29.3	2	5%	4	2	0.21	0.31
Barium	mg/kg	8.26	2	2	2	100%	31	33	35	2	100%	4	0	3	3.2
Cadmium	mg/kg	0.77	28	41	31	76%	0.021	0.262	3.74	1	2%	5	0	0.11	0.59
Chromium	mg/kg	48.2	28	41	41	100%	6.37	17.8	77.3	3	7%	2	0	0.53	1.7
Copper	mg/kg	36.4	26	39	39	100%	5.43	15.8	56	3	8%	2	0	0.53	0.77
Lead	mg/kg	50	28	41	41	100%	1.15	27.7	586	3	7%	12	0	0.11	6.5
Mercury	mg/kg	0.07	25	32	27	84%	0.004	0.0534	0.422	3	9%	6	2	0.0222	0.0334
Nickel	mg/kg	48	14	26	26	100%	5.26	11.3	58.4	1	4%	1	0	0.53	0.77
Selenium	mg/kg	0.3	2	2		0%				0	0%		2	12	13
Silver	mg/kg	0.0163	14	15	13	87%	0.049	0.0765	0.145	13	87%	9	2	0.59	0.65
Zinc	mg/kg	85.1	26	39	39	100%	14.8	43.9	418	4	10%	5	0	5.8	13.3
Organometallic															
Dibutyltin Ion	mg/kg		6	9	3	33%	0.00308	0.0121	0.0239		0%			0.00573	0.00576
Monobutyltin	mg/kg		6	9	3	33%	0.00188	0.007	0.0144		0%			0.00405	0.00407
Tetrabutyltin	mg/kg		6	9		0%					0%			0.00493	0.0499
Tributyltin Ion	mg/kg	0.000111	6	9	4	44%	0.00281	0.0116	0.026	4	44%	234	5	0.00383	0.0386
Other SVOCs															
1,2-Dinitrobenzene	mg/kg	8	2	2		0%					0%			0.4	0.43
1,2-Diphenylhydrazine	mg/kg	3.59E-05	2	2		0%				0	0%		2	0.4	0.43
1,3-Dinitrobenzene	mg/kg	8	2	2		0%					0%			0.4	0.43
1,4-Dinitrobenzene	mg/kg	8	2	2		0%					0%			0.4	0.43
2,3,4,6-Tetrachlorophenol	mg/kg	2400	2	2		0%					0%			0.4	0.43
2,3,5,6-Tetrachlorophenol	mg/kg		2	2		0%					0%			0.4	0.43
2,3-Dichloroaniline	mg/kg		2	2		0%					0%			0.4	0.43
2,4,5-Trichlorophenol	mg/kg	6.98E-05	11	20		0%				0	0%		20	0.0995	0.43
2,4,6-Trichlorophenol	mg/kg	0.401	11	20		0%				0	0%		1	0.0995	0.43
2,4-Dichlorophenol	mg/kg	0.00434	11	20		0%				0	0%		20	0.0995	0.43
2,4-Dimethylphenol	mg/kg	0.00227	23	33	1	3%	0.0376	0.0376	0.0376	1	3%	17	32	0.0997	0.0997
2,4-Dinitrophenol	mg/kg	0.0287	11	20	1	5%	2.3	2.3	2.3	1	5%	80	19	2	2
2,4-Dinitrotoluene	mg/kg	0.000155	11	20		0%				0	0%		20	0.0995	0.43
2,6-Dinitrotoluene	mg/kg	0.0654	11	20		0%				0	0%		20	0.0995	0.43
2-Chloronaphthalene	mg/kg	0.277	11	20		0%				0	0%		2	0.0199	0.43
2-Chlorophenol	mg/kg	0.0115	11	20		0%				0	0%		20	0.0199	0.43
2-Methylphenol	mg/kg	0.00636	23	33		0%				0	0%		33	0.0098	1
2-Nitroaniline	mg/kg	292	11	20		0%					0%			0.0995	0.43
2-Nitrophenol	mg/kg		11	20		0%					0%			0.0199	0.43
3 & 4 Methylphenol	mg/kg		2	2		0%					0%			0.4	0.43
3,3'-Dichlorobenzidine	mg/kg	2E-06	11	20		0%				0	0%		20	0.0995	4.3
3-Nitroaniline	mg/kg		11	20		0%					0%			0.0995	0.43
4,6-Dinitro-2-methylphenol	mg/kg	0.00728	11	20		0%				0	0%		20	0.199	2.2
4-Bromophenyl phenyl ether	mg/kg		11	20		0%					0%			0.0199	0.43
4-Chloro-3-methylphenol	mg/kg	0.028	11	20		0%				0	0%		20	0.0995	0.43
4-Chloroaniline	mg/kg	0.96	11	20		0%					0%			0.0995	0.43
4-Chlorophenyl phenyl ether	mg/kg		11	20		0%					0%			0.0199	0.43
4-Methylphenol	mg/kg	0.0624	21	31	1	3%	0.0022	0.0022	0.0022	0	0%	0	2	0.0098	1
4-Nitroaniline	mg/kg	30.5	11	20		0%					0%			0.0995	0.43
4-Nitrophenol	mg/kg	7	11	20		0%					0%			0.0995	0.43
Aniline	mg/kg	42.7	2	2		0%					0%			0.4	0.43
Benzidine	mg/kg	3.4E-08	2	2		0%				0	0%		2	4	4.3
Benzoic acid	mg/kg	0.169	21	31	4	13%	0.138	0.267	0.433	3	10%	3	27	0.199	0.2
Benzyl alcohol	mg/kg	0.0174	23	33	2	6%	0.0041	0.0059	0.0077	0	0%	0	31	0.0199	2
Benzyl butyl phthalate	mg/kg	0.000182	23	33	1	3%	0.0052	0.0052	0.0052	1	3%	29	32	0.0098	4.3
Bis(2-chloro-1-methylethyl) ether	mg/kg	0.333	9	18		0%					0%			0.0199	0.02
Bis(2-chloroethoxy)methane	mg/kg		11	20		0%					0%			0.0199	0.43
Bis(2-chloroethyl) ether	mg/kg	2.18E-05	11	20		0%				0	0%		20	0.0199	0.43
bis(2-Chloroisopropyl)ether	mg/kg		2	2		0%					0%			0.4	0.43
Bis(2-ethylhexyl) adipate	mg/kg	833	2	2		0%					0%			0.4	0.43
Bis(2-ethylhexyl) phthalate	mg/kg	0.00512	23	33	10	30%	0.03	0.76	2	10	30%	391	23	0.0498	0.499
Carbazole	mg/kg		11	20		0%					0%			0.0199	0.43
Dibenzofuran	mg/kg	0.0292	26	37	13	35%	0.00157	0.0938	0.6	5	14%	21	3	0.00498	0.0499
Diethyl phthalate	mg/kg	0.0341	23	33	3	9%	0.0496	0.0801	0.124	3	9%	4	4	0.0199	0.02
Dimethyl phthalate	mg/kg	0.0188	23	33	2	6%	0.0067	0.016	0.026	1	3%	1	22	0.0098	1
Di-n-butyl phthalate	mg/kg	0.0149	23	33	2	6%	0.006	0.0076	0.0092	0	0%	1	27	0.02	0.02
Di-n-octyl phthalate	mg/kg	0.327	23	33		0%				0	0%		3	0.0098	1
Hexachlorobenzene	mg/kg	4.01E-07	23	33	1	3%	0.0469	0.0469	0.0469	1	3%	116958	32	0.00998	0.00998
Hexachlorobutadiene	mg/kg	1.13E-05	27	40	2	5%	0.00612	0.00881	0.0115	2	5%	1018	38	0.00596	0.0199

Table B.7. Statistical Summary of All Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	Unit	Preliminary Screening Level (PSL)	Number of Sampled Locations	Number of Samples (excluding Field Dups)	Number of Samples with Detected Concentration	Frequency of Detection	Minimum Detected Concentration	Average Detected Concentration	Maximum Detected Concentration	Number of Detected Exceedances of PSL	Frequency of Detected Exceedance	Maximum PSL Exceedance Factor	Number of NonDetects with Reporting Limit Above Preliminary Screening Level	Min RL	Max RL
Hexachlorocyclopentadiene	mg/kg	0.00169	11	20		0%				0	0%		20	0.0995	0.43
Hexachloroethane	mg/kg	9.67E-06	11	20		0%				0	0%		20	0.0199	0.43
Isophorone	mg/kg	0.0387	11	20	1	5%	0.0688	0.0688	0.0688	1	5%	2	2	0.02	0.02
Nitrobenzene	mg/kg	0.0406	11	20		0%				0	0%		2	0.0199	0.43
N-Nitrosodimethylamine	mg/kg	0.000105	2	2		0%				0	0%		2	0.4	0.43
N-Nitroso-di-n-propylamine	mg/kg	3.26E-05	11	20		0%				0	0%		20	0.0199	0.43
N-Nitrosodiphenylamine	mg/kg	0.00161	23	33	1	3%	0.0995	0.0995	0.0995	1	3%	62	32	0.0199	0.0199
Pentachlorophenol	mg/kg	1.76E-06	23	33	3	9%	0.028	0.049	0.079	3	9%	44886	30	0.098	10
Phenol	mg/kg	0.0479	23	33	1	3%	0.0129	0.0129	0.0129	0	0%	0	4	0.02	0.02
Pyridine	mg/kg	36.4	2	2		0%					0%			4	4.3
PAHs															
1-Methylnaphthalene	mg/kg	2.26	14	24	14	58%	0.00107	0.177	1.05		0%	0		0.00498	0.0499
2-Methylnaphthalene	mg/kg	0.0388	26	37	13	35%	0.00142	0.45	4.5	6	16%	116	1	0.00498	0.0499
Acenaphthene	mg/kg	0.0277	26	37	14	38%	0.00081	0.117	0.51	6	16%	18	1	0.00498	0.0499
Acenaphthylene	mg/kg	1.3	26	37	9	24%	0.00119	0.0278	0.0672		0%	0		0.00498	0.0499
Anthracene	mg/kg	0.0511	26	37	16	43%	0.00087	0.244	1.2	6	16%	23	1	0.00497	0.43
Benzo(g,h,i)perylene	mg/kg	0.67	26	37	19	51%	0.0014	0.0176	0.0811	0	0%	0	1	0.00497	0.0499
Fluoranthene	mg/kg	0.0899	26	37	25	68%	0.0006	0.125	0.88	6	16%	10	1	0.00497	0.43
Fluorene	mg/kg	0.0294	26	37	12	32%	0.00181	0.258	1	7	19%	34	1	0.00498	0.43
Naphthalene	mg/kg	0.00207	27	40	10	25%	0.00131	0.0728	0.51	8	20%	246	30	0.00497	0.076
Phenanthrene	mg/kg	1.5	26	37	31	84%	0.00117	0.126	2.4	1	3%	2	0	0.00495	0.0499
Pyrene	mg/kg	0.137	26	37	29	78%	0.00065	0.105	0.99	5	14%	7	1	0.00497	0.43
Benz(a)anthracene	mg/kg		26	37	17	46%	0.00111	0.037	0.184		0%			0.00498	0.0499
Benzo(a)pyrene	mg/kg	1.55E-05	26	37	17	46%	0.00112	0.032	0.17	17	46%	10968	20	0.00498	0.0499
Benzo(b)fluoranthene	mg/kg		26	37	17	46%	0.0015	0.0252	0.118		0%			0.00498	0.0499
Benzo(j)fluoranthene	mg/kg		12	22	12	55%	0.0007	0.0154	0.0694		0%			0.00498	0.0499
Benzo(k)fluoranthene	mg/kg		2	2	1	50%	0.066	0.066	0.066		0%			0.015	0.015
Benzo(k)fluoranthene	mg/kg		24	35	12	34%	0.00094	0.0151	0.0734		0%			0.00498	0.0499
Chrysene	mg/kg		26	37	22	59%	0.00118	0.0712	0.53		0%			0.00497	0.0499
Dibenzo(a,h)anthracene	mg/kg		26	37	7	19%	0.00119	0.0104	0.0226		0%			0.00498	0.0497
Indeno(1,2,3-cd)pyrene	mg/kg		26	37	14	38%	0.00135	0.0198	0.0918		0%			0.00498	0.0499
Total Benzofluoranthenes	mg/kg	3.2	12	22	11	50%	0.00367	0.0608	0.257		0%	0		0.00995	0.0998
Total HPAHs	mg/kg	12	26	37	29	78%	0.00065	0.359	2.4		0%	0		0.00495	0.19
Total LPAHs	mg/kg	5.2	26	37	33	89%	0.00117	0.411	5.62	1	3%	1	0	0.00536	0.19
Total PAHs (ND=0)	mg/kg		26	37	34	92%	0.00131	0.705	8.02		0%			0.0099	0.19
Total cPAHs TEQ (ND = 0)	mg/kg	1.55E-05	26	37	22	59%	0.0000118	0.0344	0.203	21	57%	13097	3	0	0.005
Total cPAHs TEQ (ND = 1/2 RDL)	mg/kg	1.55E-05	26	37	22	59%	0.00226	0.07	0.755	22	59%	48710	15	0.00373725	0.14345
PCBAroclors															
Aroclor 1016	mg/kg		34	48		0%					0%			0.004	6.3
Aroclor 1221	mg/kg		22	35		0%					0%			0.004	6.3
Aroclor 1232	mg/kg		22	35		0%					0%			0.004	6.3
Aroclor 1242	mg/kg		22	35	3	9%	2.3	7	15		0%			1.2	6.3
Aroclor 1248	mg/kg		34	48	6	13%	0.0088	2.04	9.52		0%			0.004	0.311
Aroclor 1254	mg/kg		34	48	27	56%	0.0018	6.53	93		0%			0.004	6.3
Aroclor 1260	mg/kg		34	48	25	52%	0.0008	2.02	23		0%			0.004	6.3
Aroclor 1262	mg/kg		16	29	1	3%	0.0014	0.0014	0.0014		0%			0.004	0.004
Aroclor 1268	mg/kg		16	29		0%					0%			0.004	1.44
Total PCB Aroclors (ND=1/2 RL)	mg/kg	5.49E-07	33	47	32	68%	0.0166	9.17	144	32	68%	262295082	15	0.004	0.064
Total PCBs (Sum of Aroclors)	mg/kg	5.49E-07	34	48	32	67%	0.0008	8.13	131	32	67%	238615665	16	0.004	0.064
PCB Congeners															
Total PCB Congeners	mg/kg	5.49E-07	3	3	3	100%	22.1	52.7	99.1	3	100%	180510018	0	0	0
Total PCB TEQ (ND = 0)	mg/kg	3.47E-10	3	3	3	100%	0.000499	0.00141	0.0027	3	100%	7780980	0	0	0
Total PCB TEQ (ND = 1/2 RDL)	mg/kg	3.47E-10	3	3	3	100%	0.000514	0.00142	0.0027	3	100%	7780980	0	0	0
Dioxins/Furans															
Total CDD TEQ (ND = 1/2 RDL)	mg/kg	2E-06	1	1	1	100%	0.000704	0.000704	0.000704	1	100%	352	0	0	0
Total CDF TEQ (ND = 1/2 RDL)	mg/kg	2E-06	1	1	1	100%	0.000299	0.000299	0.000299	1	100%	150	0	0	0
Total Dioxin/Furan TEQ (ND = 0)	mg/kg	5.2E-06	1	1	1	100%	0.001	0.001	0.001	1	100%	192	0	0	0
Total Dioxin/Furan TEQ (ND = 1/2 RDL)	mg/kg	5.2E-06	1	1	1	100%	0.001	0.001	0.001	1	100%	192	0	0	0
Pest/Herbicides															
2,4'-DDD	mg/kg		17	27	1	4%	0.0023	0.0023	0.0023		0%			0.00099	0.44
2,4'-DDE	mg/kg		17	27		0%					0%			0.00099	11.1
2,4'-DDT	mg/kg		17	27	6	22%	0.0011	0.37	1.3		0%			0.00099	19.9
4,4'-DDD	mg/kg	3.64E-07	19	29	5	17%	0.00022	0.026	0.13	5	17%	357143	24	0.00099	0.1
4,4'-DDE	mg/kg	7.63E-08	19	29	10	34%	0.00045	0.0914	0.39	10	34%	5111402	19	0.001	0.13
4,4'-DDT	mg/kg	8.14E-07	19	29	7	24%	0.0018	0.4	1.6	7	24%	1965602	22	0.00099	44.3
Aldrin	mg/kg	2.01E-09	19	29	14	48%	0.002	3.3	20.3	14	48%	10099502488	15	0.0005	0.998

Table B.7. Statistical Summary of All Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	Unit	Preliminary Screening Level (PSL)	Number of Sampled Locations	Number of Samples (excluding Field Dups)	Number of Samples with Detected Concentration	Frequency of Detection	Minimum Detected Concentration	Average Detected Concentration	Maximum Detected Concentration	Number of Detected Exceedances of PSL	Frequency of Detected Exceedance	Maximum PSL Exceedance Factor	Number of NonDetects with Reporting Limit Above Preliminary Screening Level	Min RL	Max RL
Alpha-BHC	mg/kg	9.82E-08	7	16	1	6%	0.014	0.014	0.014	1	6%	142566	15	0.00498	0.00498
Beta-BHC	mg/kg	3.4E-06	7	16		0%				0	0%		16	0.0005	0.16
cis-Chlordane	mg/kg	5.29E-06	7	16	1	6%	0.047	0.047	0.047	1	6%	8885	15	0.0005	6.64
cis-Nonachlor	mg/kg		5	14		0%					0%			0.001	8.86
Delta-BHC	mg/kg	6	7	16	1	6%	0.056	0.056	0.056		0%	0		0.0065	0.0065
Dieldrin	mg/kg	3.09E-08	19	29	11	38%	0.00058	0.471	3.1	11	38%	100323625	18	0.001	2
Endosulfan I	mg/kg	6.13E-05	7	16		0%				0	0%		16	0.0005	0.01
Endosulfan II	mg/kg	6.13E-05	7	16		0%				0	0%		16	0.001	8.86
Endosulfan Sulfate	mg/kg	0.101	7	16		0%					0%			0.001	0.02
Endrin	mg/kg	2.22E-05	7	16		0%				0	0%		16	0.001	0.02
Endrin Aldehyde	mg/kg	0.000124	7	16	2	13%	0.036	0.098	0.16	2	13%	1290	14	0.012	0.013
Endrin ketone	mg/kg		7	16		0%					0%			0.001	1.98
Heptachlor	mg/kg	3.34E-09	19	29	3	10%	0.00056	0.0084	0.017	3	10%	5089820	26	0.0059	0.0065
Heptachlor Epoxide	mg/kg	2.49E-08	7	16		0%				0	0%		16	0.0005	0.439
Lindane	mg/kg	0.000205	19	29		0%				0	0%		29	0.0005	0.1
Methoxychlor	mg/kg	0.00161	7	16		0%				0	0%		16	0.00499	0.1
Mirex	mg/kg	0.000357	5	14		0%				0	0%		14	0.001	1.99
Oxychlordane	mg/kg		5	14		0%					0%			0.001	0.02
Total Chlordane	mg/kg	1.13E-06	12	13		0%				0	0%		13	0.0099	5
Toxaphene	mg/kg	3.07E-06	2	2		0%				0	0%		2	0.059	0.065
trans-Chlordane	mg/kg	5.29E-06	7	16	1	6%	0.18	0.18	0.18	1	6%	34026	15	0.0005	6.66
trans-Nonachlor	mg/kg		5	14		0%					0%			0.001	4.43
TPHs															
Gasoline Range Organics	mg/kg	30	28	41	8	20%	7.64	893	5440	6	15%	181	0	7.32	1430
Diesel Range Organics	mg/kg	260	34	49	13	27%	3.7	1980	9550	8	16%	37	0	27	580
Motor Oil Range Organics	mg/kg	260	34	49	19	39%	21	4240	26800	12	24%	103	0	118	1160
Diesel and Oil Extended Range Organics	mg/kg	260	34	49	19	39%	24.7	5600	36400	12	24%	140	0	54	140
VOCs															
1,1,1,2-Tetrachloroethane	mg/kg	18.7	16	28		0%					0%			0.00094	7.93
1,1,1-Trichloroethane	mg/kg	21.1	16	28		0%					0%			0.00094	7.93
1,1,2,2-Tetrachloroethane	mg/kg	0.00011	16	28		0%				0	0%		28	0.00094	7.93
1,1,2-Trichloroethane	mg/kg	0.000326	16	28		0%				0	0%		28	0.00094	7.93
1,1,2-Trichlorotrifluoroethane	mg/kg	812000	13	25		0%					0%			0.00189	15.9
1,1-Dichloroethane	mg/kg	108	16	28		0%					0%			0.00094	7.93
1,1-Dichloroethene	mg/kg	1.41	16	28	1	4%	0.00575	0.00575	0.00575	0	0%	0	1	0.0014	0.0014
1,1-Dichloropropene	mg/kg		16	28		0%					0%			0.00094	7.93
1,2,3-Trichlorobenzene	mg/kg	12.1	16	28		0%				0	0%		1	0.00472	39.7
1,2,3-Trichloropropane	mg/kg	0.00273	16	28		0%				0	0%		11	0.00189	15.9
1,2,4-Trichlorobenzene	mg/kg	0.00188	27	40		0%				0	0%		40	0.00472	39.7
1,2,4-Trimethylbenzene	mg/kg	179	16	28	5	18%	0.00039	16.8	84.2		0%	0		0.00107	7.93
1,2-Dibromo-3-chloropropane	mg/kg	0.102	16	28		0%				0	0%		4	0.00472	39.7
1,2-Dibromoethane (EDB)	mg/kg	0.277	16	28		0%				0	0%		1	0.00094	7.93
1,2-Dichlorobenzene	mg/kg	0.00299	27	40	5	13%	0.0107	0.0491	0.11	5	13%	37	15	0.0199	0.076
1,2-Dichloroethane (EDC)	mg/kg	0.0237	16	28		0%				0	0%		3	0.00094	7.93
1,2-Dichloropropane	mg/kg	0.00103	16	28		0%				0	0%		25	0.00094	7.93
1,3,5-Trimethylbenzene	mg/kg	180	16	28	5	18%	0.00035	25	125		0%	1		0.00107	7.93
1,3-Dichlorobenzene	mg/kg	0.00132	16	28	1	4%	0.00328	0.00328	0.00328	1	4%	2	12	0.00119	0.00119
1,3-Dichloropropane	mg/kg	884	16	28		0%					0%			0.00094	7.93
1,4-Dichloro-2-Butene	mg/kg		13	25		0%					0%			0.00472	39.7
1,4-Dichlorobenzene	mg/kg	0.00807	27	40	4	10%	0.0005	0.008	0.014	3	8%	2	15	0.00094	0.0199
2,2-Dichloropropane	mg/kg		16	28		0%					0%			0.00094	7.93
2-Butanone	mg/kg	48000	16	28	5	18%	0.00382	0.0087	0.017		0%	0		0.00504	0.00917
2-Chloroethyl Vinyl Ether	mg/kg		15	27		0%					0%			0.00472	39.7
2-Chlorotoluene	mg/kg	414	16	28		0%					0%			0.00094	7.93
2-Hexanone	mg/kg	400	16	28		0%					0%			0.00472	39.7
2-Pentanone	mg/kg		13	25		0%					0%			0.00472	39.7
4-Chlorotoluene	mg/kg		16	28		0%					0%			0.00094	7.93
4-Methyl-2-pentanone	mg/kg	6400	16	28		0%					0%			0.00472	39.7
Acetone	mg/kg	72000	16	28	24	86%	0.0136	0.0795	0.204		0%	0		0.0057	0.0183
Acrolein	mg/kg	0.000316	13	25		0%				0	0%		25	0.00472	39.7
Acrylonitrile	mg/kg	8.26E-06	13	25		0%				0	0%		25	0.00472	39.7
Benzene	mg/kg	0.000558	17	29	10	34%	0.00048	0.00103	0.00356	8	28%	6	19	0.00101	0.00183
Bromobenzene	mg/kg	201	16	28		0%					0%			0.00094	7.93
Bromochloromethane	mg/kg		16	28		0%					0%			0.00094	7.93
Bromodichloromethane	mg/kg	0.000892	16	28		0%				0	0%		28	0.00094	7.93
Bromoform	mg/kg	0.00495	16	28		0%				0	0%		4	0.00094	7.93
Bromomethane	mg/kg	0.0792	16	28	1	4%	0.115	0.115	0.115	1	4%	1	1	0.057	0.057

Table B.7. Statistical Summary of All Soil Chemical Analytical Results - Saturated Zone

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	Unit	Preliminary Screening Level (PSL)	Number of Sampled Locations	Number of Samples (excluding Field Dups)	Number of Samples with Detected Concentration	Frequency of Detection	Minimum Detected Concentration	Average Detected Concentration	Maximum Detected Concentration	Number of Detected Exceedances of PSL	Frequency of Detected Exceedance	Maximum PSL Exceedance Factor	Number of NonDetects with Reporting Limit Above Preliminary Screening Level	Min RL	Max RL
Carbon Disulfide	mg/kg	7390	16	28	10	36%	0.00089	0.00497	0.0132		0%	0		0.00101	0.00183
Carbon Tetrachloride	mg/kg	0.000154	16	28		0%				0	0%		28	0.00094	7.93
Chlorobenzene	mg/kg	0.102	16	28		0%				0	0%		1	0.00094	7.93
Chloroethane	mg/kg		16	28		0%					0%			0.00189	7.93
Chloroform	mg/kg	0.0524	16	28		0%				0	0%		3	0.00094	7.93
Chloromethane	mg/kg		16	28		0%					0%			0.00094	7.93
cis-1,2-Dichloroethene (cDCE)	mg/kg	117	16	28	6	21%	0.00037	0.119	0.689		0%	0		0.00101	0.437
cis-1,3-Dichloropropene	mg/kg	0.000376	16	28		0%				0	0%		28	0.00094	7.93
Dibromochloromethane	mg/kg	0.000701	16	28		0%				0	0%		28	0.00094	7.93
Dibromomethane	mg/kg	472	16	28		0%					0%			0.00094	7.93
Dichlorodifluoromethane	mg/kg	11200	16	28		0%					0%			0.00094	7.93
Ethylbenzene	mg/kg	0.0103	17	29	1	3%	0.0105	0.0105	0.0105	1	3%	1	4	0.00119	0.00119
Isopropylbenzene	mg/kg	1730	16	28	2	7%	0.0025	0.104	0.206		0%	0		0.00119	0.00159
m,p-Xylenes	mg/kg		17	29	2	7%	0.00323	0.0302	0.0571		0%			0.00238	0.00367
Methyl tert-butyl ether (MTBE)	mg/kg	556	15	27		0%					0%			0.00094	7.93
Methylene Chloride	mg/kg	0.0297	16	28	5	18%	0.00659	2.17	10.7	2	7%	360	1	0.00627	15.9
Methyl iodide	mg/kg		15	27		0%					0%			0.00094	7.93
n-Butylbenzene	mg/kg	748	16	28	3	11%	0.17	26.7	79.6		0%	0		0.0758	7.93
n-Propylbenzene	mg/kg	1670	16	28	3	11%	0.00049	24.3	72.5		0%	0		0.0014	7.93
o-Xylene	mg/kg		17	29	2	7%	0.00512	0.0354	0.0656		0%			0.00119	0.00183
p-Isopropyltoluene	mg/kg		16	28	2	7%	0.0183	6.21	12.4		0%			0.00119	7.93
sec-Butylbenzene	mg/kg	1520	16	28	5	18%	0.00044	2.79	13.6		0%	0		0.00149	7.93
Styrene	mg/kg	300	16	28		0%					0%			0.00094	7.93
tert-Butylbenzene	mg/kg	1600	16	28	2	7%	0.0008	0.00101	0.00121		0%	0		0.00149	0.00183
Tetrachloroethene (PCE)	mg/kg	0.0016	16	28	13	46%	0.0006	2.87	18.7	11	39%	11688	3	0.00101	7.93
Toluene	mg/kg	0.0435	17	29	6	21%	0.00035	0.00127	0.00444	0	0%	0	4	0.00101	0.00183
Total Xylenes	mg/kg	0.0551	13	25	2	8%	0.00836	0.0657	0.123	1	4%	2	2	0.00238	0.00367
trans-1,2-Dichloroethene	mg/kg	0.325	16	28	1	4%	0.00234	0.00234	0.00234	0	0%	0	1	0.0014	0.0014
trans-1,3-Dichloropropene	mg/kg	0.000376	16	28		0%				0	0%		28	0.00094	7.93
Trichloroethene (TCE)	mg/kg	0.000266	16	28	7	25%	0.00063	0.105	0.672	7	25%	2526	21	0.00101	0.437
Trichlorofluoromethane	mg/kg	16800	16	28		0%					0%			0.0011	7.93
Vinyl Acetate	mg/kg	80000	15	27		0%					0%			0.00472	39.7
Vinyl Chloride	mg/kg	5.55E-05	16	28	1	4%	0.0012	0.0012	0.0012	1	4%	22	27	0.00149	0.00149
Conventionals															
Total Organic Carbon	%		13	23	16	70%	0.07	0.491	2.28		0%			0.02	0.02
Total Solids	%		25	36	36	100%	60.5	77.36	87.5		0%			0.04	0.04

Preliminary Screening Level: SPM_RI_SATURATED-SOIL_SLS_2022.02_FLAG

Notes:

This table includes all samples collected to date.

Blank cells = not applicable

D - Dissolved

Dups - Duplicates

Max -Maximum

mg/Kg - milligrams per kilogram

N - not applicable

ng/Kg - nanogram per kilogram

PAHs - Polycyclic Aromatic Hydrocarbons

PCB - Polychlorinated Biphenyl

RL - Reporting Limit

SVOCs - Semivolatile Organic Compounds

T- Total

TPHs - Total Petroleum Hydrocarbons

VOCs - Volatile Organic Compounds

Many maximum and minimum reporting limits were not explicitly listed in the historical database. We have assumed the values given for non-detect results are the reporting limit where historical reporting limits were omitted. Therefore some of the maximum and minimum reporting limits are based on non-detect results only.

Table B.8. Statistical Summary of All Groundwater Chemical Analytical Results - Shallow Monitoring Wells

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	Units	Preliminary Screening Level (PSL)	Number of Sampled Locations	Number of Samples (excluding Field Dups)	Number of Samples with Detected Concentration	Frequency of Detection	Minimum Detected Concentration	Average Detected Concentration	Maximum Detected Concentration	Number of Detected Exceedances of Preliminary Screening Level	Frequency of Detected Exceedance	Maximum PSL Exceedance Factor	Number of NonDetects with Reporting Limit Above Preliminary Screening Level	First Sample Date	Most Recent Available Sample Date	Last Sample Date with Detected Concentration	Min RL	Max RL	Date of Last Screening Level Exceedance
Metals																			
Arsenic (D)	ug/L	8	9	9	9	100%	0.254	0.691	1.72		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
Arsenic (T)	ug/L	8	9	9	8	89%	0.267	0.773	1.51		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
Cadmium (D)	ug/L	1.19	9	9	4	44%	0.053	0.0798	0.114		0%	0		3/29/2021	3/31/2021	3/31/2021	0.1	0.1	
Cadmium (T)	ug/L	1.19	9	9	3	33%	0.036	0.0743	0.104		0%	0		3/29/2021	3/31/2021	3/30/2021	0.1	0.1	
Chromium (D)	ug/L	27.4	9	9	7	78%	0.289	0.795	2.34		0%			3/29/2021	3/31/2021	3/31/2021	0.5	0.5	
Chromium (T)	ug/L	27.4	9	9	6	67%	0.342	0.962	2.37		0%			3/29/2021	3/31/2021	3/31/2021	0.5	0.5	
Copper (D)	ug/L	3.1	9	9	9	100%	0.297	3.65	10.1	4	44%	3	0	3/29/2021	3/31/2021	3/31/2021	0.5	0.5	3/31/2021
Copper (T)	ug/L	3.1	9	9	5	56%	2.17	5.7	10.4	3	33%	3	0	3/29/2021	3/31/2021	3/30/2021	0.5	0.5	3/30/2021
Lead (D)	ug/L	5.6	9	9	9	100%	0.052	0.315	1.99		0%	0		3/29/2021	3/31/2021	3/30/2021	0.1	0.1	
Lead (T)	ug/L	5.6	9	9	6	67%	0.13	1.47	4.67		0%	1		3/29/2021	3/31/2021	3/31/2021	0.1	0.1	
Mercury (D)	ug/L	0.025	9	9		0%					0%			3/29/2021	3/31/2021		0.02	0.02	
Mercury (T)	ug/L	0.025	9	9		0%					0%			3/29/2021	3/31/2021		0.02	0.02	
Nickel (D)	ug/L	8.2	9	9	9	100%	0.272	5.72	22.2	2	22%	3	0	3/29/2021	3/31/2021	3/31/2021	0.5	0.5	3/31/2021
Nickel (T)	ug/L	8.2	9	9	8	89%	0.366	6.72	25.1	2	22%	3	0	3/29/2021	3/31/2021	3/31/2021	0.5	0.5	3/31/2021
Zinc (D)	ug/L	81	9	9	7	78%	5.1	222	1490	1	11%	18	0	3/29/2021	3/31/2021	3/31/2021	5	40	3/31/2021
Zinc (T)	ug/L	81	9	9	4	44%	5.66	464	1830	1	11%	23	0	3/29/2021	3/31/2021	3/31/2021	6	60	3/31/2021
Organometallic																			
Dibutyltin Ion	ug/L		8	8		0%					0%			3/29/2021	3/31/2021		0.289	0.289	
Monobutyltin	ug/L		8	8		0%					0%			3/29/2021	3/31/2021		0.204	0.204	
Tetrabutyltin	ug/L		8	8		0%					0%			3/29/2021	3/31/2021		0.3	0.3	
Tributyltin Ion	ug/L	4.27E-06	8	8		0%				0	0%		8	3/29/2021	3/31/2021		0.193	0.193	3/31/2021
Other SVOCs																			
2,4,5-Trichlorophenol	ug/L	0.037	7	7		0%				0	0%		7	3/29/2021	3/31/2021		1	1.1	3/31/2021
2,4,6-Trichlorophenol	ug/L	600	7	7		0%					0%			3/29/2021	3/31/2021		1	1.1	
2,4-Dichlorophenol	ug/L	10	7	7		0%					0%			3/29/2021	3/31/2021		1	1.1	
2,4-Dimethylphenol	ug/L	2.91	7	7		0%					0%			3/29/2021	3/31/2021		1	1.1	
2,4-Dinitrophenol	ug/L	100	7	7		0%					0%			3/29/2021	3/31/2021		2	2.1	
2,4-Dinitrotoluene	ug/L	0.18	7	7		0%				0	0%		7	3/29/2021	3/31/2021		1	1.1	3/31/2021
2,6-Dinitrotoluene	ug/L	74.9	7	7		0%					0%			3/29/2021	3/31/2021		1	1.1	
2-Chloronaphthalene	ug/L	100	10	10		0%					0%			3/29/2021	3/31/2021		0.01	0.013	
2-Chlorophenol	ug/L	17	7	7		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
2-Methylphenol	ug/L	10.7	7	7	1	14%	0.06	0.06	0.06		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
2-Nitroaniline	ug/L	735000	7	7		0%					0%			3/29/2021	3/31/2021		1	1.1	
2-Nitrophenol	ug/L		7	7		0%					0%			3/29/2021	3/31/2021		1	1.1	
3,3'-Dichlorobenzidine	ug/L	0.0033	7	7		0%				0	0%		7	3/29/2021	3/31/2021		1	1.1	3/31/2021
3-Nitroaniline	ug/L		7	7		0%					0%			3/29/2021	3/31/2021		1	1.1	
4,6-Dinitro-2-methylphenol	ug/L	7	7	7		0%					0%			3/29/2021	3/31/2021		2	2.1	
4-Bromophenyl phenyl ether	ug/L		7	7		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
4-Chloro-3-methylphenol	ug/L	36	7	7		0%					0%			3/29/2021	3/31/2021		1	1.1	
4-Chloroaniline	ug/L	2400	3	3		0%					0%			3/31/2021	3/31/2021		1	1	
4-Chlorophenyl phenyl ether	ug/L		7	7		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
4-Methylphenol	ug/L	106	7	7	1	14%	0.1	0.1	0.1		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
4-Nitroaniline	ug/L	106000	7	7		0%					0%			3/29/2021	3/31/2021		1	1.1	
4-Nitrophenol	ug/L		7	7		0%					0%			3/29/2021	3/31/2021		1	1.1	
Benzoic acid	ug/L	589	7	7	1	14%	0.4	0.4	0.4		0%	0		3/29/2021	3/31/2021	3/31/2021	2	2	
Benzyl alcohol	ug/L	56.4	7	7		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Benzyl butyl phthalate	ug/L	0.013	7	7		0%				0	0%		7	3/29/2021	3/31/2021		0.2	0.2	3/31/2021
Bis(2-chloro-1-methylethyl) ether	ug/L	900	7	7		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Bis(2-chloroethoxy)methane	ug/L		7	7		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Bis(2-chloroethyl) ether	ug/L	0.06	7	7		0%				0	0%		7	3/29/2021	3/31/2021		0.2	0.2	3/31/2021
Bis(2-ethylhexyl) phthalate	ug/L	0.046	7	7	2	29%	0.6	0.6	0.6	2	29%	13	5	3/29/2021	3/31/2021	3/31/2021	0.2	0.2	3/31/2021
Carbazole	ug/L		10	10	3	30%	0.001	0.4	1.2		0%			3/29/2021	3/31/2021	3/31/2021	0.01	0.2	
Dibenzofuran	ug/L	3.09	10	10	8	80%	0.002	0.0448	0.322		0%	0		3/29/2021	3/31/2021	3/31/2021	0.01	0.01	
Diethyl phthalate	ug/L	92.6	7	7	3	43%	0.07	0.52	1.4		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
Dimethyl phthalate	ug/L	59	7	7		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Di-n-butyl phthalate	ug/L	8	7	7	2	29%	0.05	0.3	0.5		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
Di-n-octyl phthalate	ug/L	2.31	7	7		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Hexachlorobenzene	ug/L	5E-06	8	8		0%				0	0%		8	3/29/2021	3/31/2021		0.0013	0.2	3/31/2021
Hexachlorobutadiene	ug/L	0.01	12	12		0%				0	0%		7	3/29/2021	3/31/2021		0.0013	0.5	3/31/2021
Hexachlorocyclopentadiene	ug/L	1	7	7		0%				0	0%		2	3/29/2021	3/31/2021		1	1.1	3/30/2021
Hexachloroethane	ug/L	0.02	7	7		0%				0	0%		7	3/29/2021	3/31/2021		0.2	0.2	3/31/2021
Isophorone	ug/L	110	7	7		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Nitrobenzene	ug/L	100	7	7		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
N-Nitroso-di-n-propylamine	ug/L	0.058	7	7		0%				0	0%		7	3/29/2021	3/31/2021		0.2	0.2	3/31/2021
N-Nitrosodiphenylamine	ug/L	0.554	7	7	1	14%	0.3	0.3	0.3		0%	1		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
Pentachlorophenol	ug/L	0.002	7	7		0%				0	0%		7	3/29/2021	3/31/2021		1	1.1	3/31/2021
Perylene	ug/L		10	10		0%					0%			3/29/2021	3/31/2021		0.01	0.013	
Phenol	ug/L	101	7	7	1	14%	0.1	0.1	0.1		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
PAHs																			
1-Methylnaphthalene	ug/L	804	10	10	8	80%	0.002	0.335	2.63		0%	0		3/29/2021	3/31/2021	3/31/2021	0.01	0.05	
2-Methylnaphthalene	ug/L	14	10	10	7	70%	0.003	0.0659	0.441		0%	0		3/29/2021	3/31/2021	3/31/2021	0.01	0.013	
Acenaphthene	ug/L	5.34	10	10	3	30%	0.003	0.164	0.436		0%	0		3/29/2021	3/31/2021	3/31/20			

Table B.8. Statistical Summary of All Groundwater Chemical Analytical Results - Shallow Monitoring Wells

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	Units	Preliminary Screening Level (PSL)	Number of Sampled Locations	Number of Samples (excluding Field Dups)	Number of Samples with Detected Concentration	Frequency of Detection	Minimum Detected Concentration	Average Detected Concentration	Maximum Detected Concentration	Number of Detected Exceedances of Preliminary Screening Level	Frequency of Detected Exceedance	Maximum PSL Exceedance Factor	Number of NonDetects with Reporting Limit Above Preliminary Screening Level	First Sample Date	Most Recent Available Sample Date	Last Sample Date with Detected Concentration	Min RL	Max RL	Date of Last Screening Level Exceedance
Benzo(k)fluoranthene	ug/L	0.0016	10	10		0%				0	0%		10	3/29/2021	3/31/2021	3/31/2021	0.01	0.013	3/31/2021
Chrysene	ug/L	0.016	10	10	4	40%	0.002	0.0043	0.011		0%	1		3/29/2021	3/31/2021	3/31/2021	0.01	0.01	
Dibenzo(a,h)anthracene	ug/L	1.6E-05	10	10		0%				0	0%		10	3/29/2021	3/31/2021		0.01	0.013	3/31/2021
Indeno(1,2,3-cd)pyrene	ug/L	0.00016	10	10	1	10%	0.001	0.001	0.001	1	10%	6	9	3/29/2021	3/31/2021	3/31/2021	0.01	0.01	3/31/2021
Total Benzofluoranthenes	ug/L		10	10	1	10%	0.006	0.006	0.006		0%			3/29/2021	3/31/2021	3/31/2021	0.01	0.01	
Total HPAHs	ug/L		10	10	7	70%	0.002	0.0289	0.138		0%			3/29/2021	3/31/2021	3/31/2021	0.01	0.013	
Total LPAHs	ug/L		10	10	8	80%	0.002	0.184	1.3		0%			3/29/2021	3/31/2021	3/31/2021	0.01	0.01	
Total PAHs (ND=0)	ug/L		10	10	9	90%	0.002	0.186	1.44		0%			3/29/2021	3/31/2021	3/31/2021	0.01	0.01	
Total cPAHs TEQ (ND = 0)	ug/L	0.00969	10	10	4	40%	0.00002	0.00107	0.00421		0%	0		3/29/2021	3/31/2021	3/31/2021	0	0	
Total cPAHs TEQ (ND = 1/2 RDL)	ug/L	0.00969	10	10	4	40%	0.00521	0.00694	0.00752	0	0%	1	1	3/29/2021	3/31/2021	3/31/2021	0.00755	0.009815	3/29/2021
PCB Aroclors																			
Aroclor 1016	ug/L		10	10		0%					0%			3/29/2021	3/31/2021		0.01	0.012	
Aroclor 1221	ug/L		10	10		0%					0%			3/29/2021	3/31/2021		0.01	0.012	
Aroclor 1232	ug/L		10	10	1	10%	0.386	0.386	0.386		0%			3/29/2021	3/31/2021	3/31/2021	0.01	0.01	
Aroclor 1242	ug/L		10	10	1	10%	0.063	0.063	0.063		0%			3/29/2021	3/31/2021	3/31/2021	0.01	0.01	
Aroclor 1248	ug/L		10	10		0%					0%			3/29/2021	3/31/2021		0.01	0.012	
Aroclor 1254	ug/L		10	10	7	70%	0.003	0.0453	0.252		0%			3/29/2021	3/31/2021	3/31/2021	0.01	0.011	
Aroclor 1260	ug/L		10	10	5	50%	0.004	0.012	0.041		0%			3/29/2021	3/31/2021	3/31/2021	0.01	0.011	
Aroclor 1262	ug/L		10	10		0%					0%			3/29/2021	3/31/2021		0.01	0.012	
Aroclor 1268	ug/L		10	10		0%					0%			3/29/2021	3/31/2021		0.01	0.012	
Total PCB Aroclors (ND=1/2 RL)	ug/L	7E-06	10	10	7	70%	0.042	0.154	0.709	7	70%	101286	3	3/29/2021	3/31/2021	3/31/2021	0.045	0.054	3/31/2021
Total PCBs (Sum of Aroclors)	ug/L	7E-06	10	10	7	70%	0.003	0.118	0.679	7	70%	97000	0	3/29/2021	3/31/2021	3/31/2021	0	0	3/31/2021
PCB Congeners																			
Total PCB Congeners	ug/L	7E-06	5	5	5	100%	0.0000547	0.0922	0.304	5	100%	43429	0	5/27/2021	5/27/2021	5/27/2021			5/27/2021
Total PCB TEQ (ND = 0)	ug/L	4.43E-09	5	5	4	80%	3.03E-09	0.00000197	0.00000509	2	40%	1149	0	5/27/2021	5/27/2021	5/27/2021	0	0	5/27/2021
Total PCB TEQ (ND = 1/2 RDL)	ug/L	4.43E-09	5	5	4	80%	0.000000333	0.00000217	0.00000516	4	80%	1165	1	5/27/2021	5/27/2021	5/27/2021	0.000000324715	0.000000324715	5/27/2021
Pest/Herbicides																			
2,4'-DDD	ug/L		7	7		0%					0%			3/29/2021	3/31/2021		0.0013	1	
2,4'-DDE	ug/L		7	7		0%					0%			3/29/2021	3/31/2021		0.0013	0.0013	
2,4'-DDT	ug/L		7	7		0%					0%			3/29/2021	3/31/2021		0.0013	0.0013	
4,4'-DDD	ug/L	7.9E-06	7	7		0%				0	0%		7	3/29/2021	3/31/2021		0.0013	0.0013	3/31/2021
4,4'-DDE	ug/L	8.8E-07	7	7		0%				0	0%		7	3/29/2021	3/31/2021		0.0013	0.0013	3/31/2021
4,4'-DDT	ug/L	1.2E-06	7	7		0%				0	0%		7	3/29/2021	3/31/2021		0.0013	1	3/31/2021
Aldrin	ug/L	4.1E-08	7	7	4	57%	0.0027	0.0272	0.0663	4	57%	1617073	3	3/29/2021	3/31/2021	3/31/2021	0.0006	0.0013	3/31/2021
Alpha-BHC	ug/L	4.8E-05	7	7	4	57%	0.0027	0.0032	0.0038	4	57%	79	3	3/29/2021	3/31/2021	3/30/2021	0.0006	0.0006	3/31/2021
Beta-BHC	ug/L	0.0014	7	7		0%					0%			3/29/2021	3/31/2021		0.0006	0.0006	
cis-Chlordane	ug/L	0.000103	7	7		0%				0	0%		7	3/29/2021	3/31/2021		0.0006	0.0006	3/31/2021
cis-Nonachlor	ug/L		7	7		0%					0%			3/29/2021	3/31/2021		0.0013	0.0013	
Delta-BHC	ug/L		7	7		0%					0%			3/29/2021	3/31/2021		0.0006	0.0006	
Dieldrin	ug/L	1.2E-06	7	7	3	43%	0.0158	0.0264	0.037	3	43%	30833	4	3/29/2021	3/31/2021	3/31/2021	0.0013	0.0013	3/31/2021
Endosulfan I	ug/L	0.0087	7	7		0%					0%			3/29/2021	3/31/2021		0.0006	0.0006	
Endosulfan II	ug/L	0.0087	7	7		0%					0%			3/29/2021	3/31/2021		0.0013	0.0013	
Endosulfan Sulfate	ug/L	10	7	7		0%					0%			3/29/2021	3/31/2021		0.0013	0.0013	
Endrin	ug/L	0.002	7	7		0%					0%			3/29/2021	3/31/2021		0.0013	0.0013	
Endrin Aldehyde	ug/L	0.035	7	7		0%					0%			3/29/2021	3/31/2021		0.0013	0.0013	
Endrin ketone	ug/L		7	7		0%					0%			3/29/2021	3/31/2021		0.0013	0.0013	
Heptachlor	ug/L	3.4E-07	7	7		0%				0	0%		7	3/29/2021	3/31/2021		0.0006	1	3/31/2021
Heptachlor Epoxide	ug/L	2.4E-06	7	7		0%				0	0%		7	3/29/2021	3/31/2021		0.0006	0.0006	3/31/2021
Lindane	ug/L	0.126	7	7		0%					0%			3/29/2021	3/31/2021		0.0006	0.0006	
Methoxychlor	ug/L	0.02	7	7		0%					0%			3/29/2021	3/31/2021		0.0063	0.0063	
Mirex	ug/L	0.001	7	7		0%				0	0%		7	3/29/2021	3/31/2021		0.0013	0.0013	3/31/2021
Oxychlorane	ug/L		7	7		0%					0%			3/29/2021	3/31/2021		0.0013	0.0013	
trans-Chlordane	ug/L	0.000103	7	7		0%				0	0%		7	3/29/2021	3/31/2021		0.0006	0.0006	3/31/2021
trans-Nonachlor	ug/L		7	7		0%					0%			3/29/2021	3/31/2021		0.0013	0.0013	
TPHs																			
Gasoline Range Organics	ug/L	800	12	12	3	25%	101	1060	2810	1	8%	4	0	3/29/2021	3/31/2021	3/31/2021	100	100	3/31/2021
Diesel Range Organics	ug/L	500	10	10	2	20%	744	2590	4430	2	20%	9	0	3/29/2021	3/31/2021	3/31/2021	100	100	3/31/2021
Motor Oil Range Organics	ug/L	500	10	10	2	20%	630	777	923	2	20%	2	0	3/29/2021	3/31/2021	3/31/2021	200	200	3/31/2021
Diesel and Oil Extended Range Organics	ug/L	500	10	10	2	20%	1370	3360	5350	2	20%	11	0	3/29/2021	3/31/2021	3/31/2021	200	250	3/31/2021
VOCs																			
1,1,1,2-Tetrachloroethane	ug/L	7.11	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
1,1,1-Trichloroethane	ug/L	5450	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
1,1,2,2-Tetrachloroethane	ug/L	0.3	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
1,1,2-Trichloroethane	ug/L	0.9	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
1,1,2-Trichlorotrifluoroethane	ug/L	167	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
1,1-Dichloroethane	ug/L	11	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
1,1-Dichloroethene	ug/L	130	12	12	1	8%	3.2	3.2	3.2		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
1,1-Dichloropropene	ug/L		12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
1,2,3-Trichlorobenzene	ug/L	7260	12	12		0%					0%			3/29/2021	3/31/2021		0.5	0.5	
1,2,3-Trichloropropane	ug/L	6.77	12	12		0%					0%			3/29/2021	3/31/2021		0.5	0.5	
1,2,4-Trichlorobenzene	ug/L	0.964	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.5	
1,2,4-Trimethylbenzene	ug/L	239	12	12	2	17%	0.13	0.14	0.15		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
1,2-Dibromo-3-chloropropane	ug/L	0.0423	12	12		0%				0	0%		12	3/29/2021	3/31/2021		0.5	0.5	3/31/2021
1,2-Dibromoethane (EDB)	ug/L	0.296	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
1,2-Dichlorobenzene	ug/L	4.48	12	12	3	25%	0.11	1.22	3.34		0%	1		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
1,2-Dichloroethane (EDC)	ug/L	3.48	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
1,2-Dichloropropane	ug/L	3.1	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
1,3,5-Trimethylbenzene	ug/L	167	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
1,3-Dichlorobenzene	ug/L	2	12	12	1	8%	0.08	0.08	0.08		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
1,3-Dichloropropane	ug/L	2460000	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
1,4-Dichloro-2-Butene																			

Table B.8. Statistical Summary of All Groundwater Chemical Analytical Results - Shallow Monitoring Wells

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	Units	Preliminary Screening Level (PSL)	Number of Sampled Locations	Number of Samples (excluding Field Dups)	Number of Samples with Detected Concentration	Frequency of Detection	Minimum Detected Concentration	Average Detected Concentration	Maximum Detected Concentration	Number of Detected Exceedances of Preliminary Screening Level	Frequency of Detected Exceedance	Maximum PSL Exceedance Factor	Number of NonDetects with Reporting Limit Above Preliminary Screening Level	First Sample Date	Most Recent Available Sample Date	Last Sample Date with Detected Concentration	Min RL	Max RL	Date of Last Screening Exceedance
2-Hexanone	ug/L	7260	12	12		0%					0%			3/29/2021	3/31/2021		5	5	
2-Pentanone	ug/L		12	12		0%					0%			3/29/2021	3/31/2021		5	5	
4-Chlorotoluene	ug/L		12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
4-Methyl-2-pentanone	ug/L	466000	12	12		0%					0%			3/29/2021	3/31/2021		5	5	
Acetone	ug/L	338000000	12	12	6	50%	4.44	5.31	6.99		0%	0		3/29/2021	3/31/2021	3/31/2021	5	5	
Acrolein	ug/L	1.1	12	12		0%				0	0%		12	3/29/2021	3/31/2021		5	5	3/31/2021
Acrylonitrile	ug/L	0.028	12	12		0%				0	0%		12	3/29/2021	3/31/2021		1	1	3/31/2021
Benzene	ug/L	1.6	12	12	2	17%	0.07	0.35	0.63		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
Bromobenzene	ug/L	633	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Bromochloromethane	ug/L		12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Bromodichloromethane	ug/L	1.37	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Bromoform	ug/L	12	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Bromomethane	ug/L	10.9	12	12		0%					0%			3/29/2021	3/31/2021		1	1	
Carbon Disulfide	ug/L	836	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Carbon Tetrachloride	ug/L	0.35	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Chlorobenzene	ug/L	200	12	12	1	8%	1.44	1.44	1.44		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
Chloroethane	ug/L	14700	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Chloroform	ug/L	1.18	12	12	1	8%	0.69	0.69	0.69		0%	1		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
Chloromethane	ug/L	153	12	12		0%					0%			3/29/2021	3/31/2021		0.5	0.5	
cis-1,2-Dichloroethene (cDCE)	ug/L	359000	12	12	3	25%	0.12	188	555		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	10	
cis-1,3-Dichloropropene	ug/L	1.2	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Dibromochloromethane	ug/L	2.2	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Dibromomethane	ug/L	86.4	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Dichlorodifluoromethane	ug/L	4.24	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Ethylbenzene	ug/L	21	12	12	1	8%	0.46	0.46	0.46		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
Isopropylbenzene	ug/L	907	12	12	1	8%	1.74	1.74	1.74		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
m,p-Xylenes	ug/L		12	12	1	8%	1.22	1.22	1.22		0%			3/29/2021	3/31/2021	3/31/2021	0.4	0.4	
Methyl tert-butyl ether (MTBE)	ug/L	801	12	12		0%					0%			3/29/2021	3/31/2021		0.5	0.5	
Methylene Chloride	ug/L	100	12	12		0%					0%			3/29/2021	3/31/2021		1	1	
Methyl iodide	ug/L		12	12		0%					0%			3/29/2021	3/31/2021		1	1	
n-Butylbenzene	ug/L	424000	12	12	1	8%	0.65	0.65	0.65		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
n-Propylbenzene	ug/L	2270	12	12	1	8%	2.63	2.63	2.63		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
o-Xylene	ug/L		12	12	1	8%	1.5	1.5	1.5		0%			3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
p-Isopropyltoluene	ug/L		12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
sec-Butylbenzene	ug/L	940000	12	12	1	8%	0.68	0.68	0.68		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
Styrene	ug/L	8170	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
tert-Butylbenzene	ug/L	1240000	12	12	1	8%	0.09	0.09	0.09		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
Tetrachloroethene (PCE)	ug/L	2.9	12	12	8	67%	0.09	584	4640	3	25%	1600	0	3/29/2021	3/31/2021	3/31/2021	0.2	20	3/31/2021
Toluene	ug/L	102	12	12	4	33%	0.11	0.2	0.36		0%			3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
Total Xylenes	ug/L	106	12	12	1	8%	2.72	2.72	2.72		0%	0		3/29/2021	3/31/2021	3/31/2021	0.6	0.6	
trans-1,2-Dichloroethene	ug/L	76.8	12	12	1	8%	4.99	4.99	4.99		0%	0		3/29/2021	3/31/2021	3/31/2021	0.2	0.2	
trans-1,3-Dichloropropene	ug/L	1.2	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Trichloroethene (TCE)	ug/L	0.7	12	12	4	33%	0.09	68.6	259	2	17%	370	0	3/29/2021	3/31/2021	3/31/2021	0.2	10	3/31/2021
Trichlorofluoromethane	ug/L	119	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Vinyl Acetate	ug/L	7810	12	12		0%					0%			3/29/2021	3/31/2021		0.2	0.2	
Vinyl Chloride	ug/L	0.18	12	12	2	17%	0.35	0.44	0.53	2	17%	3	10	3/29/2021	3/31/2021	3/31/2021	0.2	0.2	3/31/2021
Conventional																			
Total Organic Carbon	ug/L		8	8	8	100%	890	5475	14240		0%			3/29/2021	3/31/2021	3/31/2021	500	500	
Total Suspended Solids	ug/L		8	8	5	63%	4000	7400	17000		0%			3/29/2021	3/31/2021	3/31/2021	1000	2000	

Preliminary Screening Level: SPM_RI_GW_SLS_2022.02

Notes:

This table includes all samples collected to date.

Blank cells = not applicable

D - Dissolved

Dups - Duplicates

Max -Maximum

mg/L - milligrams per liter

Min - Minimum

PCB - Polychlorinated Biphenyl

PSL - Preliminary Screening Level

RL - Reporting Limit

SVOCs - Semivolatile Organic Compounds

T- Total

TPHs - Total Petroleum Hydrocarbons

ug/L - micrograms per liter

VOCs - Volatile Organic Compounds

Many maximum and minimum reporting limits were not explicitly listed in the historical database. We have assumed the values given for non-detect results are the reporting limit where historical reporting limits were omitted. Therefore some of the maximum and minimum reporting limits are based on non-detect results only.

This table only includes well results, not grab groundwater results.

Table B.9. Statistical Summary of All Groundwater Chemical Analytical Results - Alluvial Monitoring Wells

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	Units	Preliminary Screening Level (PSL)	Number of Sampled Locations	Number of Samples (excluding Field Dups)	Number of Samples with Detected Concentration	Frequency of Detection	Minimum Detected Concentration	Average Detected Concentration	Maximum Detected Concentration	Number of Exceedances of PSL	Frequency of Detected Exceedance	Maximum PSL Exceedance Factor	Number of NonDetects with Reporting Limit Above PSL	First Sample Date	Most Recent Available Sample Date	Last Sample Date with Detected Concentration	Min RL	Max RL	Date of Last Screening Level Exceedance
Metals																			
Arsenic (D)	ug/L	8	3	3	3	100%	3.26	5.27	8.08	1	33%	1	0	10/8/2007	10/9/2007	10/9/2007			10/9/2007
Arsenic (T)	ug/L	8	3	6	6	100%	1.56	3.66	8.07	1	17%	1	0	10/8/2007	3/12/2008	3/12/2008			10/9/2007
Cadmium (D)	ug/L	1.19	3	3	3	100%	0.026	0.0543	0.105	0	0%	0	0	10/8/2007	10/9/2007	10/9/2007			
Cadmium (T)	ug/L	1.19	3	6	6	100%	0.013	0.033	0.091	0	0%	0	0	10/8/2007	3/12/2008	3/12/2008			
Chromium (D)	ug/L	27.4	3	3	3	100%	1.25	9.35	25.2	0	0%	1	0	10/8/2007	10/9/2007	10/9/2007			
Chromium (T)	ug/L	27.4	3	6	6	100%	1.52	17.7	40.4	1	17%	1	0	10/8/2007	3/12/2008	3/12/2008			
Copper (D)	ug/L	3.1	3	3	3	100%	2.77	4.72	6.27	2	67%	2	0	10/8/2007	10/9/2007	10/9/2007			10/9/2007
Copper (T)	ug/L	3.1	3	6	6	100%	2.83	6.67	9.83	5	83%	3	0	10/8/2007	3/12/2008	3/12/2008			3/12/2008
Lead (D)	ug/L	5.6	3	3	3	100%	0.021	0.044	0.057	0	0%	0	0	10/8/2007	10/9/2007	10/9/2007			
Lead (T)	ug/L	5.6	3	6	6	100%	0.046	0.191	0.519	0	0%	0	0	10/8/2007	3/12/2008	3/12/2008			
Mercury (D)	ug/L	0.025	3	3	0	0%				0	0%		3	10/8/2007	10/9/2007		0.2	0.2	10/9/2007
Mercury (T)	ug/L	0.025	3	6	0	0%				0	0%		6	10/8/2007	3/12/2008		0.2	0.2	3/12/2008
Silver (D)	ug/L	1.9	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.02	0.02	
Silver (T)	ug/L	1.9	3	6	2	33%	0.005	0.008	0.01	0	0%	0	0	10/8/2007	3/12/2008	10/9/2007	0.005	0.02	
Zinc (D)	ug/L	81	3	3	3	100%	2.1	3.8	5.2	0	0%	0	0	10/8/2007	10/9/2007	10/9/2007			
Zinc (T)	ug/L	81	3	6	6	100%	2.93	4.06	4.9	0	0%	0	0	10/8/2007	3/12/2008	3/12/2008			
Other SVOCs																			
2,4-Dimethylphenol	ug/L	2.91	3	3	0	0%				0	0%		3	10/8/2007	10/9/2007		4.1	4.1	10/9/2007
2-Methylphenol	ug/L	10.7	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.51	0.51	
4-Methylphenol	ug/L	106	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.51	0.51	
Benzoic acid	ug/L	589	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		5.1	5.1	
Benzyl alcohol	ug/L	56.4	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		5.1	5.1	
Benzyl butyl phthalate	ug/L	0.013	3	3	0	0%				0	0%		3	10/8/2007	10/9/2007		0.21	0.21	10/9/2007
Bis(2-ethylhexyl) phthalate	ug/L	0.046	3	3	0	0%				0	0%		3	10/8/2007	10/9/2007		1.1	1.1	10/9/2007
Dibenzofuran	ug/L	3.09	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.21	0.21	
Diethyl phthalate	ug/L	92.6	3	3	3	100%	0.036	0.047	0.059	0	0%	0	0	10/8/2007	10/9/2007	10/9/2007			
Dimethyl phthalate	ug/L	59	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.21	0.21	
Di-n-butyl phthalate	ug/L	8	3	3	3	100%	0.065	0.075	0.08	0	0%	0	0	10/8/2007	10/9/2007	10/9/2007			
Di-n-octyl phthalate	ug/L	2.31	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.21	0.21	
Hexachlorobenzene	ug/L	5E-06	3	3	0	0%				0	0%		3	10/8/2007	10/9/2007		0.21	0.21	10/9/2007
Hexachlorobutadiene	ug/L	0.01	3	6	0	0%				0	0%		6	10/8/2007	3/12/2008		0.21	2	3/12/2008
N-Nitrosodiphenylamine	ug/L	0.554	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.21	0.21	
Pentachlorophenol	ug/L	0.002	3	3	0	0%				0	0%		3	10/8/2007	10/9/2007		1.1	1.1	10/9/2007
Phenol	ug/L	101	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.51	0.51	
PAHs																			
2-Methylnaphthalene	ug/L	14	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.21	0.21	
Acenaphthene	ug/L	5.34	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.21	0.21	
Acenaphthylene	ug/L		3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.21	0.21	
Anthracene	ug/L	2.15	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.21	0.21	
Benzo(g,h,i)perylene	ug/L		3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.21	0.21	
Fluoranthene	ug/L	1.82	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.21	0.21	
Fluorene	ug/L	3.67	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.21	0.21	
Naphthalene	ug/L	1.4	3	6	0	0%				0	0%		3	10/8/2007	3/12/2008		0.21	2	3/12/2008
Phenanthrene	ug/L		3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.21	0.21	
Pyrene	ug/L	2.01	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.21	0.21	
Benz(a)anthracene	ug/L	0.00016	3	3	0	0%				0	0%		3	10/8/2007	10/9/2007		0.21	0.21	10/9/2007
Benzo(a)pyrene	ug/L	1.6E-05	3	3	0	0%				0	0%		3	10/8/2007	10/9/2007		0.21	0.21	10/9/2007
Benzo(b)fluoranthene	ug/L	0.00016	3	3	0	0%				0	0%		3	10/8/2007	10/9/2007		0.21	0.21	10/9/2007
Benzo(k)fluoranthene	ug/L	0.0016	3	3	0	0%				0	0%		3	10/8/2007	10/9/2007		0.21	0.21	10/9/2007
Chrysene	ug/L	0.016	3	3	0	0%				0	0%		3	10/8/2007	10/9/2007		0.21	0.21	10/9/2007
Dibenzo(a,h)anthracene	ug/L	1.6E-05	3	3	0	0%				0	0%		3	10/8/2007	10/9/2007		0.21	0.21	10/9/2007
Indeno(1,2,3-cd)pyrene	ug/L	0.00016	3	3	0	0%				0	0%		3	10/8/2007	10/9/2007		0.21	0.21	10/9/2007
Total HPAHs	ug/L		3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.21	0.21	
Total LPAHs	ug/L		3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.21	0.21	
Total PAHs (ND=0)	ug/L		3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.21	0.21	
Total cPAHs TEQ (ND = 0)	ug/L	0.00969	3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0	0	
Total cPAHs TEQ (ND = 1/2)	ug/L	0.00969	3	3	0	0%				0	0%		3	10/8/2007	10/9/2007		0.15855	0.15855	10/9/2007
PCB Aroclors																			
Aroclor 1016	ug/L		3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.2	0.21	
Aroclor 1248	ug/L		3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.2	0.21	
Aroclor 1254	ug/L		3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.2	0.21	
Aroclor 1260	ug/L		3	3	0	0%				0	0%		0	10/8/2007	10/9/2007		0.2	0.21	
Total PCB Aroclors (ND=1/2)	ug/L	7E-06	3	3	0	0%				0	0%		3	10/8/2007	10/9/2007		0.2	0.21	10/9/2007
Total PCBs (Sum of Aroclors)	ug/L	7E-06	3	3	0	0%				0	0%		3	10/8/2007	10/9/2007		0.2	0.21	10/9/2007
Pesticides/Herbicides																			
2,4'-DDD	ug/L		3	6	0	0%				0	0%		0	10/8/2007	3/12/2008		0.00049	0.011	
2,4'-DDE	ug/L		3	6	0	0%				0	0%		0	10/8/2007	3/12/2008		0.00049	0.011	
2,4'-DDT	ug/L		3	6	1	17%	0.001	0.001	0.001	0	0%		0	10/8/2007	3/12/2008	10/8/2007	0.00049	0.011	
4,4'-DDD	ug/L	7.9E-06	3	6	0	0%				0	0%		6	10/8/2007	3/12/2008		0.00049	0.011	3/12/2008
4,4'-DDE	ug/L	8.8E-07	3	6	0	0%				0	0%		6	10/8/2007	3/12/2008		0.00049	0.011	3/12/2008
4,4'-DDT	ug/L	1.2E-06	3	6	3	50%	0.00082	0.0015	0.0022	3	50%	1833	3	10/8/2007	3/12/2008	3/12/2008	0.0005	0.011	3/12/2008
Aldrin	ug/L	4.1E-08	3	6	2	33%	0.0012	0.0012	0.0012	2	33%	29268	4	10/8/2007	3/12/2008	3/12/2008	0.0		

Table B.9. Statistical Summary of All Groundwater Chemical Analytical Results - Alluvial Monitoring Wells

Project No. 190293, South Park Marina, Seattle, Washington

Analyte	Units	Preliminary Screening Level (PSL)	Number of Sampled Locations	Number of Samples (excluding Field Dups)	Number of Samples with Detected Concentration	Frequency of Detection	Minimum Detected Concentration	Average Detected Concentration	Maximum Detected Concentration	Number of Exceedances of PSL	Frequency of Detected Exceedance	Maximum PSL Exceedance Factor	Number of NonDetects with Reporting Limit Above PSL	First Sample Date	Most Recent Available Sample Date	Last Sample Date with Detected Concentration	Min RL	Max RL	Date of Last Screening Level Exceedance
1,1,2-Trichloroethane	ug/L	0.9	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
1,1-Dichloroethane	ug/L	11	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
1,1-Dichloroethene	ug/L	130	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
1,1-Dichloropropene	ug/L		3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
1,2,3-Trichlorobenzene	ug/L	7260	3	6		0%					0%			10/8/2007	3/12/2008		2	2	
1,2,3-Trichloropropane	ug/L	6.77	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
1,2,4-Trichlorobenzene	ug/L	0.964	3	6		0%				0	0%		3	10/8/2007	3/12/2008		0.21	2	3/12/2008
1,2,4-Trimethylbenzene	ug/L	239	3	6		0%					0%			10/8/2007	3/12/2008		2	2	
1,2-Dibromo-3-chloropropane	ug/L	0.0423	3	6		0%				0	0%		6	10/8/2007	3/12/2008		2	2	3/12/2008
1,2-Dibromoethane (EDB)	ug/L	0.296	3	6		0%				0	0%		6	10/8/2007	3/12/2008		2	2	3/12/2008
1,2-Dichlorobenzene	ug/L	4.48	3	6		0%					0%			10/8/2007	3/12/2008		0.21	0.5	
1,2-Dichloroethane (EDC)	ug/L	3.48	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
1,2-Dichloropropane	ug/L	3.1	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
1,3,5-Trimethylbenzene	ug/L	167	3	6		0%					0%			10/8/2007	3/12/2008		2	2	
1,3-Dichlorobenzene	ug/L	2	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
1,3-Dichloropropane	ug/L	2460000	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
1,4-Dichlorobenzene	ug/L	4.96	3	6		0%					0%			10/8/2007	3/12/2008		0.21	0.5	
2,2-Dichloropropane	ug/L		3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
2-Butanone	ug/L	1710000	3	6		0%					0%			10/8/2007	3/12/2008		20	20	
2-Chlorotoluene	ug/L	618000	3	6		0%					0%			10/8/2007	3/12/2008		2	2	
2-Hexanone	ug/L	7260	3	6		0%					0%			10/8/2007	3/12/2008		20	20	
4-Chlorotoluene	ug/L		3	6		0%					0%			10/8/2007	3/12/2008		2	2	
4-Methyl-2-pentanone	ug/L	466000	3	6		0%					0%			10/8/2007	3/12/2008		20	20	
Acetone	ug/L	338000000	3	6		0%					0%			10/8/2007	3/12/2008		20	20	
Benzene	ug/L	1.6	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Bromobenzene	ug/L	633	3	6		0%					0%			10/8/2007	3/12/2008		2	2	
Bromochloromethane	ug/L		3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Bromodichloromethane	ug/L	1.37	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Bromoform	ug/L	12	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Bromomethane	ug/L	10.9	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Carbon Disulfide	ug/L	836	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Carbon Tetrachloride	ug/L	0.35	3	6		0%				0	0%		6	10/8/2007	3/12/2008		0.5	0.5	3/12/2008
Chlorobenzene	ug/L	200	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Chloroethane	ug/L	14700	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Chloroform	ug/L	1.18	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Chloromethane	ug/L	153	3	6	4	67%	0.36	0.64	0.9		0%	0		10/8/2007	3/12/2008	3/12/2008	0.5	0.5	
cis-1,2-Dichloroethene (cDE)	ug/L	359000	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
cis-1,3-Dichloropropene	ug/L	1.2	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Dibromochloromethane	ug/L	2.2	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Dibromomethane	ug/L	86.4	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Dichlorodifluoromethane	ug/L	4.24	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Ethylbenzene	ug/L	21	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Isopropylbenzene	ug/L	907	3	6		0%					0%			10/8/2007	3/12/2008		2	2	
m,p-Xylenes	ug/L		3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Methylene Chloride	ug/L	100	3	6		0%					0%			10/8/2007	3/12/2008		2	2	
n-Butylbenzene	ug/L	424000	3	6		0%					0%			10/8/2007	3/12/2008		2	2	
n-Propylbenzene	ug/L	2270	3	6		0%					0%			10/8/2007	3/12/2008		2	2	
o-Xylene	ug/L		3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
p-Isopropyltoluene	ug/L		3	6		0%					0%			10/8/2007	3/12/2008		2	2	
sec-Butylbenzene	ug/L	940000	3	6		0%					0%			10/8/2007	3/12/2008		2	2	
Styrene	ug/L	8170	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
tert-Butylbenzene	ug/L	1240000	3	6		0%					0%			10/8/2007	3/12/2008		2	2	
Tetrachloroethene (PCE)	ug/L	2.9	3	6	3	50%	0.16	0.18	0.2		0%	0		10/8/2007	3/12/2008	3/12/2008	0.5	0.5	
Toluene	ug/L	102	3	6	2	33%	0.11	0.12	0.12		0%	0		10/8/2007	3/12/2008	10/9/2007	0.5	0.5	
Total Xylenes	ug/L	106	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
trans-1,2-Dichloroethene	ug/L	76.8	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
trans-1,3-Dichloropropene	ug/L	1.2	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Trichloroethene (TCE)	ug/L	0.7	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Trichlorofluoromethane	ug/L	119	3	6		0%					0%			10/8/2007	3/12/2008		0.5	0.5	
Vinyl Chloride	ug/L	0.18	3	6		0%				0	0%		6	10/8/2007	3/12/2008		0.5	0.5	3/12/2008

Preliminary Screening Level (PSL): SPM_RI_GW_SLS_2022.02_action_level

Notes:

This table includes all samples collected to date.

Blank cells = not applicable

D - Dissolved

Dups - Duplicates

Max -Maximum

Min - Minimum

N - not applicable

PAHs - Polycyclic Aromatic Hydrocarbons

PCB - Polychlorinated Biphenyl

PSL - Preliminary Screening Level

RL - Reporting Limit

SVOCs - Semivolatile Organic Compounds

T- Total

TPHs - Total Petroleum Hydrocarbons

ug/L - micrograms per liter

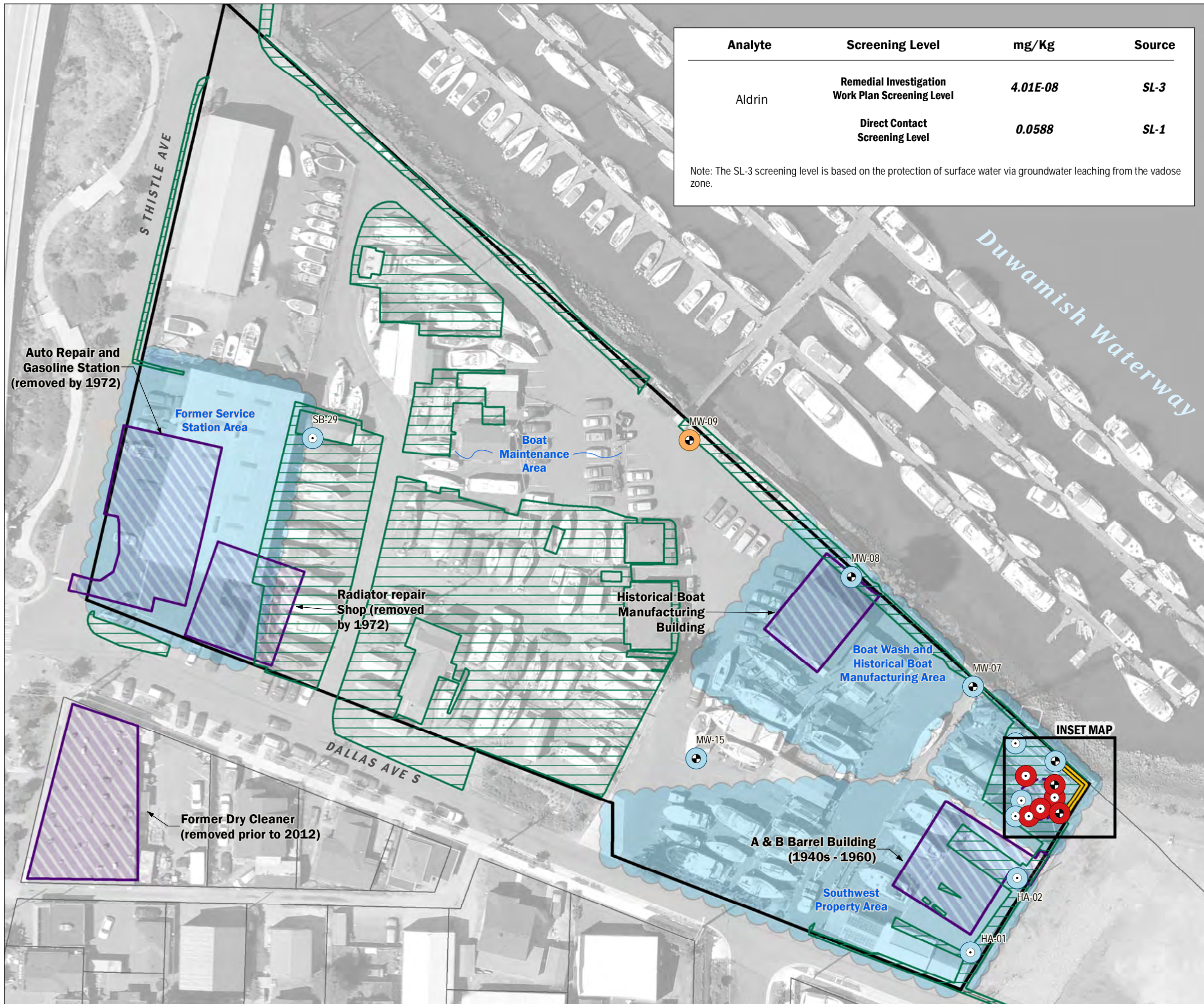
VOCs - Volatile Organic Compounds

Many maximum and minimum reporting limits were not explicitly listed in the historical database. We have assumed the values given for non-detect results are the reporting limit where historical reporting limits were omitted. Therefore some of the maximum and minimum reporting limits are based on non-detect results only.

This table only includes well results, not grab groundwater results.

APPENDIX B

Figures



Analyte	Screening Level	mg/Kg	Source
Aldrin	Remedial Investigation Work Plan Screening Level	4.01E-08	SL-3
	Direct Contact Screening Level	0.0588	SL-1

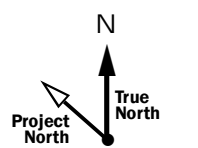
Note: The SL-3 screening level is based on the protection of surface water via groundwater leaching from the vadose zone.

- Analyte detected at a concentration greater than the direct-contact screening level (SL-1).
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well

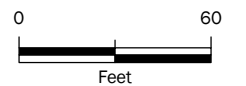
Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

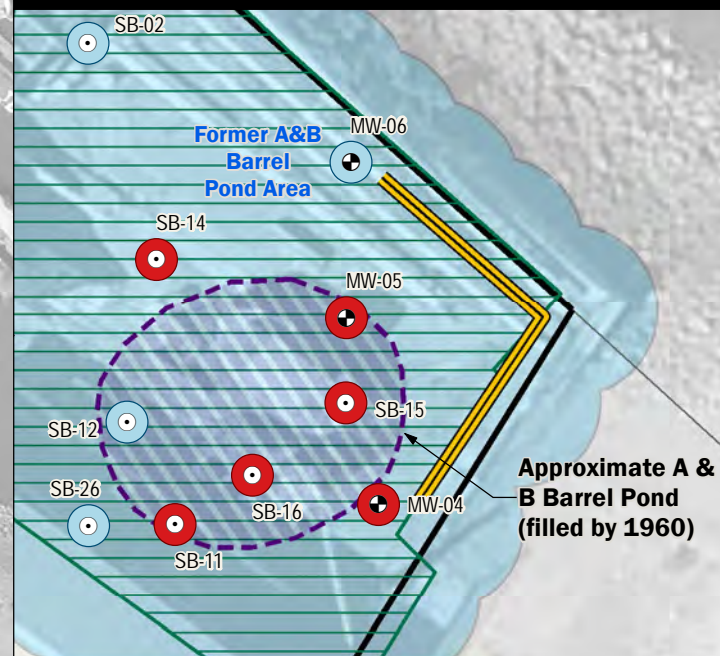
MW-12
Exploration ID



Notes:
 - mg/Kg = milligram per kilogram
 - Site features are approximate.



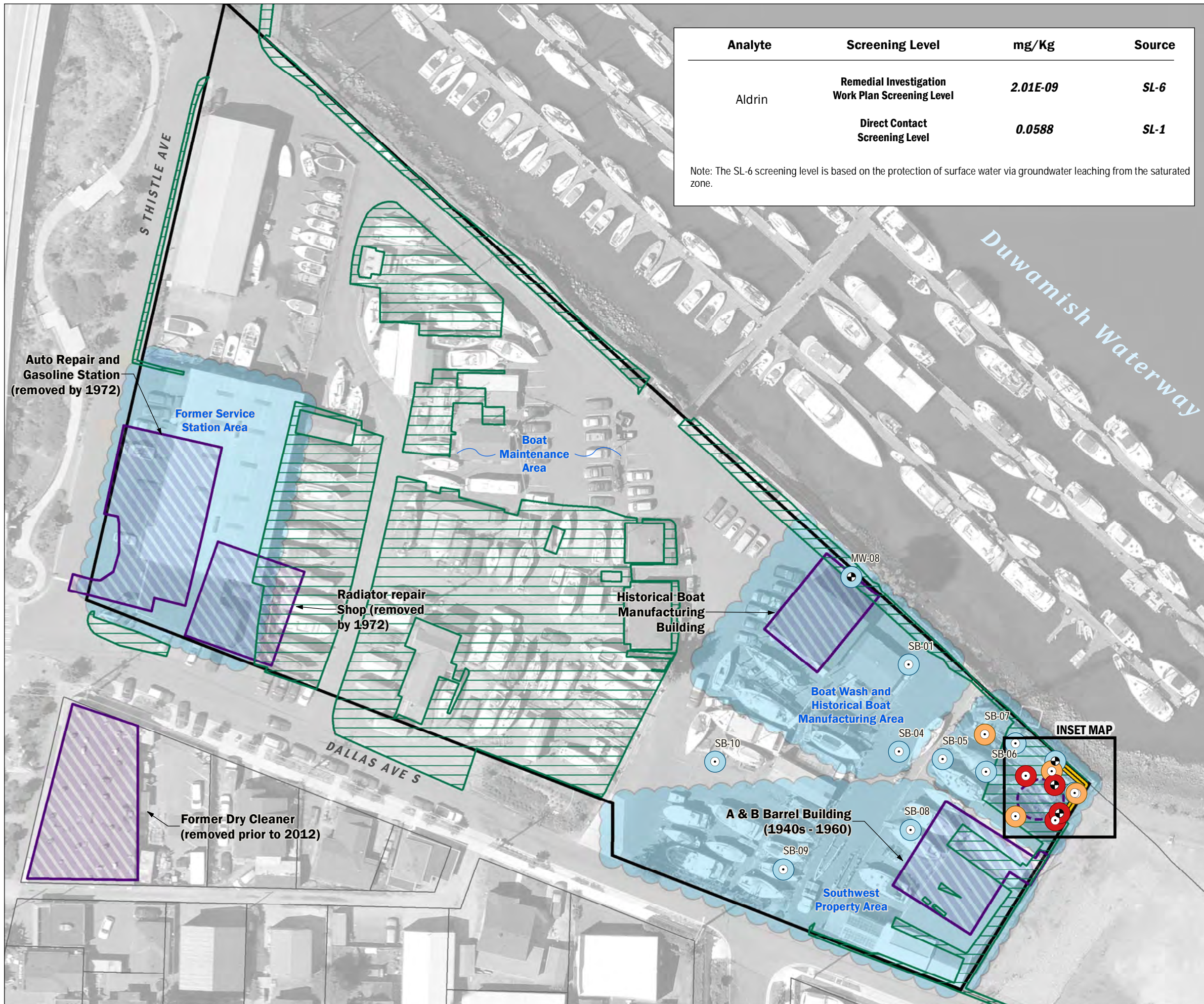
INSET MAP



Aldrin Results in Vadose Zone Soil

RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\Projects_8\Seattle\City\SouthParkMarina_190293\Delivered\RIWP_2021\Final\mch\Map_A_Aldrin_Results_in_Vadose_Zone_Soil.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: mch\m | Print Date: 6/3/2022



Analyte	Screening Level	mg/Kg	Source
Aldrin	Remedial Investigation Work Plan Screening Level	2.01E-09	SL-6
	Direct Contact Screening Level	0.0588	SL-1

Note: The SL-6 screening level is based on the protection of surface water via groundwater leaching from the saturated zone.

- Analyte detected at a concentration greater than the direct-contact screening level (SL-1).
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- Fill Unit Monitoring Well

Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

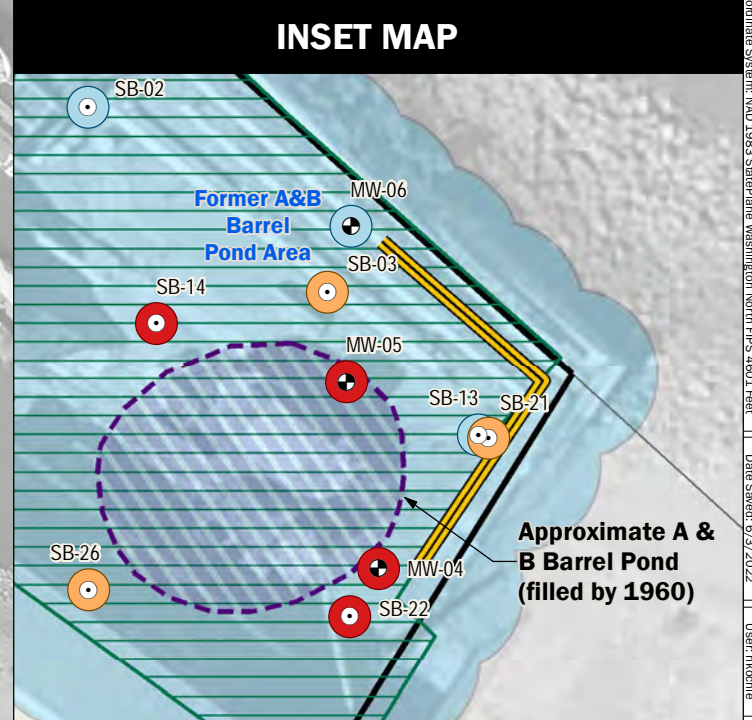
Notes:

- mg/Kg = milligram per kilogram
- Site features are approximate.

0 60
Feet

Exploration ID
MW-12

Project North
True North

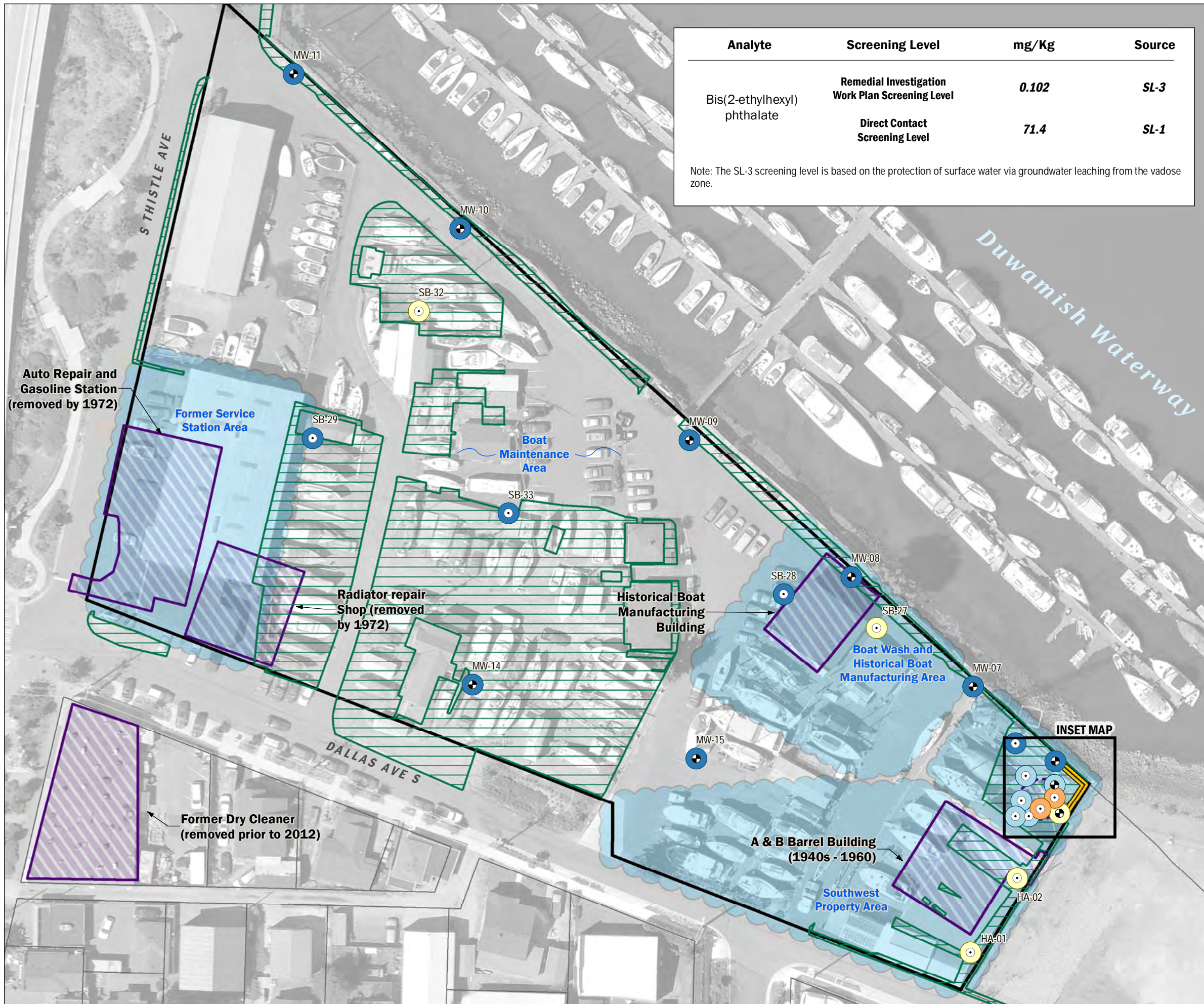


Aldrin Results in Saturated Soil

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Seattle, WA

	JUN-2022	BY: AY / TDR	FIGURE NO. B.2
	PROJECT NO. 190293	REVISED BY: NLK	

Print Date: 6/3/2022 | User: michele | Date Saved: 6/3/2022 | Data Source: 6/3/2022 | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4901 Feet | 190293.Delivered\RIWP_2021\Final\mch\Map_Aldrin_Results_in_Saturated_Soil.mxd



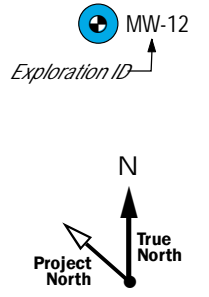
Analyte	Screening Level	mg/Kg	Source
Bis(2-ethylhexyl) phthalate	Remedial Investigation Work Plan Screening Level	0.102	SL-3
	Direct Contact Screening Level	71.4	SL-1

Note: The SL-3 screening level is based on the protection of surface water via groundwater leaching from the vadose zone.

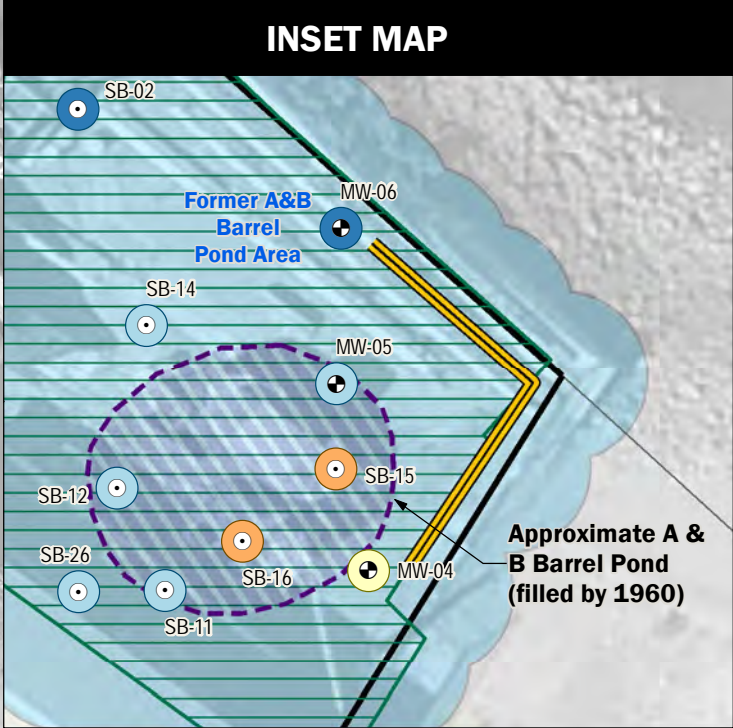
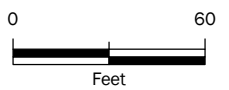
- Analyte detected at a concentration greater than the direct-contact screening level (SL-1).
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well

Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel



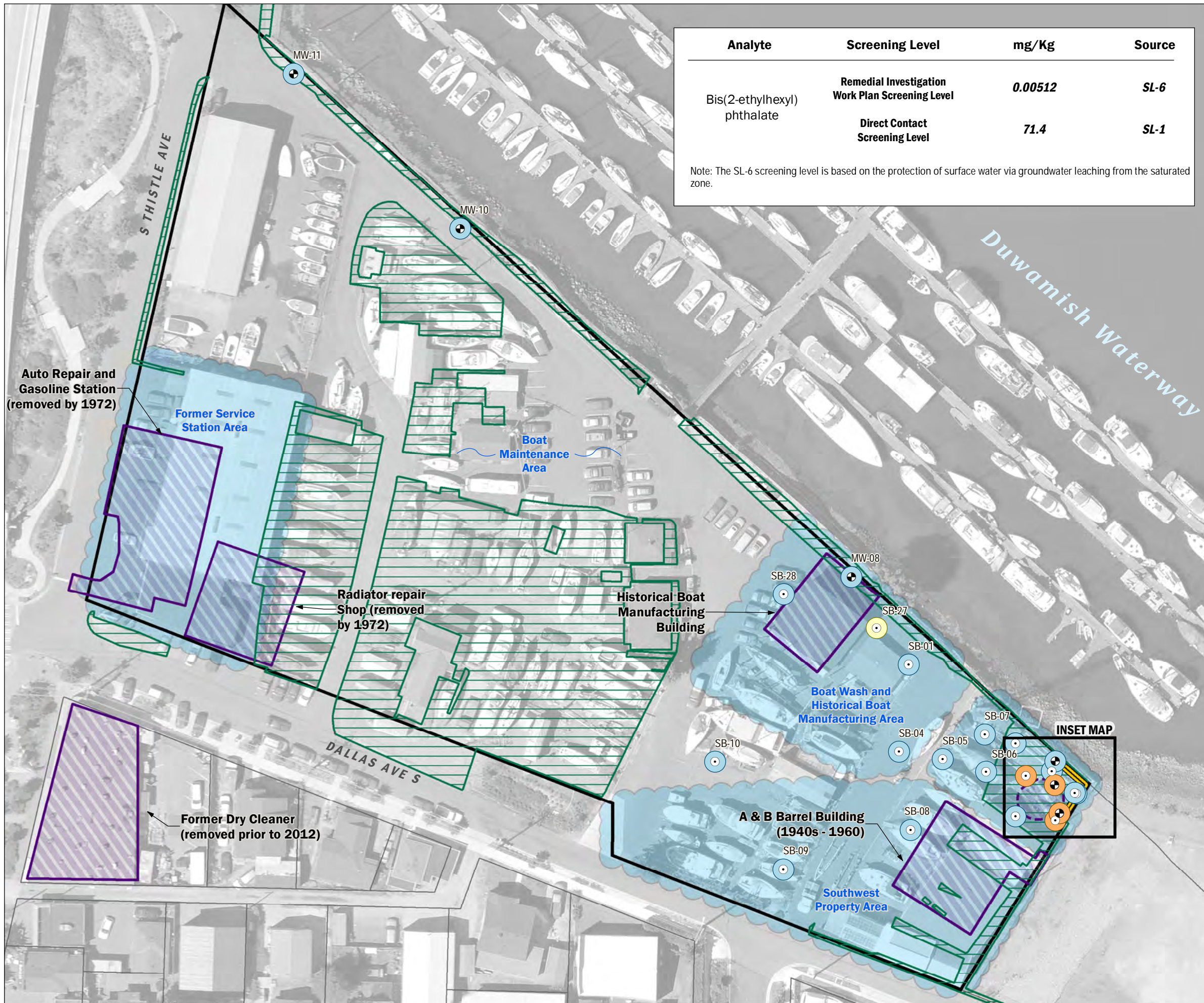
Notes:
 - mg/Kg = milligram per kilogram
 - Site features are approximate.



BEHP Results in Vadose Zone Soil

RIWP Addendum
 South Park Marina
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GIS Path: T:\Projects_8\Seattle\SouthParkMarina_190293\Deliverables\2021\Final\MapDocs_MXDs\B_3_BEHP_Results_in_Vadose_Zone_Soil.mxd | Coordinates System: NAD 1983 StatePlane Washington North FIPS 4901 Feet | Date Saved: 6/9/2022 | User: mkoehle | Print Date: 6/3/2022



Analyte	Screening Level	mg/Kg	Source
Bis(2-ethylhexyl) phthalate	Remedial Investigation Work Plan Screening Level	0.00512	SL-6
	Direct Contact Screening Level	71.4	SL-1

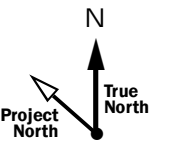
Note: The SL-6 screening level is based on the protection of surface water via groundwater leaching from the saturated zone.

- Analyte detected at a concentration greater than the direct-contact screening level (SL-1).
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well

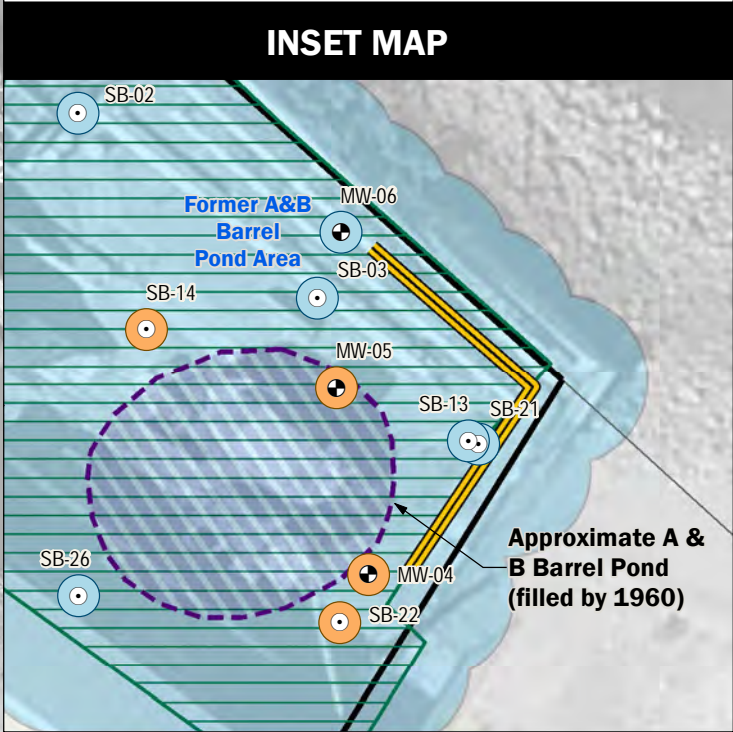
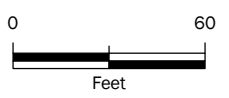
Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

MW-12
Exploration ID



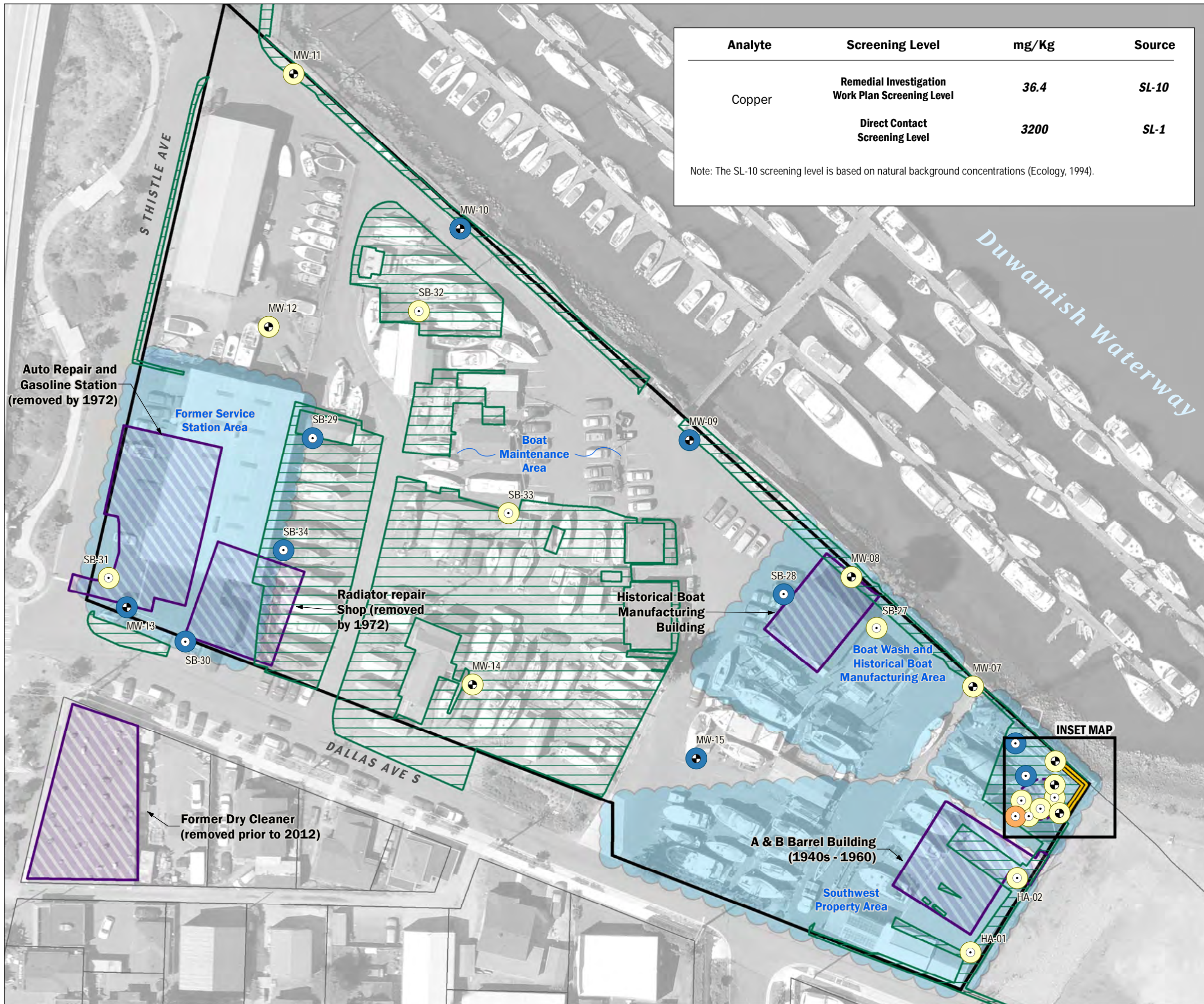
Notes:
- mg/Kg = milligram per kilogram
- Site features are approximate.



BEHP Results in Saturated Soil

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South Park Marina
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Seattle, WA

GIS Path: T:\Projects_8\Seattle\City\SouthParkMarina_190293\Delivered\RIWP_2021\Final\Deliverables_Maps\B.4_BEHP_Results_in_Saturated_Soil.mxd | Coordinate System: NAD_1983_StatePlane_Washington_North_FIPS_4601_Feet | Date Saved: 6/3/2022 | User: mhechle | Print Date: 6/3/2022



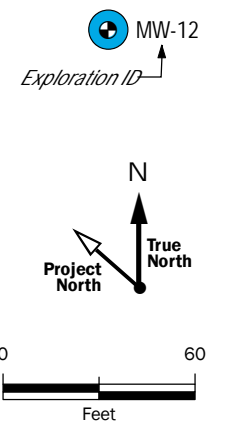
Analyte	Screening Level	mg/Kg	Source
Copper	Remedial Investigation Work Plan Screening Level	36.4	SL-10
	Direct Contact Screening Level	3200	SL-1

Note: The SL-10 screening level is based on natural background concentrations (Ecology, 1994).

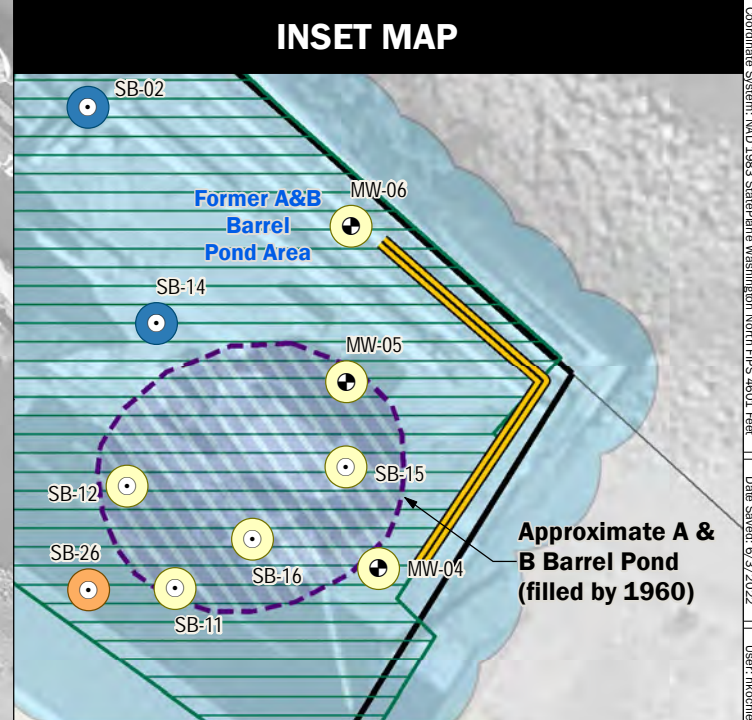
- Analyte detected at a concentration greater than the direct-contact screening level (SL-1).
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well

Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

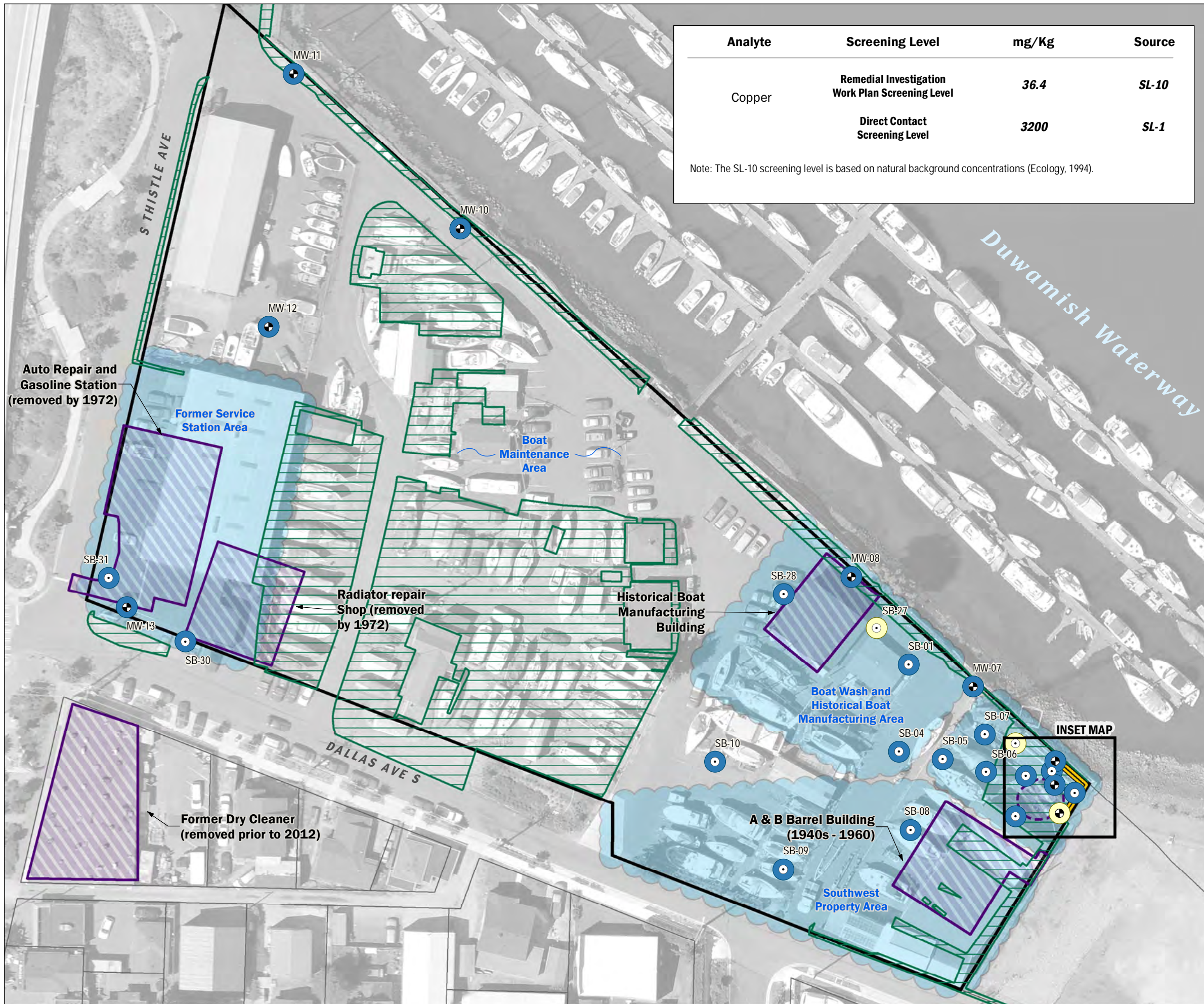


Notes:
 - mg/Kg = milligram per kilogram
 - Site features are approximate.



Copper Results in Vadose Zone Soil
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 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\projects_8\Seattle\City\SouthParkMarina_190293\Delivered\RIWP_2021\Final\mxd\Map_1\Map_1_Copper_Results_in_Vadose_Zone_Soil.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: mchole | Print Date: 6/3/2022



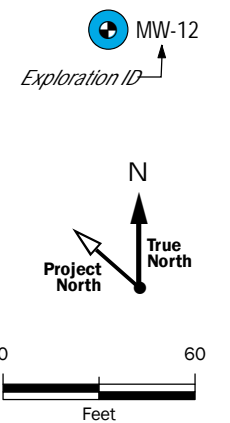
Analyte	Screening Level	mg/Kg	Source
Copper	Remedial Investigation Work Plan Screening Level	36.4	SL-10
	Direct Contact Screening Level	3200	SL-1

Note: The SL-10 screening level is based on natural background concentrations (Ecology, 1994).

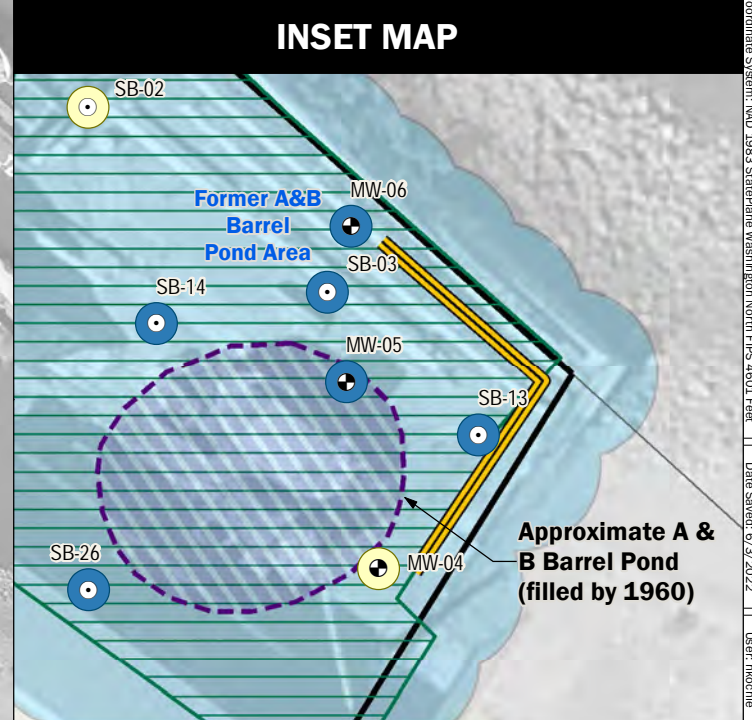
- Analyte detected at a concentration greater than the direct-contact screening level (SL-1).
- Analyte detected at a concentration 100 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well

Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel



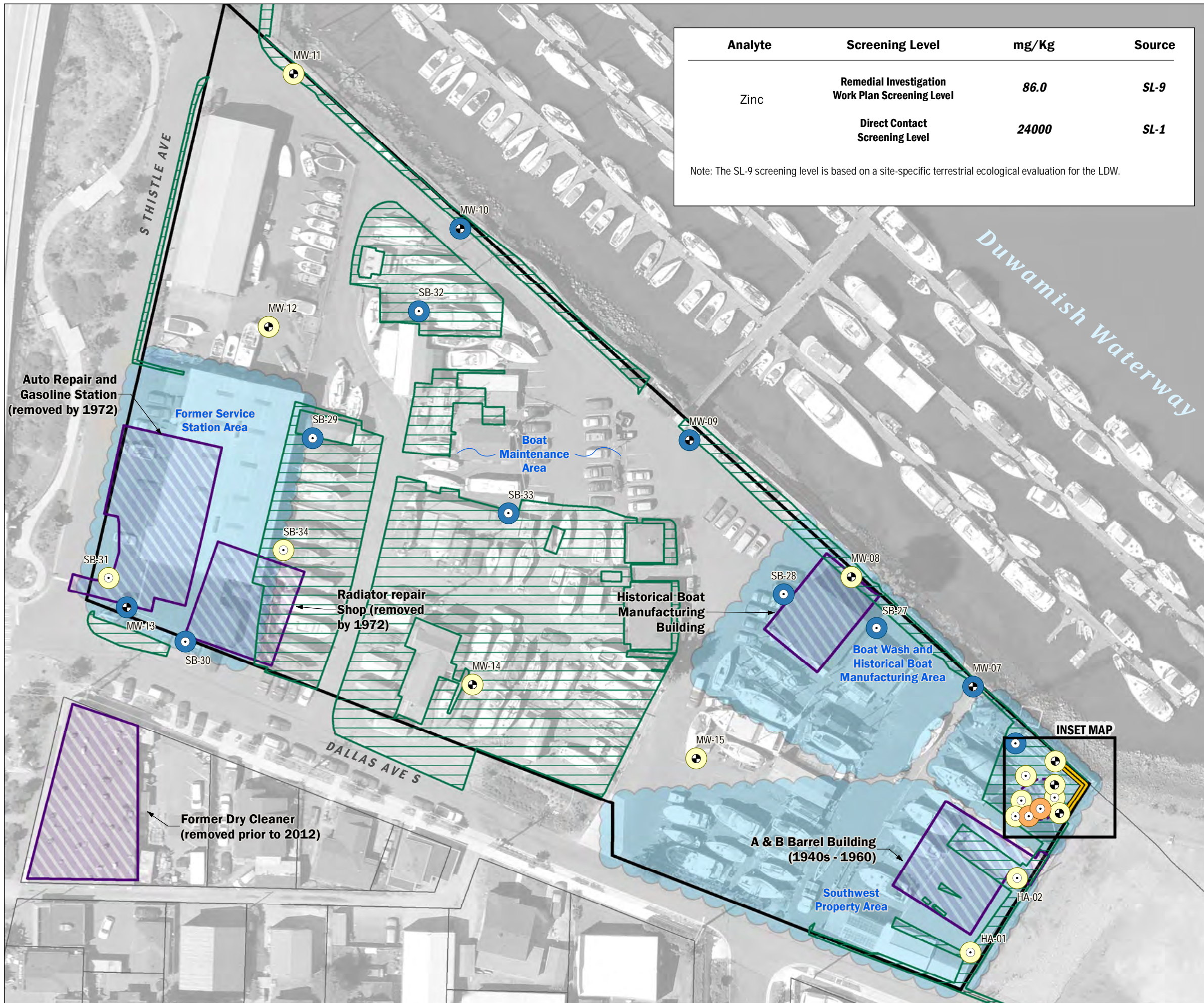
Notes:
 - mg/Kg = milligram per kilogram
 - Site features are approximate.



Copper Results in Saturated Soil

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 South Park Marina
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 Seattle, WA

GIS Path: T:\projects_8\Seattle\SouthParkMarina_190293\Deliverables\RIWP_2021\Figure\B.6_Copper_Results_in_Saturated_Soil.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: mcinlan | Print Date: 6/3/2022



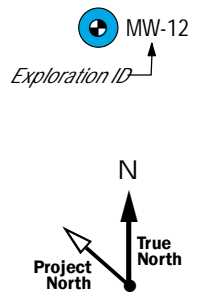
Analyte	Screening Level	mg/Kg	Source
Zinc	Remedial Investigation Work Plan Screening Level	86.0	SL-9
	Direct Contact Screening Level	24000	SL-1

Note: The SL-9 screening level is based on a site-specific terrestrial ecological evaluation for the LDW.

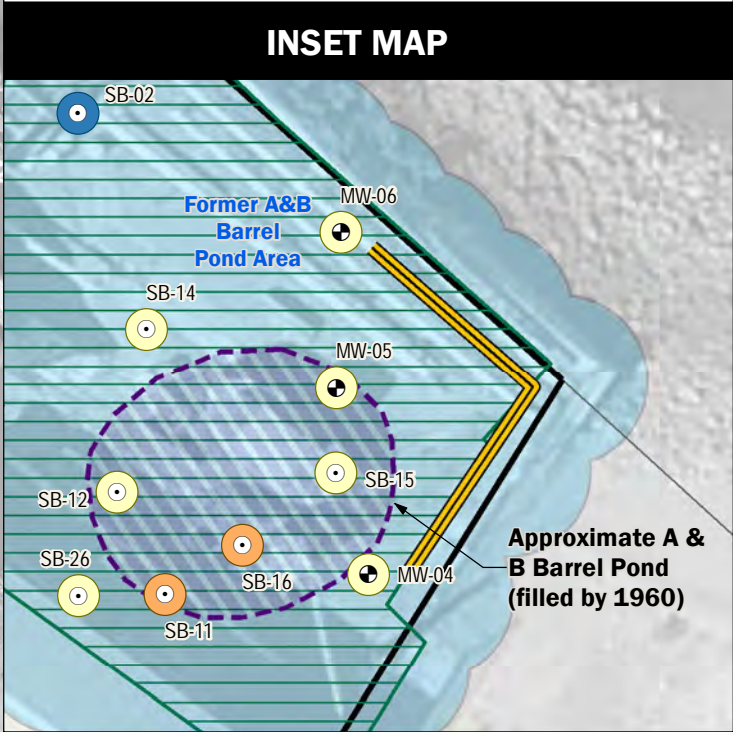
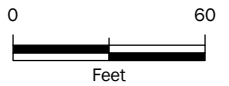
- Analyte detected at a concentration greater than the direct-contact screening level (SL-1).
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well

Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel



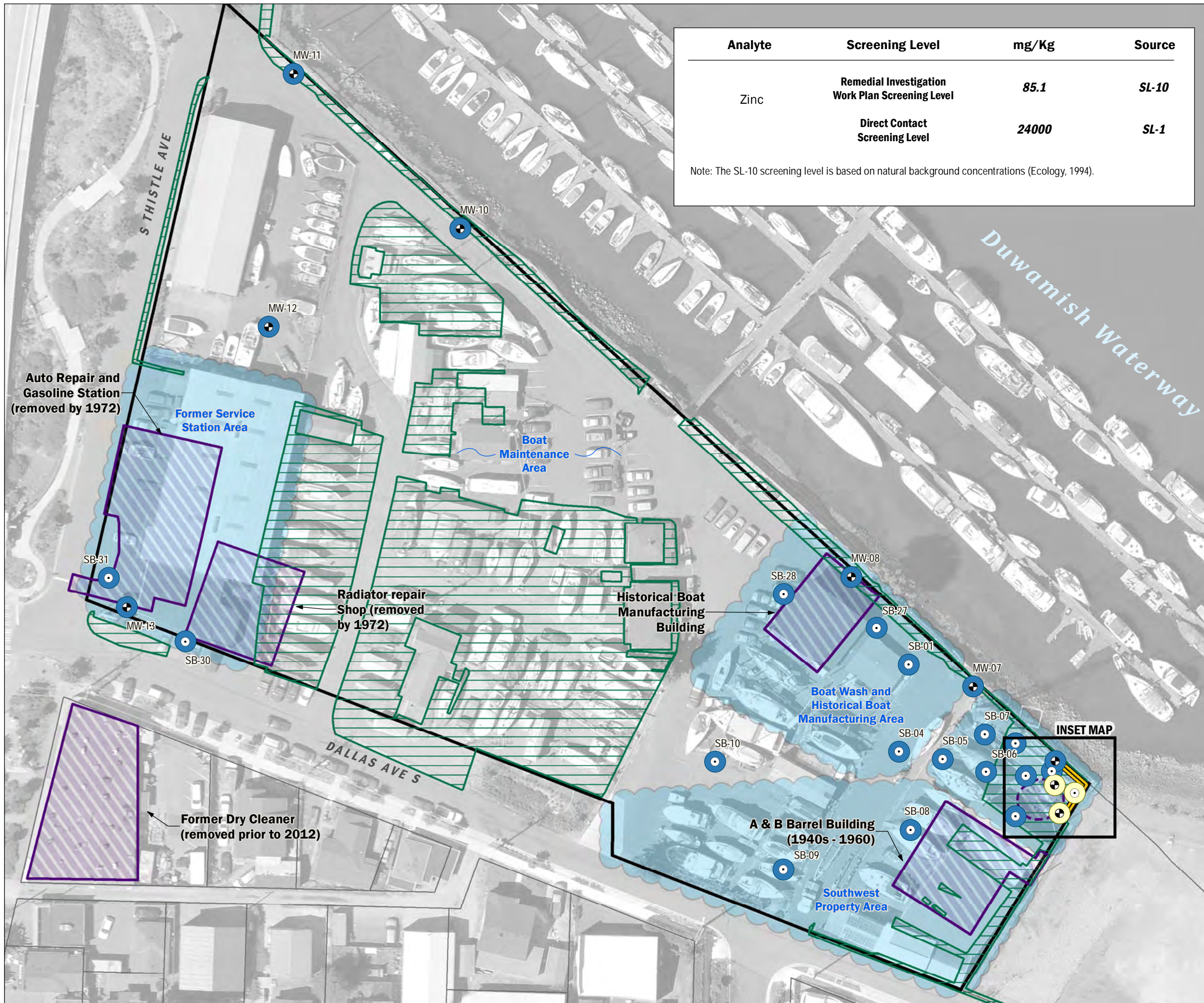
Notes:
 - mg/Kg = milligram per kilogram
 - Site features are approximate.



Zinc Results in Vadose Zone Soil

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 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\projects_8\Seattle\RIWP\SouthParkMarina_190293\Delivered\RIWP_2021\Final\mxd\Map_A_MXN\B_Zinc Results in Vadose Zone Soil.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4501 Feet | Date Saved: 6/3/2022 | User: mmochie | Print Date: 6/3/2022



Analyte	Screening Level	mg/Kg	Source
Zinc	Remedial Investigation Work Plan Screening Level	85.1	SL-10
	Direct Contact Screening Level	24000	SL-1

Note: The SL-10 screening level is based on natural background concentrations (Ecology, 1994).

- Analyte detected at a concentration greater than the direct-contact screening level (SL-1).
- Analyte detected at a concentration 100 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well

Site Features

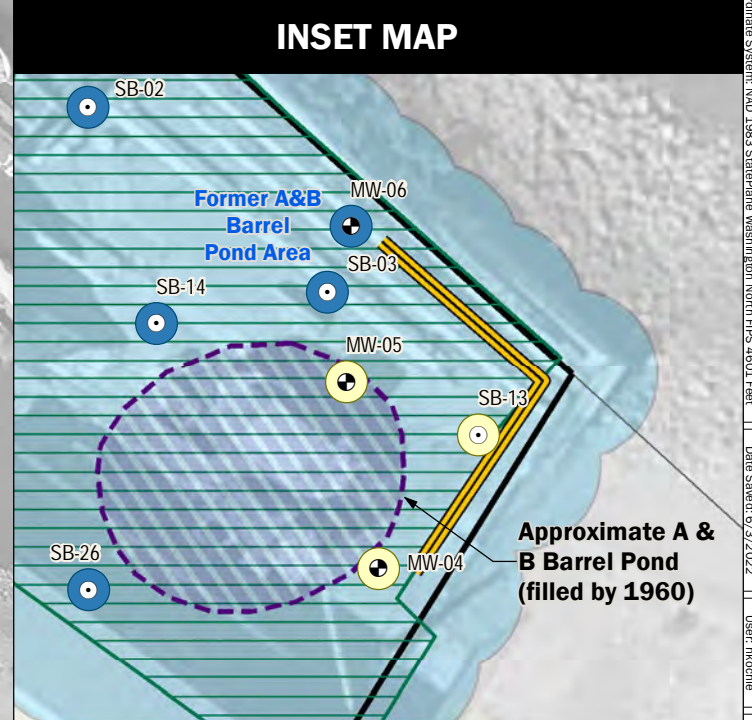
- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

Notes:
 - mg/Kg = milligram per kilogram
 - Site features are approximate.

0 60
Feet

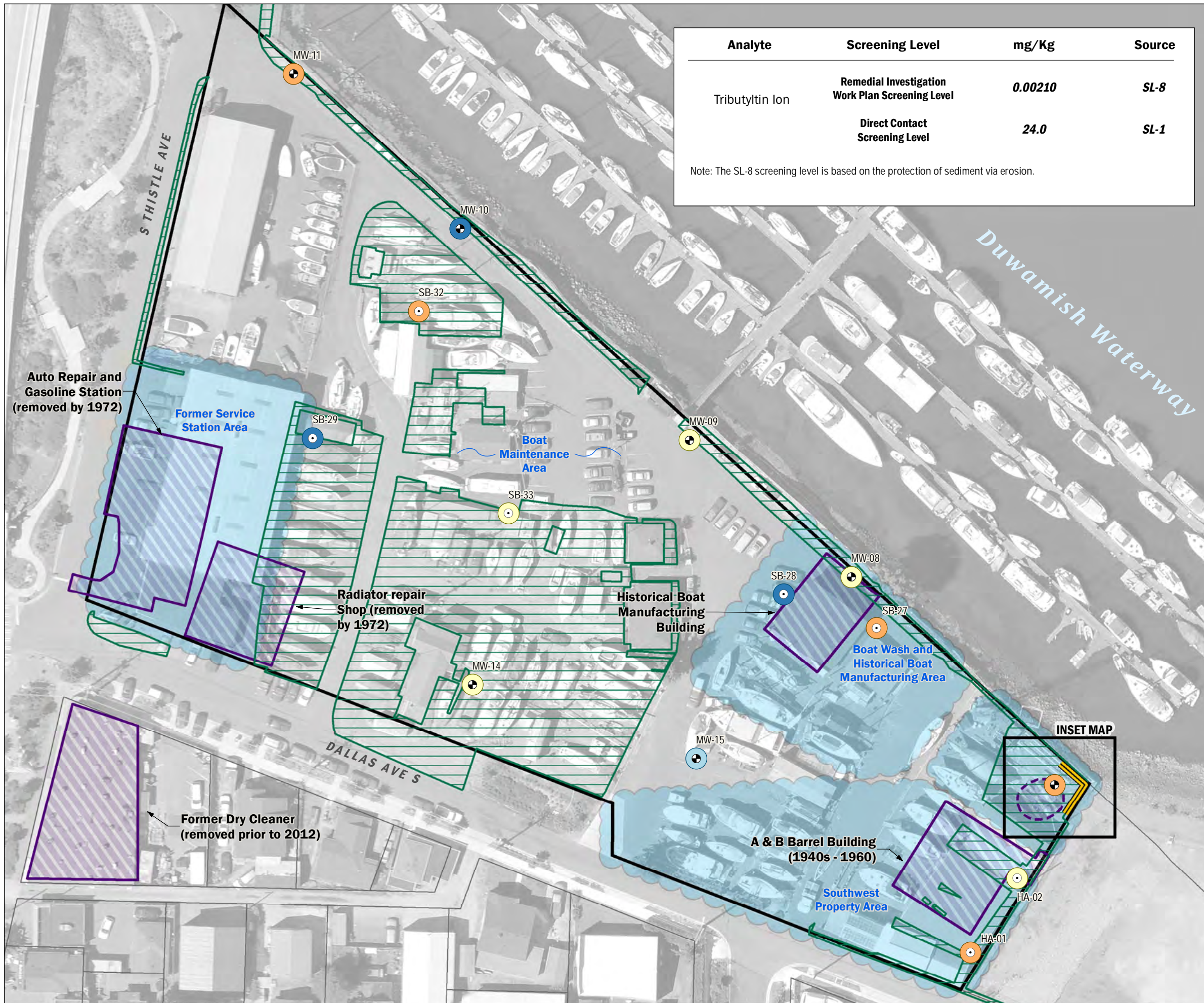
Exploration ID
 MW-12

Project North
 True North



Zinc Results in Saturated Soil
 RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: \\projects_8\Seattle\City\SouthParkMarina_190293\Deliverables\RIWP_2021\Final\mxd\Map_03_Zinc_Results_in_Saturated_Soil.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: mlocaine | Print Date: 6/3/2022



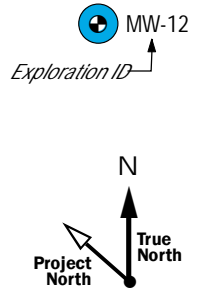
Analyte	Screening Level	mg/Kg	Source
Tributyltin Ion	Remedial Investigation Work Plan Screening Level	0.00210	SL-8
	Direct Contact Screening Level	24.0	SL-1

Note: The SL-8 screening level is based on the protection of sediment via erosion.

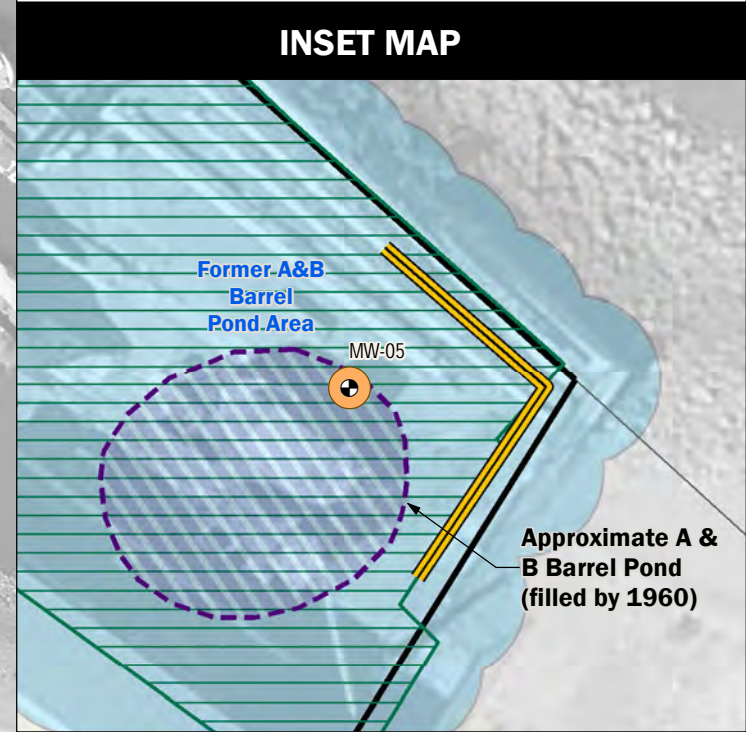
- Analyte detected at a concentration greater than the direct-contact screening level (SL-1).
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well

Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

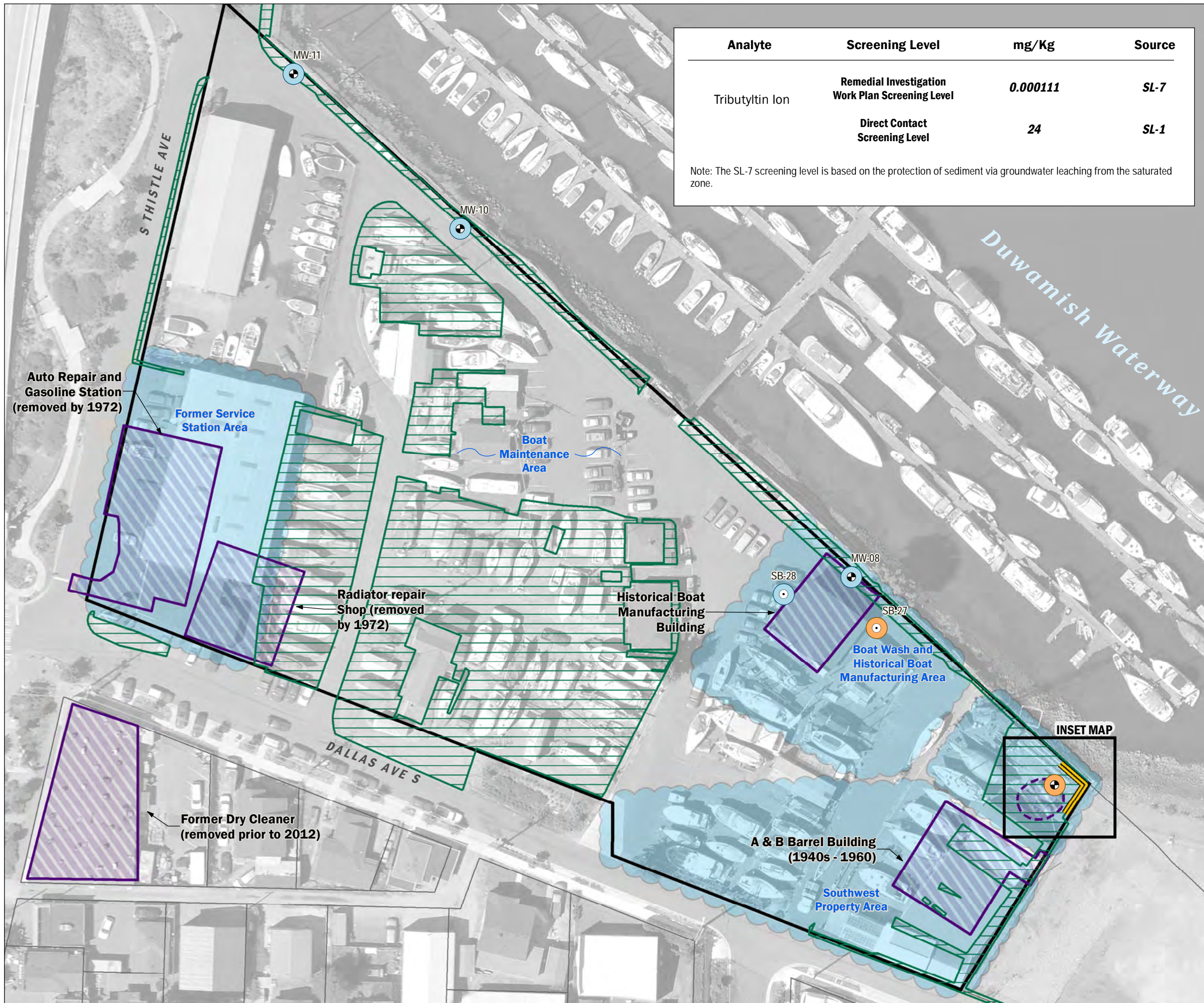


Notes:
 - mg/Kg = milligram per kilogram
 - Site features are approximate.



Tributyltin Ion Results in Vadose Zone Soil
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 Seattle, WA

GIS Path: T:\projects_8\Seattle\City\SouthParkMarina_190293\Delivered\RIWP_2021\Final\mxd\Map_A_MXN\8_Tributyltin Ion Results in Vadose Zone Soil.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: mhoyle | Print Date: 6/2/2022



Analyte	Screening Level	mg/Kg	Source
Tributyltin Ion	Remedial Investigation Work Plan Screening Level	0.000111	SL-7
	Direct Contact Screening Level	24	SL-1

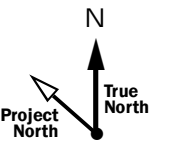
Note: The SL-7 screening level is based on the protection of sediment via groundwater leaching from the saturated zone.

- Analyte detected at a concentration greater than the direct-contact screening level (SL-1).
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well

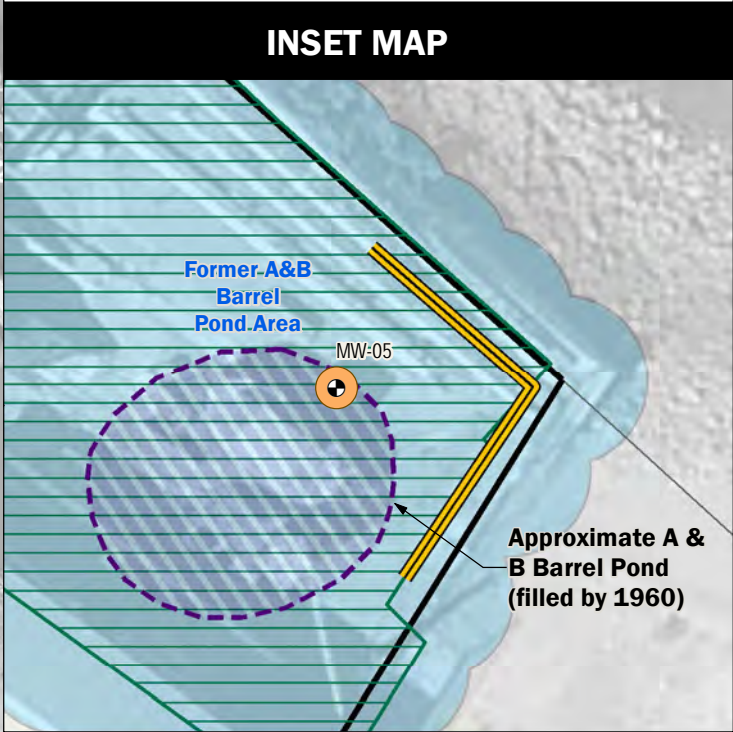
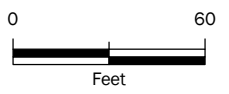
Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

MW-12
Exploration ID



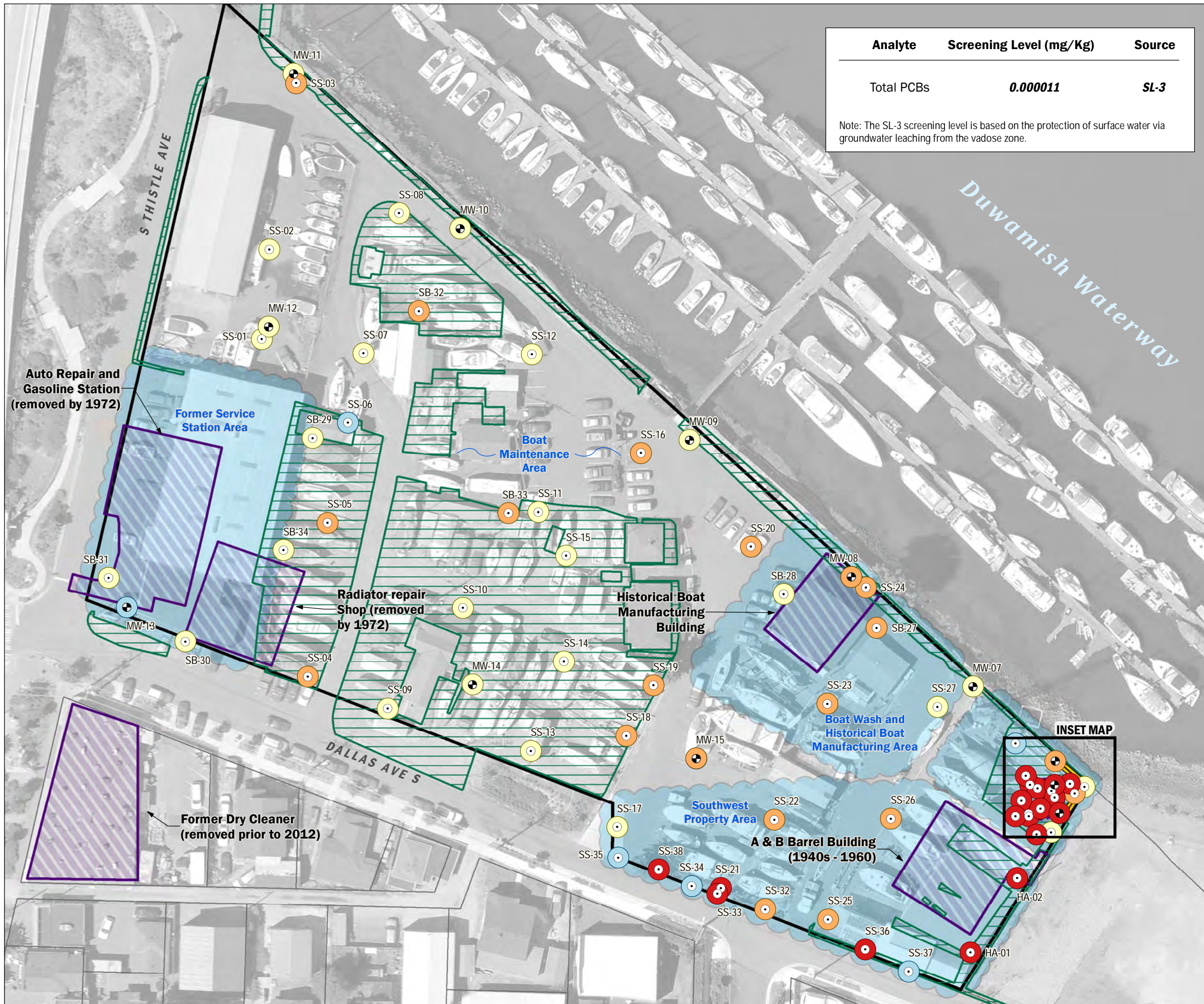
Notes:
- mg/Kg = milligram per kilogram
- Site features are approximate.



Tributyltin Ion Results in Saturated Soil

RIWP Addendum
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8604 Dallas Avenue South
Seattle, WA

GIS Path: T:\Projects_8\Seattle\City\SouthParkMarina_190293\Delivered\RIWP_2021\Final\Deliverables_Maps\A\B.10 Tributyltin Ion Results in Saturated Soil.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4801 Feet | Date Saved: 6/3/2022 | User: r.hochle | Print Date: 6/3/2022



Analyte Concentration Legend:

- Red circle: Analyte detected at a concentration greater than 1.0 mg/kg, which is the direct-contact screening level (SL-1).
- Orange circle: Analyte detected at a concentration greater than 0.1 mg/kg and less than 1.0 mg/kg.
- Yellow circle: Analyte detected at a concentration greater than the screening level and less than 0.1 mg/kg.
- Light blue circle: Analyte not detected and non-detect value greater than the screening level.
- Dark blue circle: Analyte not detected or detected at a concentration less than the screening level.

Monitoring Well Legend:

- Circle with cross: Soil Boring / Surface Soil / Hand Auger Boring
- Circle with cross and dot: Fill Unit Monitoring Well

Site Features Legend:

- Black outline: Site Boundary
- Green outline: Pervious Surface (gravel)
- Purple outline: Historical Site Feature
- Yellow outline: Sheet Pile Wall
- Black line: King County Tax Parcel

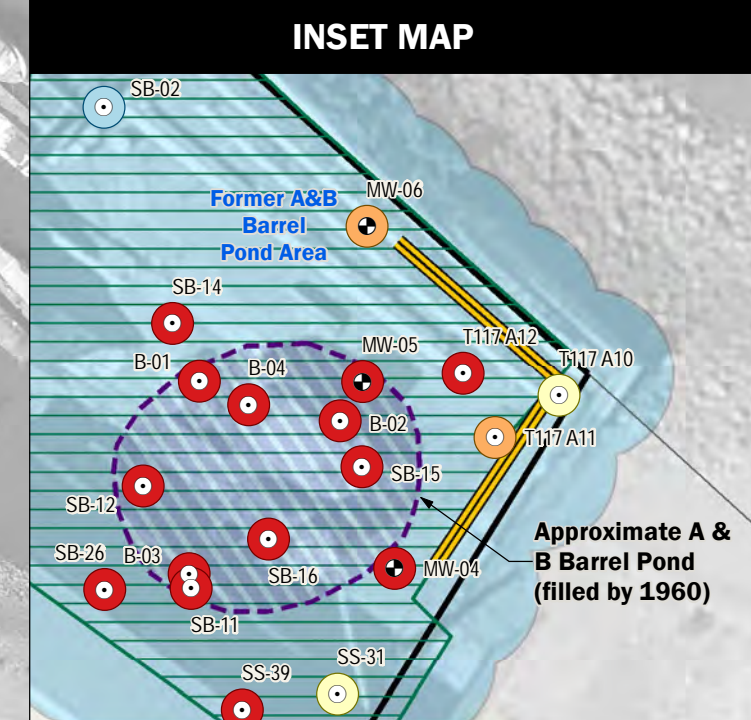
Notes:

- Total PCBs is the sum of Aroclors or sum of congeners, with non-detected results summed as zero. For locations with both Aroclor and congener results, the higher of the two sums is shown.
- mg/Kg = milligram per kilogram
- Site features are approximate.

Scale and Orientation:

0 60 Feet

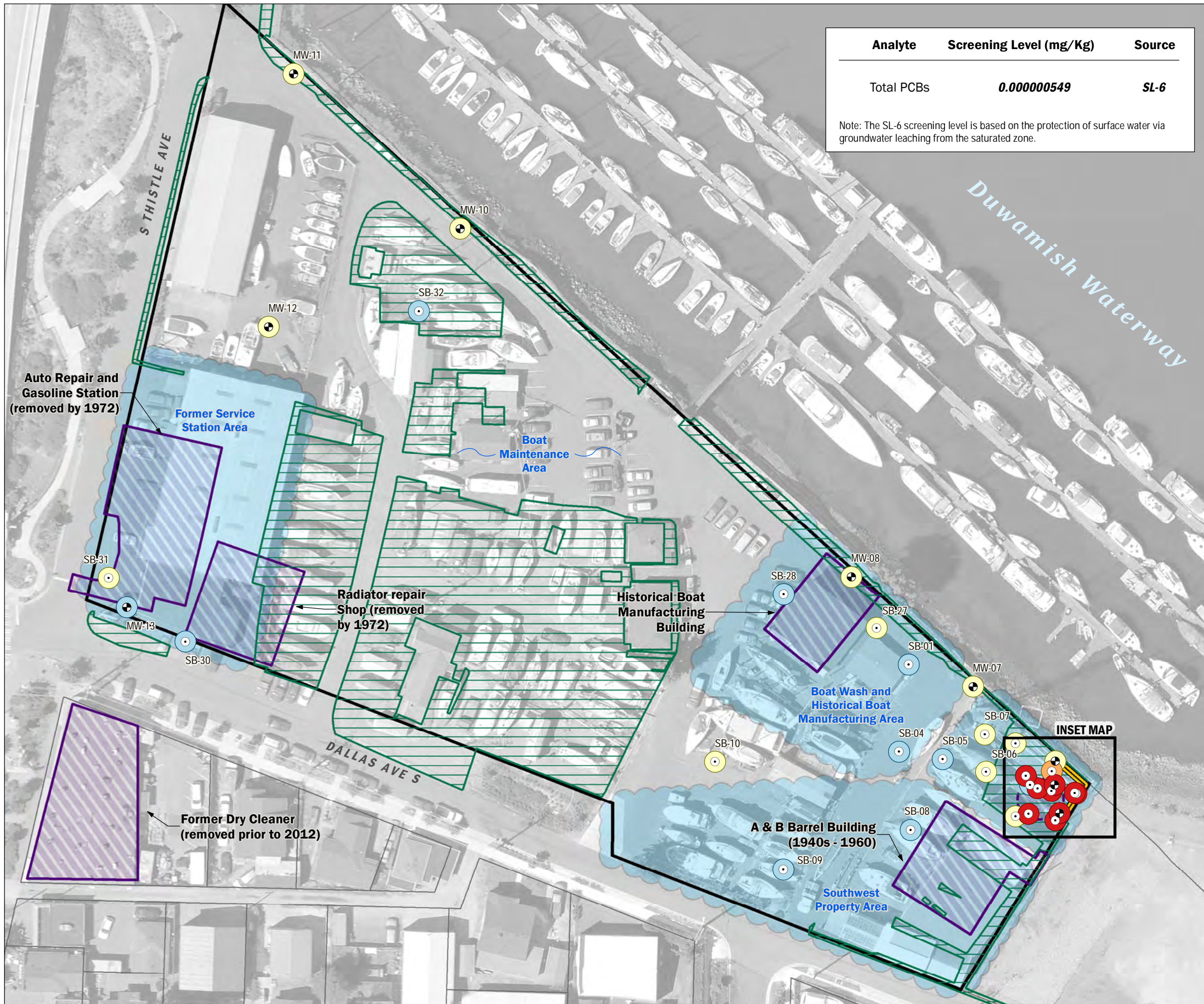
Project North, True North



Total PCB Results in Vadose Zone Soil

RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\projects_8\Seattle\RIWP\SouthParkMarina_190293\Deliverables\2021\Final\MapDocs\MAX9\PCB_B.11_Tot PCB Results in Vadose Zone.mxd | Coordinates System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Data Saved: 6/3/2022 | User: mchmhe | Print Date: 6/3/2022



Analyte	Screening Level (mg/Kg)	Source
Total PCBs	0.00000549	SL-6

Note: The SL-6 screening level is based on the protection of surface water via groundwater leaching from the saturated zone.

- Analyte detected at a concentration greater than 1.0 mg/kg, which is the direct-contact screening level (SL-1).
- Analyte detected at a concentration greater than 0.1 mg/kg and less than 1.0 mg/kg.
- Analyte detected at a concentration greater than the screening level and less than 0.1 mg/kg.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well

Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

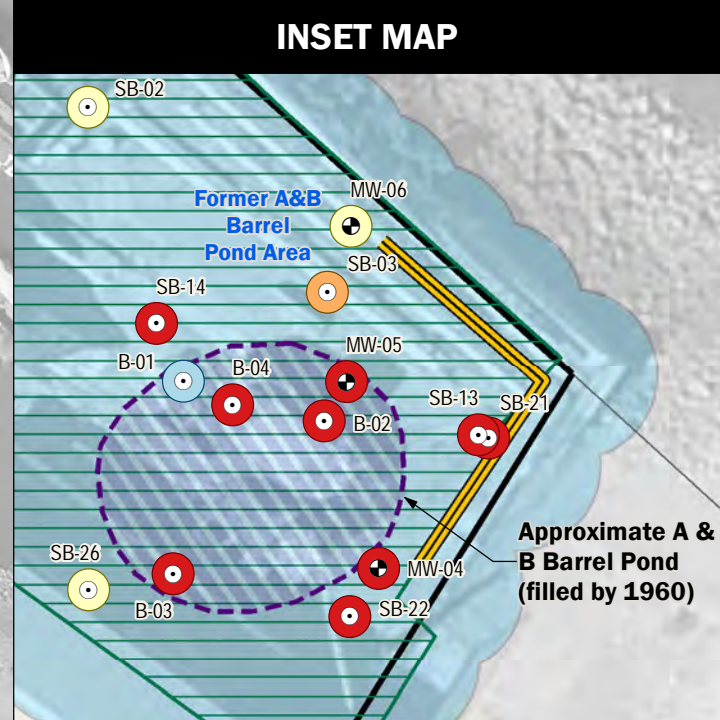
Notes:

- Total PCBs is the sum of Aroclors or sum of congeners, with non-detected results summed as zero. For locations with both Aroclor and congener results, the higher of the two sums is shown.
- mg/Kg = milligram per kilogram
- Site features are approximate.

Exploration ID ⊕ MW-12

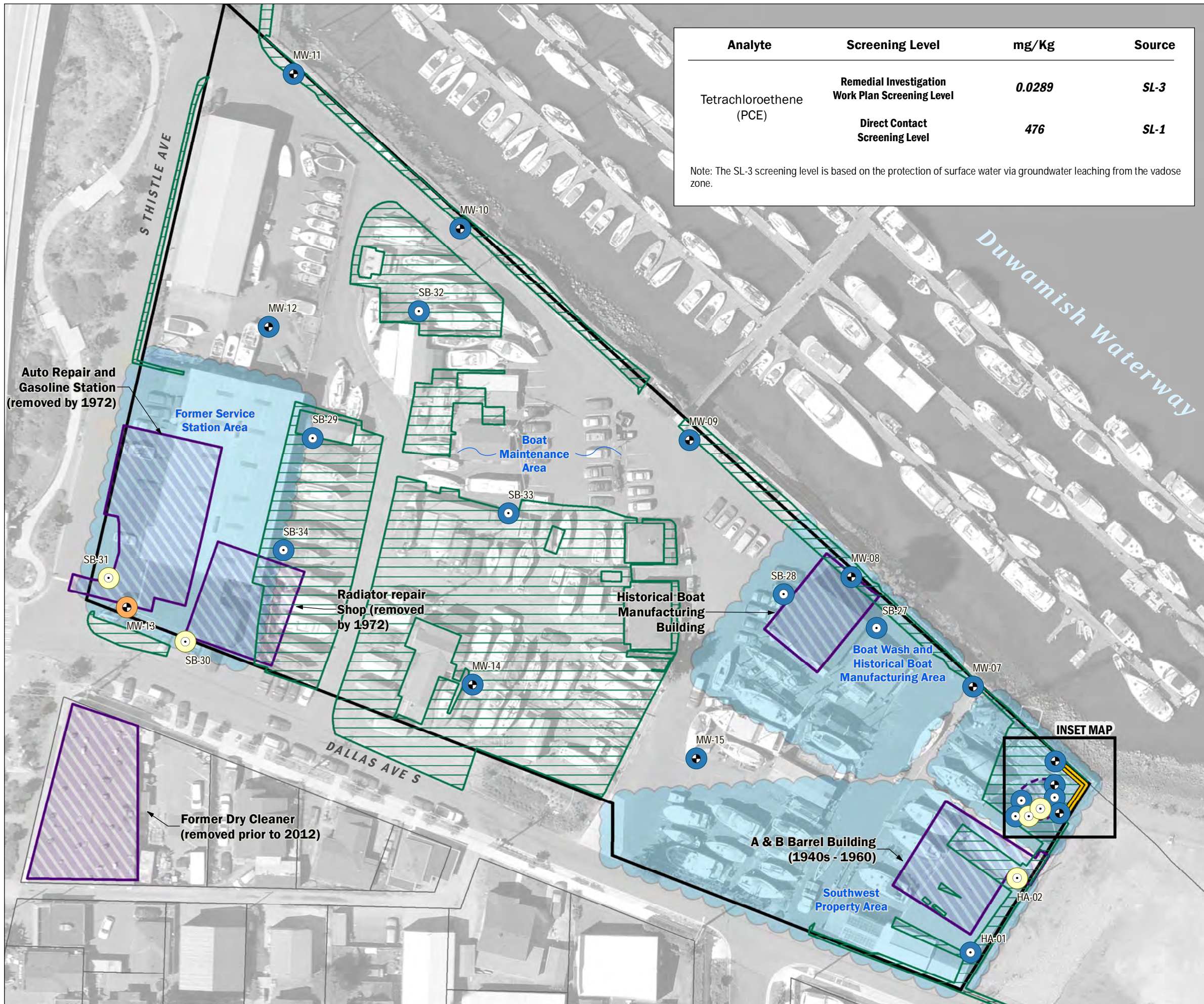
Project North ↑ True North

0 60
Feet



Total PCB Results in Saturated Soil
 RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\projects_8\Seattle\RIWP\SouthParkMarina_190293\Deliverables\2021\Facilities\MapDocs\MapDocs_PCBs_B.12_Total PCB Results in Saturated Zone.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Data Source: 6/2/2022 | User: mloche | Print Date: 6/3/2022



Analyte	Screening Level	mg/Kg	Source
Tetrachloroethene (PCE)	Remedial Investigation Work Plan Screening Level	0.0289	SL-3
	Direct Contact Screening Level	476	SL-1

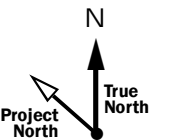
Note: The SL-3 screening level is based on the protection of surface water via groundwater leaching from the vadose zone.

- Analyte detected at a concentration greater than the direct-contact screening level (SL-1).
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well

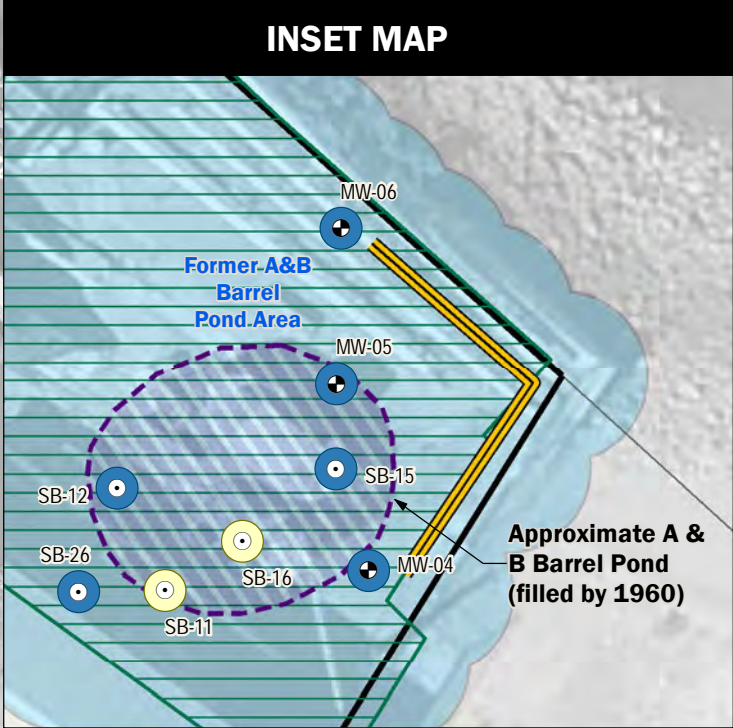
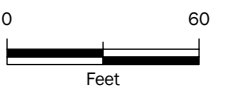
Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

Exploration ID



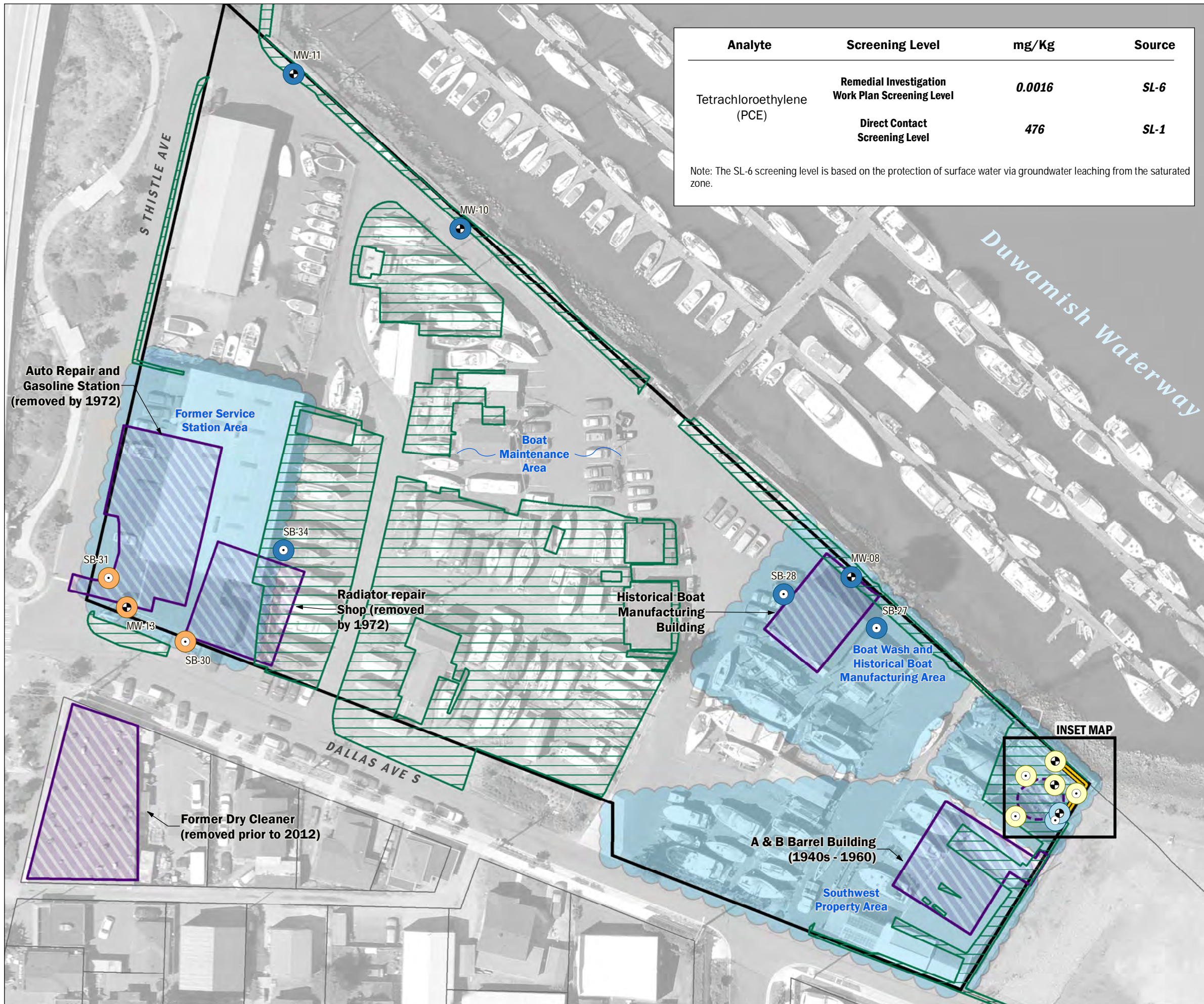
Notes:
 - mg/Kg = milligram per kilogram
 - Site features are approximate.



PCE Results in Vadose Zone Soil

RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\Projects_B\Seattle\LU\SouthParkMarina_190293\Delivered\RIWP_2021\Final\mxd\Map_A_13_PCE_Results_in_Vadose_Zone_Soil.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: mncnls | Print Date: 6/3/2022

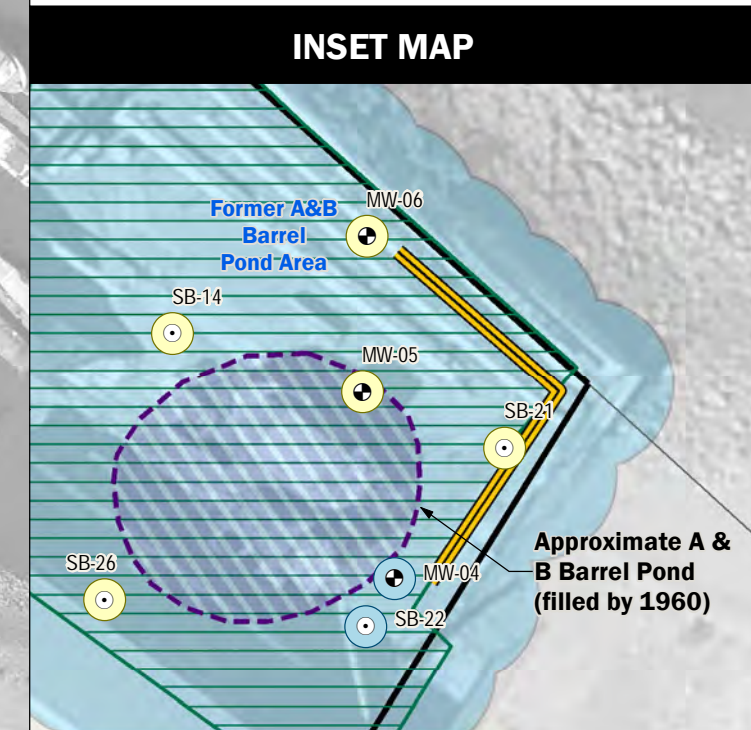


- Analyte detected at a concentration greater than the direct-contact screening level (SL-1).
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- Fill Unit Monitoring Well

Site Features

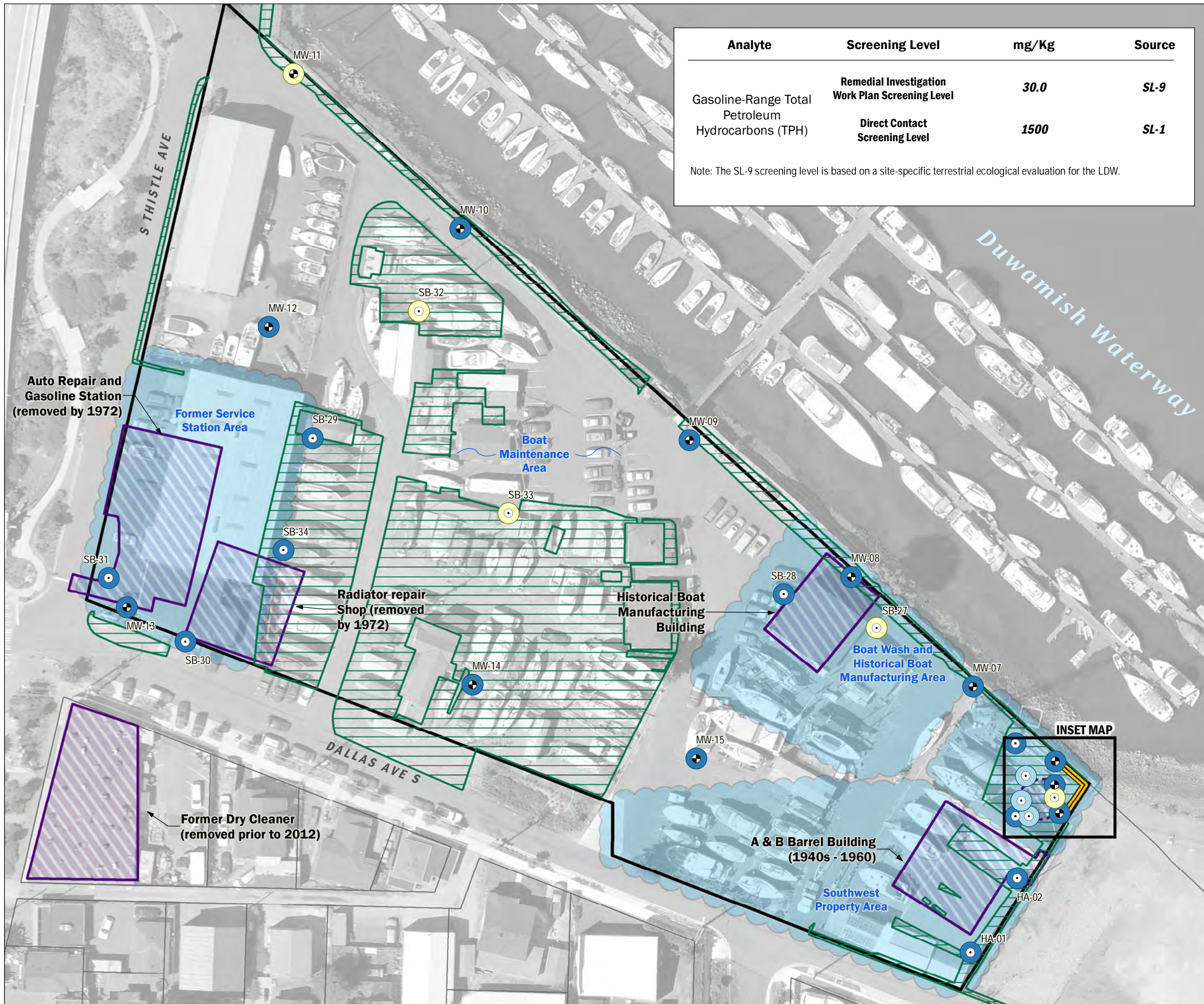
- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

Notes:
 - mg/Kg = milligram per kilogram
 - Site features are approximate.



PCE Results in Saturated Soil
 RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\projects_8\Seattle\City\SouthParkMarina_190293\Deliverables\RIWP_2021\Final\mxd\Map_8_14_PCE_Results_in_Saturated_Soil.mxd | Coordinates System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: rmoehle | Print Date: 6/3/2022



Analyte	Screening Level	mg/Kg	Source
Gasoline-Range Total Petroleum Hydrocarbons (TPH)	Remedial Investigation Work Plan Screening Level	30.0	SL-9
	Direct Contact Screening Level	1500	SL-1

Note: The SL-9 screening level is based on a site-specific terrestrial ecological evaluation for the LDW.

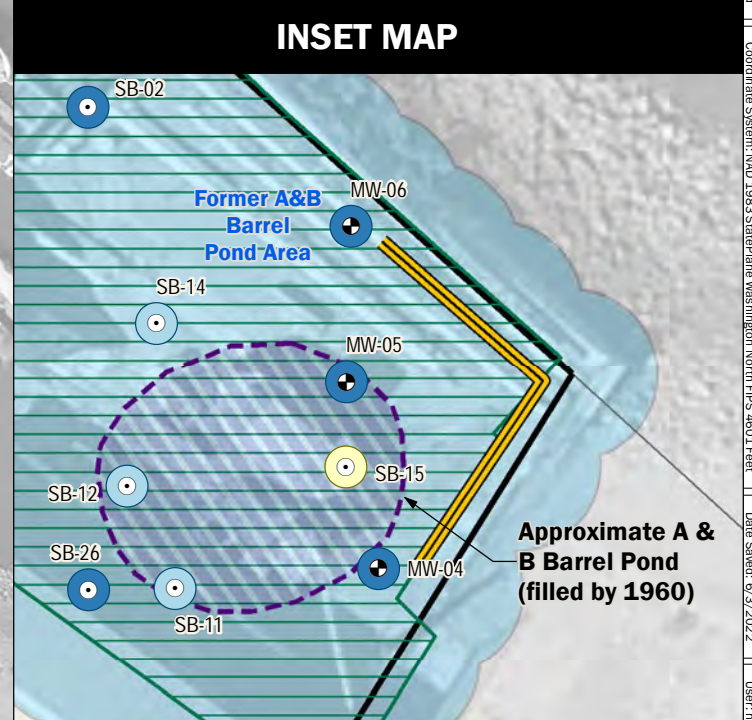
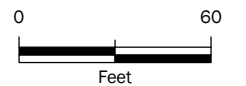
- Analyte detected at a concentration greater than the direct-contact screening level (SL-1).
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well

Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

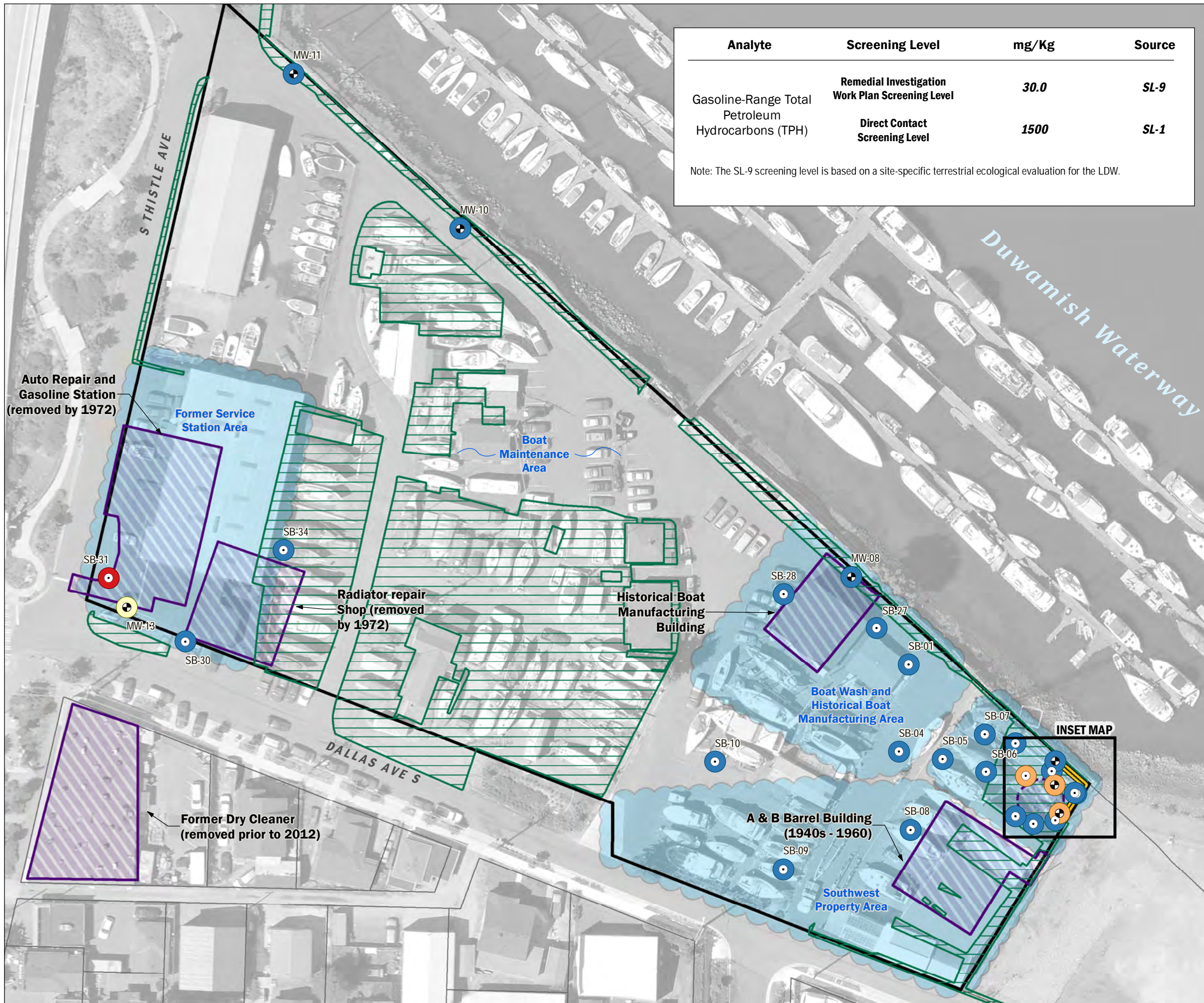


Notes:
 - mg/Kg = milligram per kilogram
 - Site features are approximate.



Gasoline-Range TPH in Vadose Zone Soil
 RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\projects_8\Seattle\City\SouthParkMarina_190293\Delivered\RIWP_2021\Final\mxd\Map_A_15_Gasoline-Range_TPH_in_Vadose_Zone_Soil.mxd
 Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet
 Date Saved: 6/3/2022
 User: nicolette
 Print Date: 6/3/2022



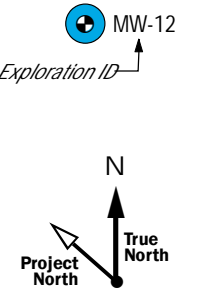
Analyte	Screening Level	mg/Kg	Source
Gasoline-Range Total Petroleum Hydrocarbons (TPH)	Remedial Investigation Work Plan Screening Level	30.0	SL-9
	Direct Contact Screening Level	1500	SL-1

Note: The SL-9 screening level is based on a site-specific terrestrial ecological evaluation for the LDW.

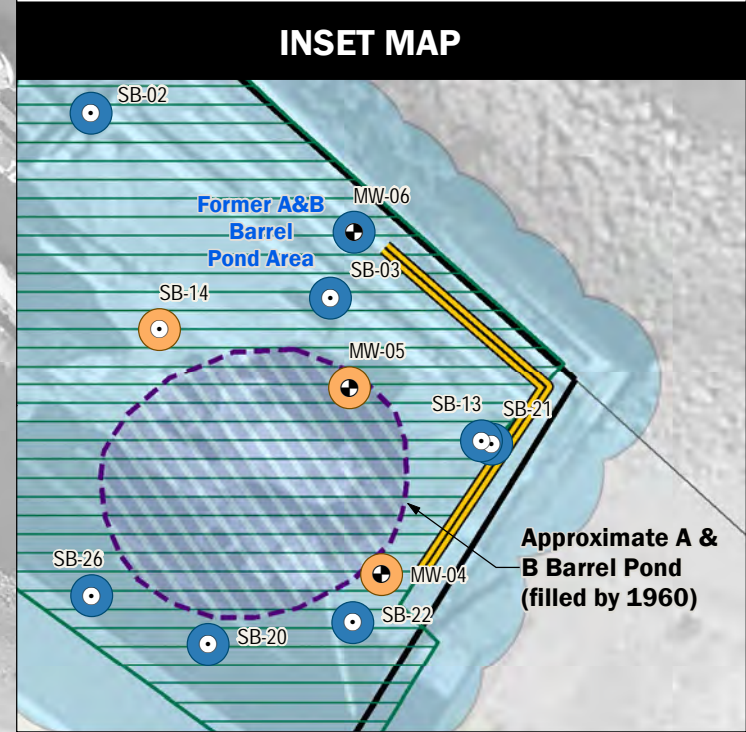
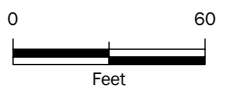
- Analyte detected at a concentration greater than the direct-contact screening level (SL-1).
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well

Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

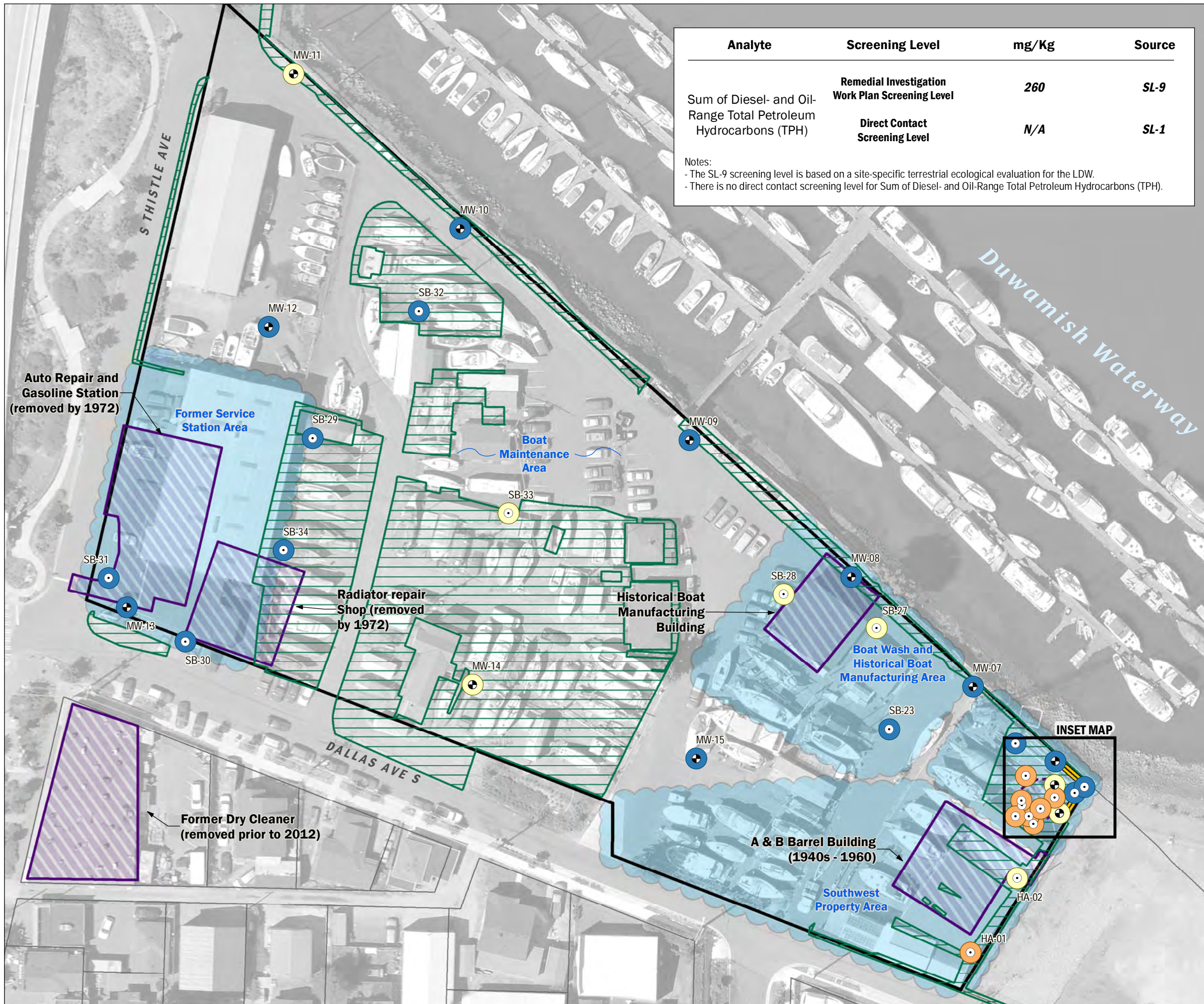


Notes:
 - mg/Kg = milligram per kilogram
 - Site features are approximate.



Gasoline-Range TPH in Saturated Soil
 RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\projects_8_Serial\Serial\SouthParkMarina_190293\Deliverables\RIWP_2021\FigureAddendum_Maps\B.16 Gasoline-Range TPH in Saturated Soil.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: nicolite | Print Date: 6/29/2022



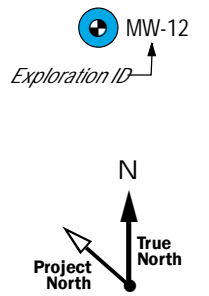
Analyte	Screening Level	mg/Kg	Source
Sum of Diesel- and Oil-Range Total Petroleum Hydrocarbons (TPH)	Remedial Investigation Work Plan Screening Level	260	SL-9
	Direct Contact Screening Level	N/A	SL-1

Notes:
 - The SL-9 screening level is based on a site-specific terrestrial ecological evaluation for the LDW.
 - There is no direct contact screening level for Sum of Diesel- and Oil-Range Total Petroleum Hydrocarbons (TPH).

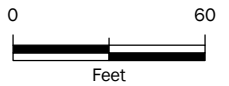
- Analyte detected at a concentration greater than the direct-contact screening level (SL-1).
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well

Site Features

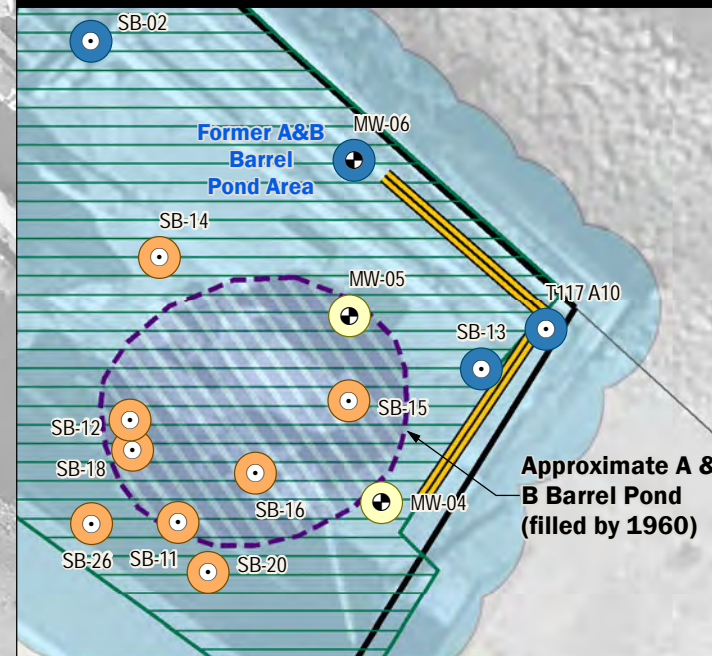
- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel



- Notes:
 - mg/Kg = milligram per kilogram
 - Site features are approximate.



INSET MAP



Sum of Diesel- and Oil-Range TPH in Vadose Zone Soil

RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

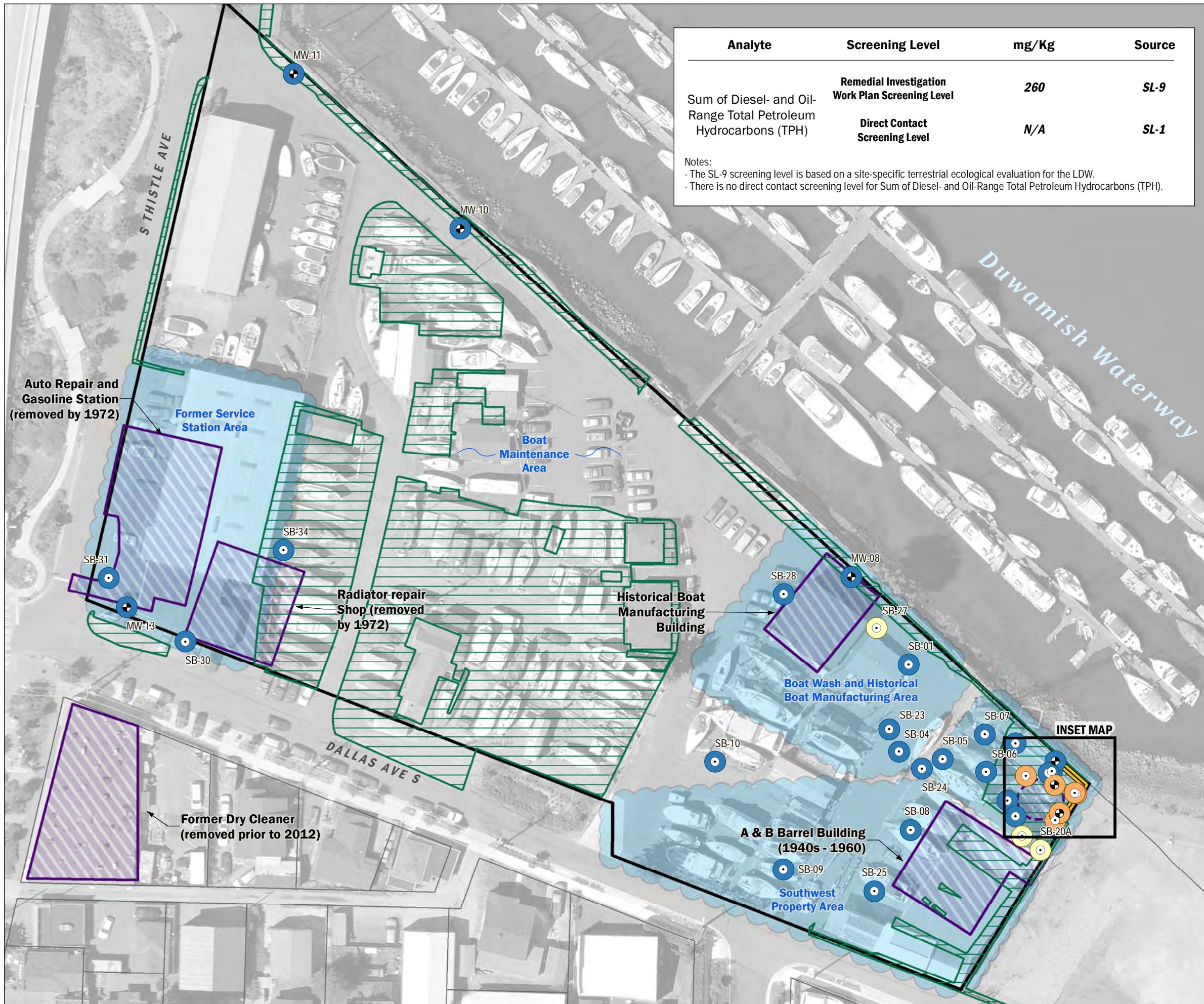


JUN-2022
 PROJECT NO. 190293

BY: AY / TDR
 REVISED BY: NLK

FIGURE NO. **B.17**

GIS Path: \\projects_8\Seattle\RIWP\SouthParkMarina_190293\Deliverables\2021\Final\MapDocs\MapDocs_B.17_Sum of Diesel and Oil-Range TPH in Vadose Zone Soil.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: rmoche | Print Date: 6/3/2022



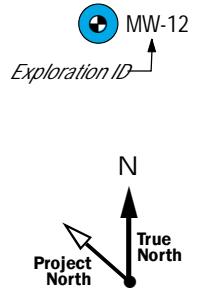
Analyte	Screening Level	mg/Kg	Source
Sum of Diesel- and Oil-Range Total Petroleum Hydrocarbons (TPH)	Remedial Investigation Work Plan Screening Level	260	SL-9
	Direct Contact Screening Level	N/A	SL-1

Notes:
 - The SL-9 screening level is based on a site-specific terrestrial ecological evaluation for the LDW.
 - There is no direct contact screening level for Sum of Diesel- and Oil-Range Total Petroleum Hydrocarbons (TPH).

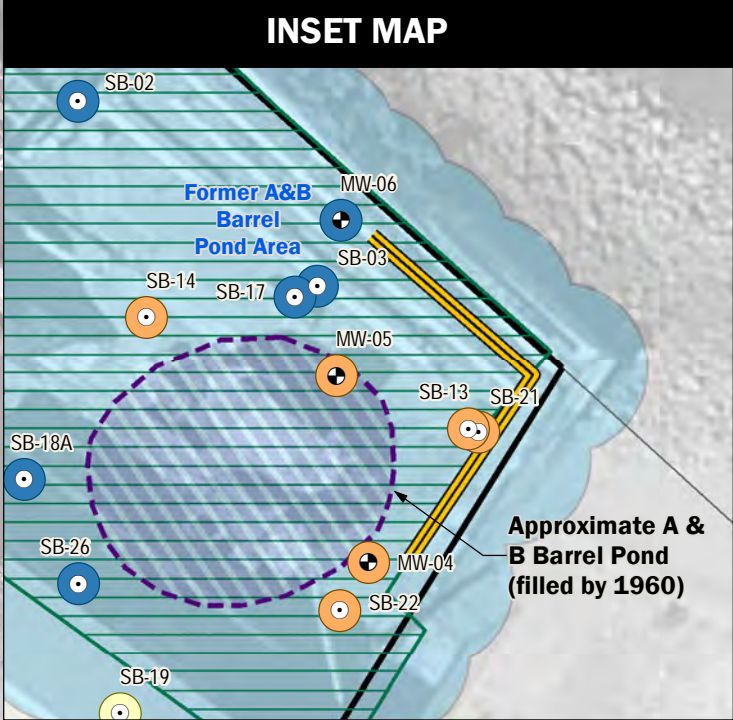
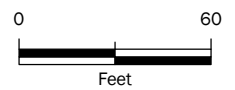
- Analyte detected at a concentration greater than the direct-contact screening level (SL-1).
- Analyte detected at a concentration 100 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well

Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel



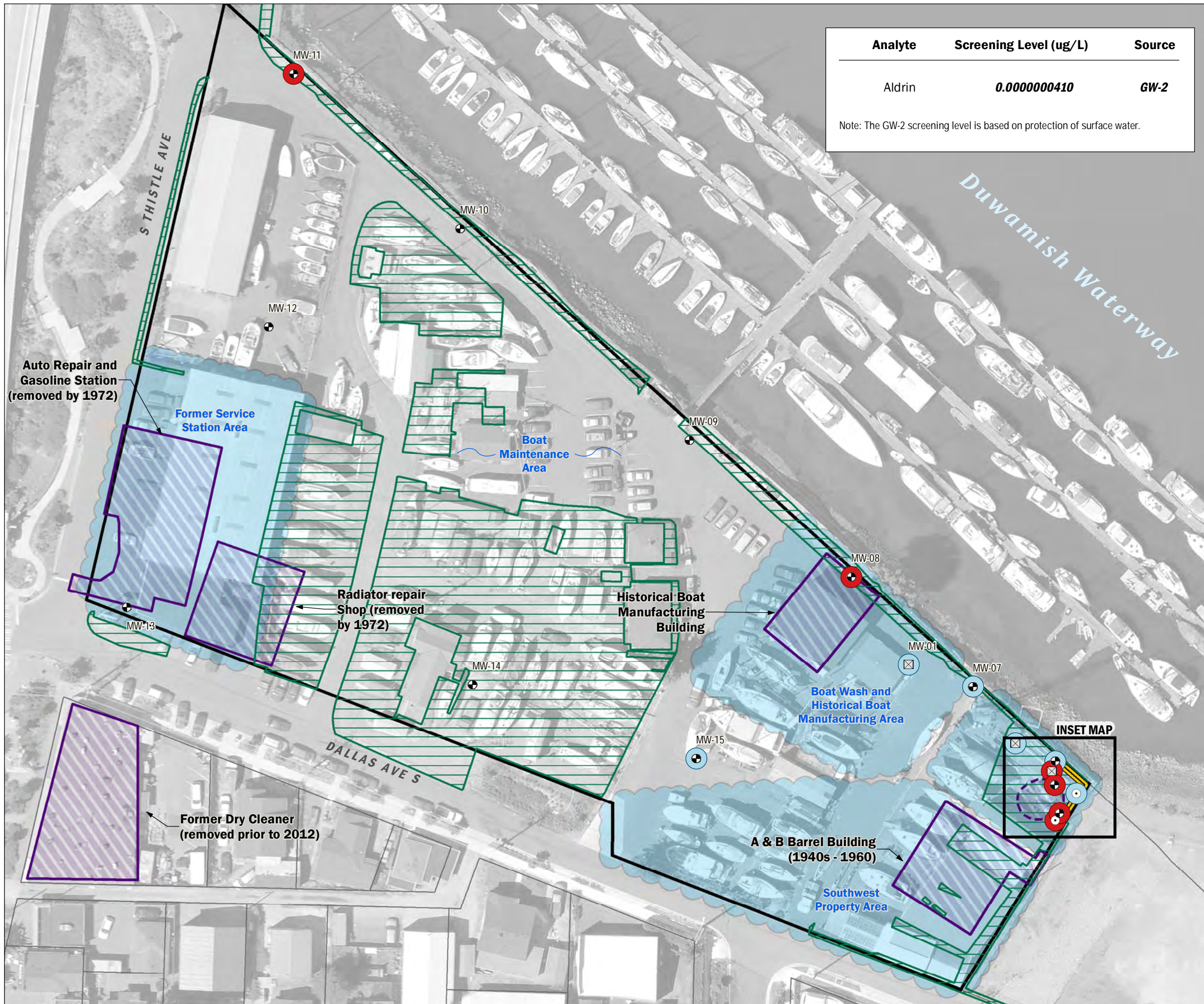
Notes:
 - mg/Kg = milligram per kilogram
 - Site features are approximate.



Sum of Diesel- and Oil-Range TPH in Saturated Soil

RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\projects_8\Seattle\RIWP\SouthParkMarina_190293\Delivered\RIWP_2021\Final\mxd\Map_190293_Sum of Diesel and Oil-Range TPH in Saturated Soil.mxd | Coordinates System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: rlnichol | Print Date: 6/3/2022



Analyte	Screening Level (ug/L)	Source
Aldrin	0.000000410	GW-2

Note: The GW-2 screening level is based on protection of surface water.

- Analyte detected at a concentration 100 times greater than the screening level.
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well
- ⊗ Alluvium Unit Monitoring Well (SAIC 2007; decommissioned)

Site Features

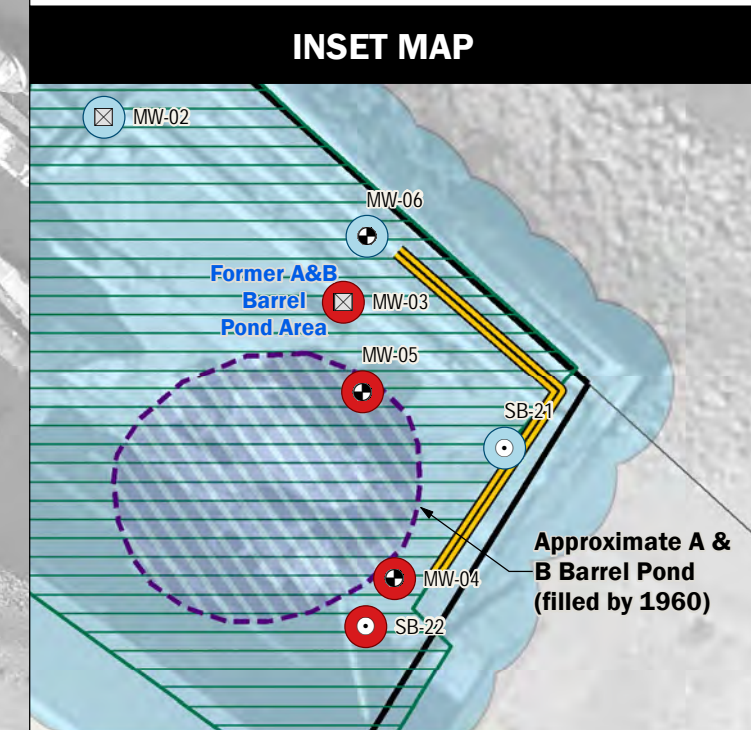
- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

Notes:
 - ug/L = micrograms per liter
 - Site features are approximate.

0 60
Feet

Exploration ID
 MW-12

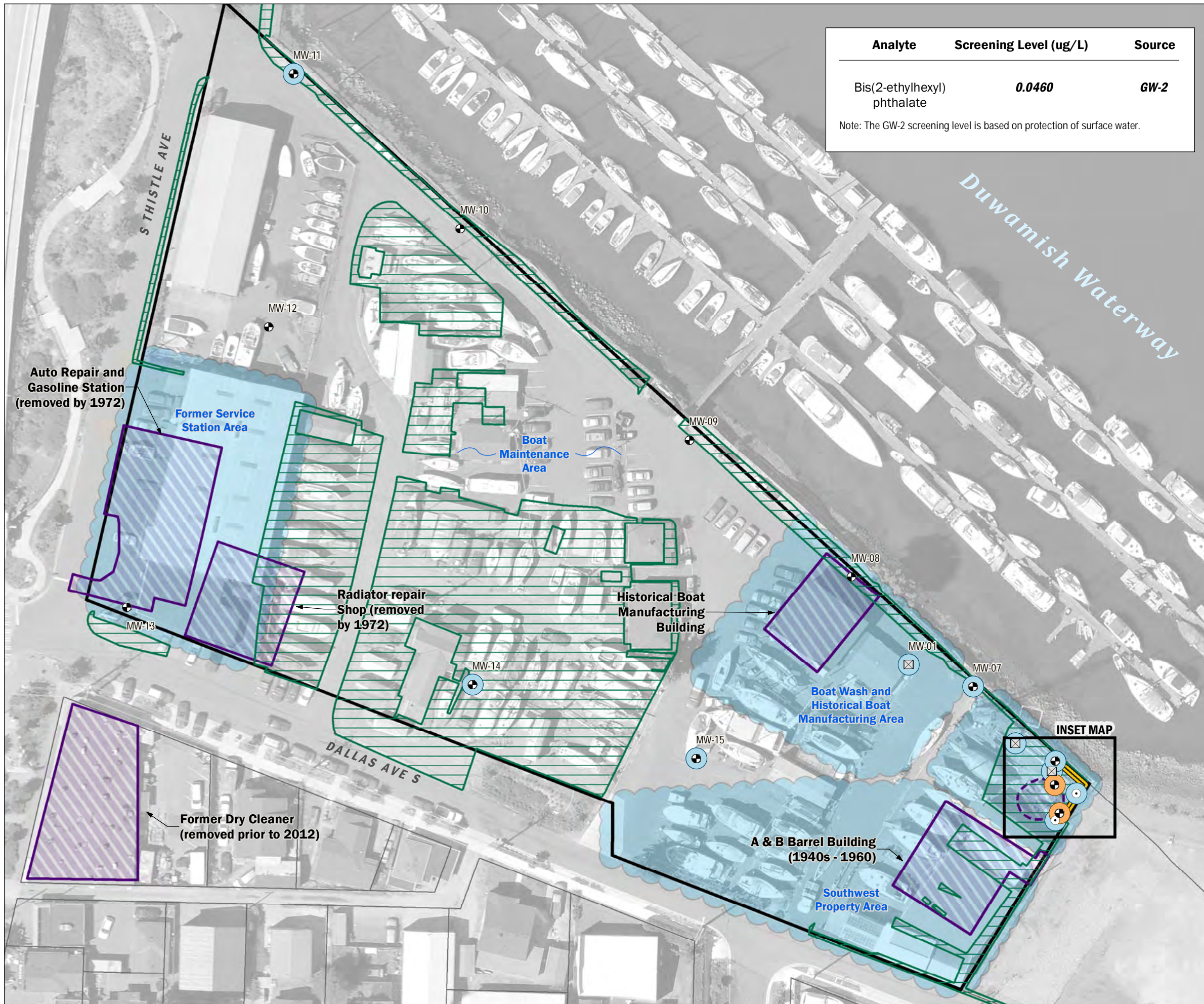
Project North
 True North



Aldrin Results in Groundwater

RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\Projects_8_Serial\Serial\SouthParkMarina_190293\Deliverables\RIWP_2021\Final\AldrinResultsInGroundwater.mxd | Coordinates System: NAD 1983 StatePlane Washington North FIPS 4801 Feet | Date Saved: 6/3/2022 | User: mchen | Print Date: 6/3/2022



Analyte	Screening Level (ug/L)	Source
Bis(2-ethylhexyl) phthalate	0.0460	GW-2

Note: The GW-2 screening level is based on protection of surface water.

- Analyte detected at a concentration 100 times greater than the screening level.
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well
- ⊠ Alluvium Unit Monitoring Well (SAIC 2007; decommissioned)

Site Features

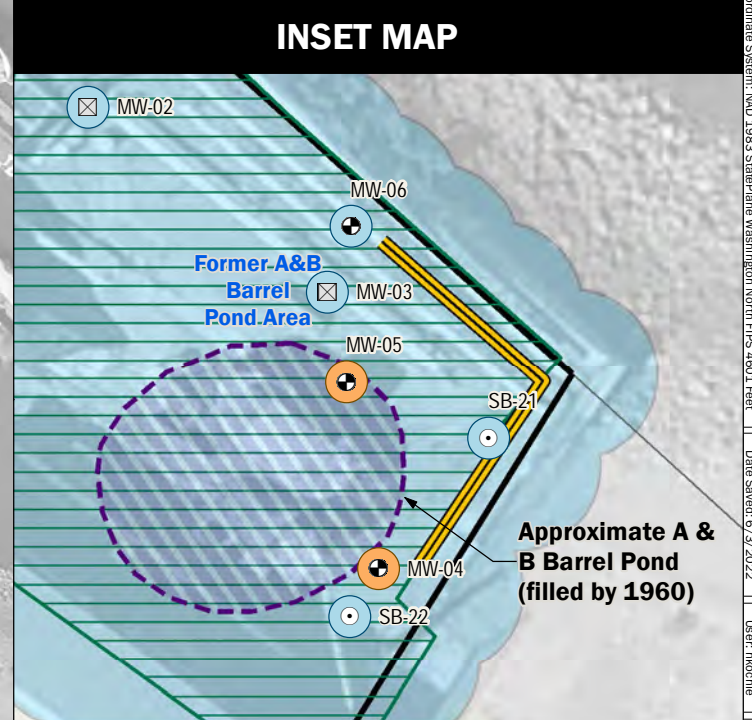
- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

Notes:
 - ug/L = micrograms per liter
 - Site features are approximate.

0 60
Feet

Exploration ID: MW-12

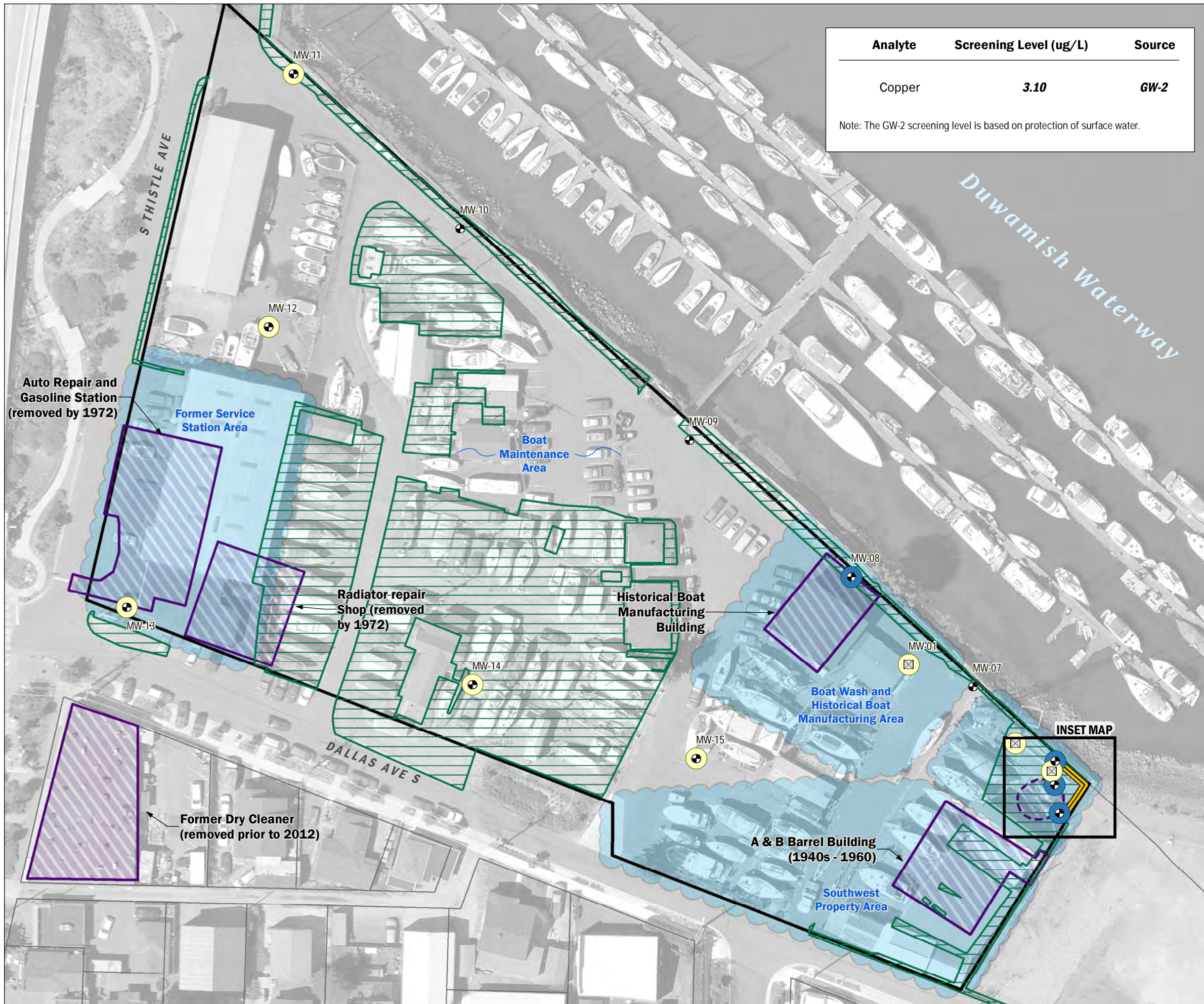
Project North / True North



BEHP Results in Groundwater

RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\projects_8\Seattle\RIWP\SouthParkMarina_190293\Deliverables\2021\Final\BEHP_Results_in_Groundwater.mxd | Coordinates System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: mchen | Print Date: 6/3/2022



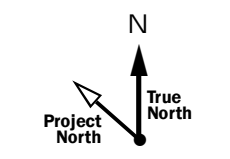
Analyte	Screening Level (ug/L)	Source
Copper	3.10	GW-2

Note: The GW-2 screening level is based on protection of surface water.

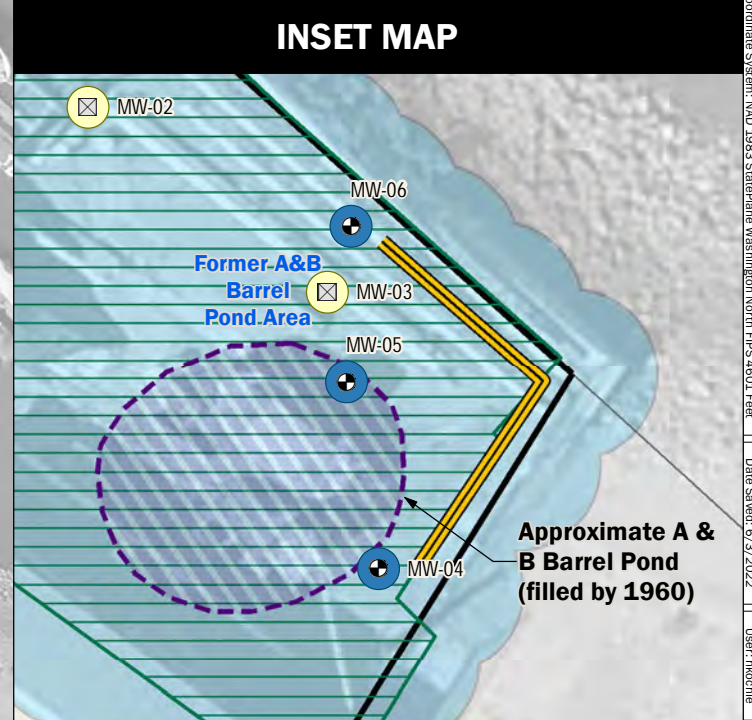
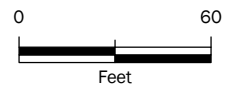
- Analyte detected at a concentration 100 times greater than the screening level.
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- ⊕ Fill Unit Monitoring Well
- ⊗ Alluvium Unit Monitoring Well (SAIC 2007; decommissioned)

Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel



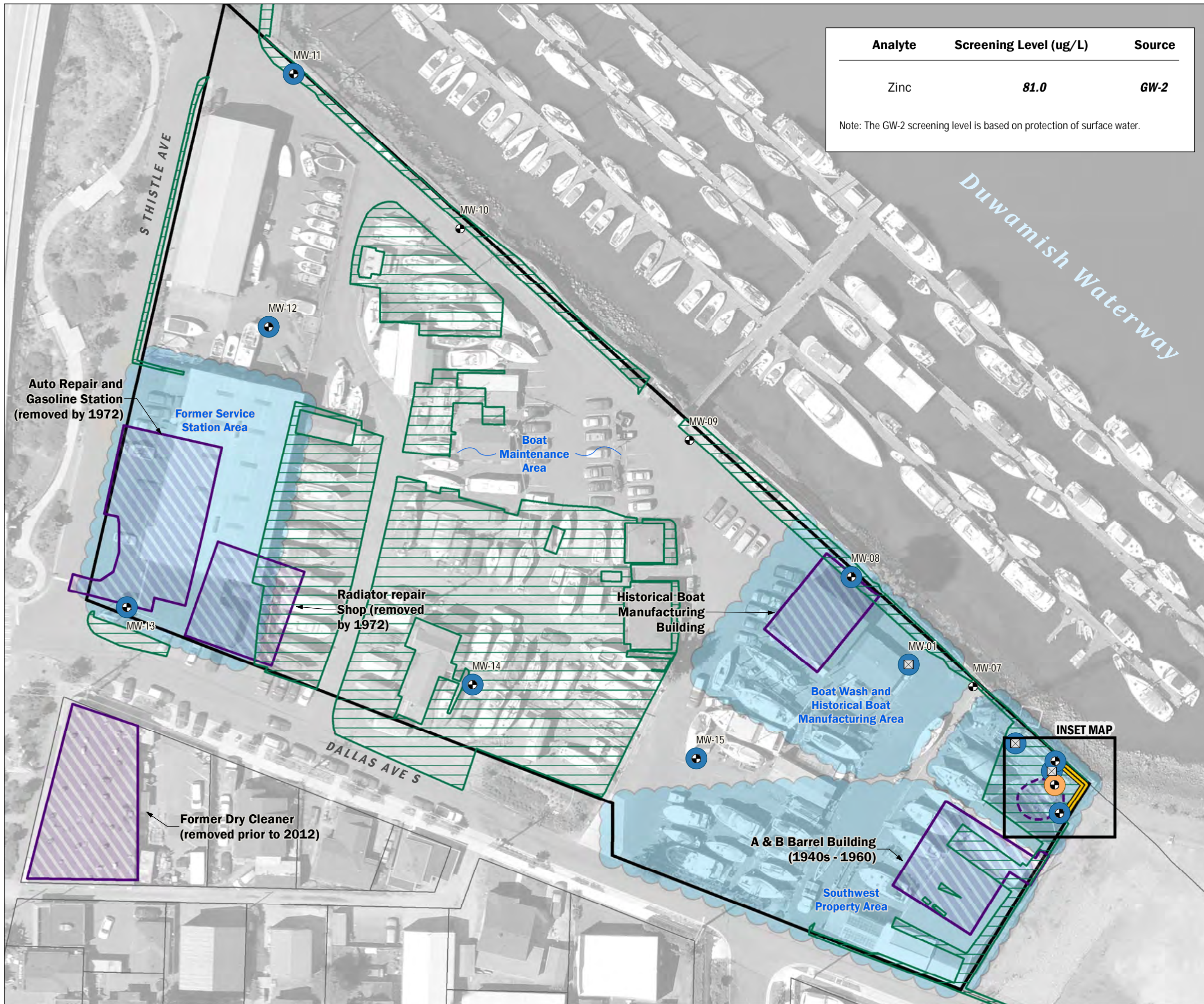
Notes:
 - ug/L = micrograms per liter
 - Site features are approximate.



Copper Results in Groundwater

RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

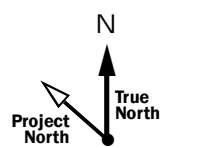
GIS Path: T:\projects_8\Seattle\RIWP\SouthParkMarina_190293\Deliverables\2021\Final\mxd\Map_8_21_Copper_Results_in_Groundwater.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: mncliche | Print Date: 6/9/2022



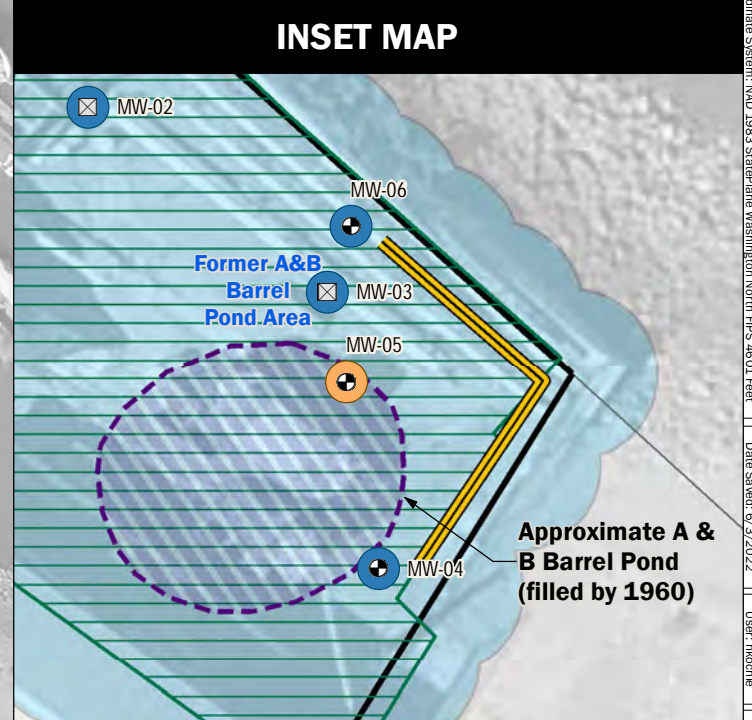
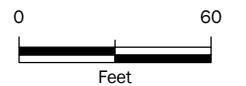
- Analyte detected at a concentration 100 times greater than the screening level.
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- ⊕ Fill Unit Monitoring Well
- ⊗ Alluvium Unit Monitoring Well (SAIC 2007; decommissioned)

Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel



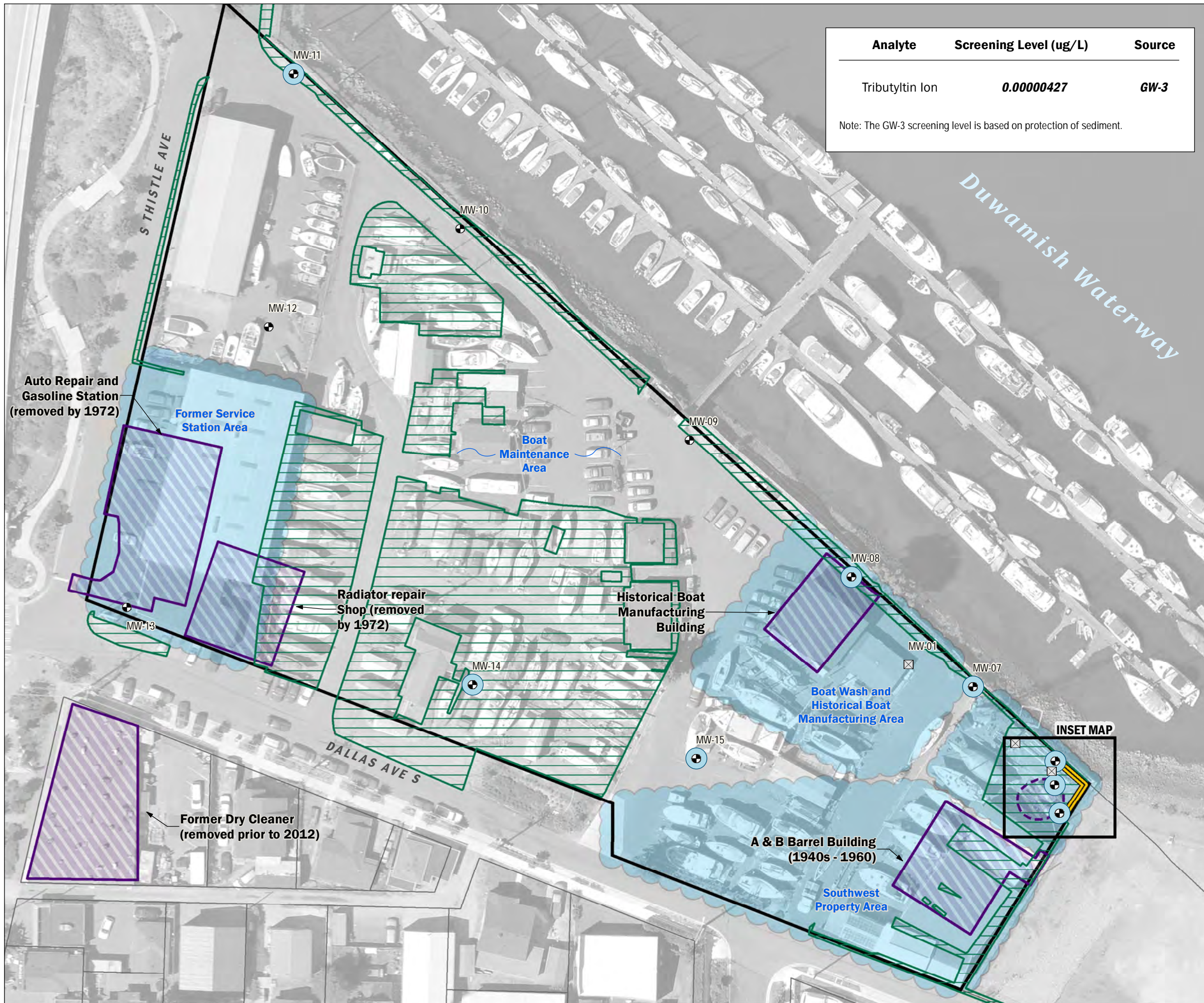
Notes:
 - ug/L = micrograms per liter
 - Site features are approximate.



Zinc Results in Groundwater

RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: \\projects_8\Seattle\RIWP\SouthParkMarina_190293\Deliverables\2021\Final\mxd\MapX_B_Zinc_Results_in_Groundwater.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: mochie | Print Date: 6/3/2022



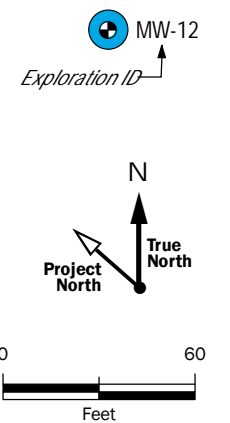
Analyte	Screening Level (ug/L)	Source
Tributyltin Ion	0.00000427	GW-3

Note: The GW-3 screening level is based on protection of sediment.

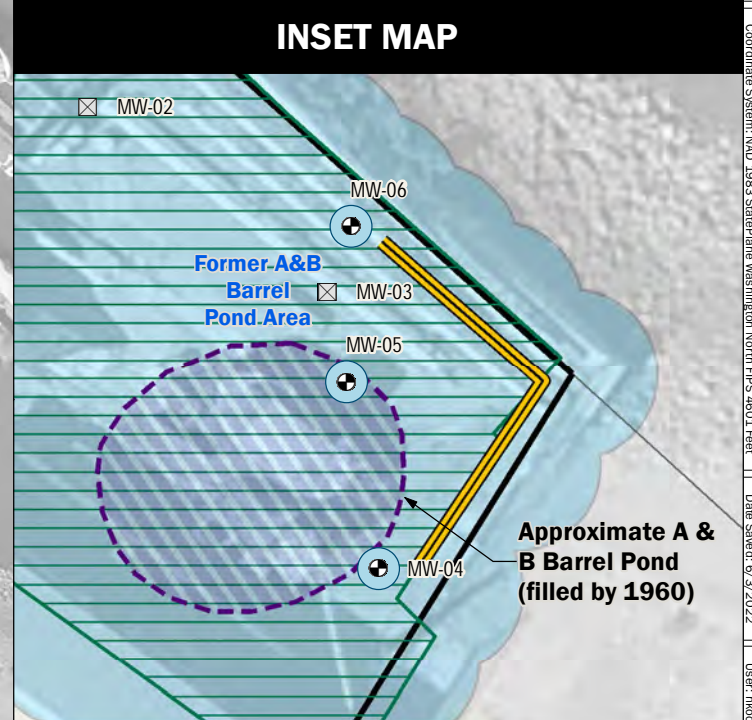
- Analyte detected at a concentration 100 times greater than the screening level.
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- ⊕ Fill Unit Monitoring Well
- ⊗ Alluvium Unit Monitoring Well (SAIC 2007; decommissioned)

Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

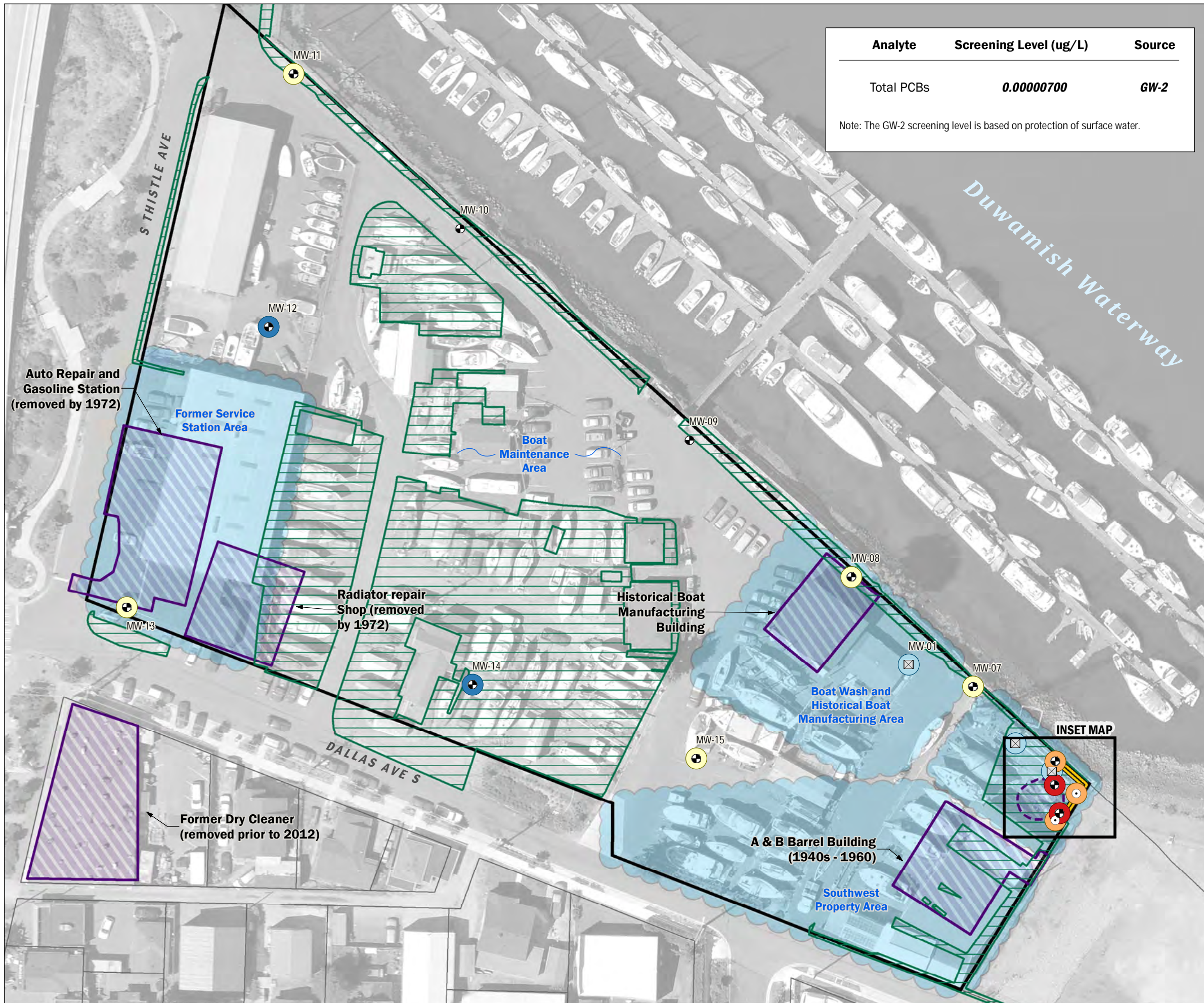


Notes:
 - ug/L = micrograms per liter
 - Site features are approximate.



Tributyltin Ion Results in Groundwater
 RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\projects_8_SouthParkMarina\SouthParkMarina_190293\Deliverables\RIWP_2021\FigureAddendum\Map\B.23_Tributyltin Ion Results in Groundwater.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: mchelle | Print Date: 6/29/2022



Analyte	Screening Level (ug/L)	Source
Total PCBs	0.00000700	GW-2

Note: The GW-2 screening level is based on protection of surface water.

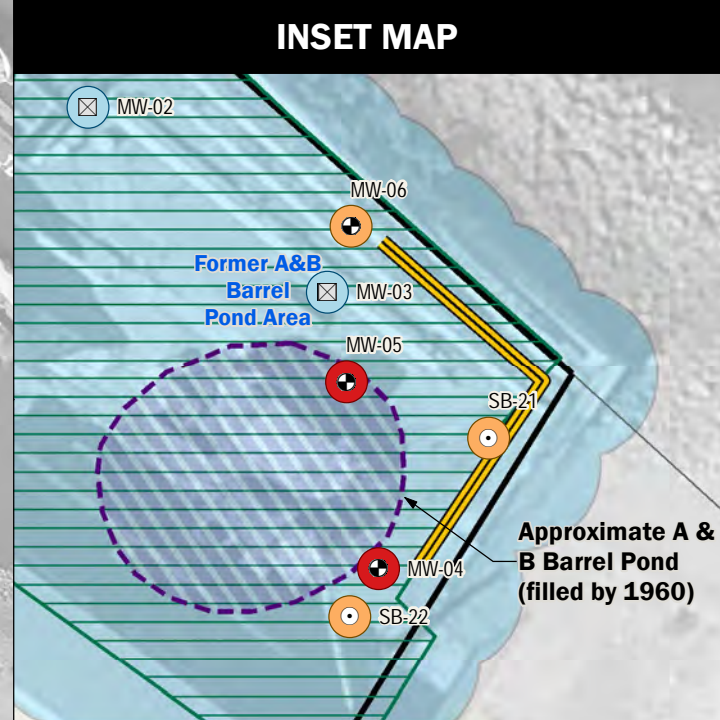
- Analyte detected at a concentration greater than 0.1 ug/L.
- Analyte detected at a concentration greater than 0.01 ug/L and less than 0.1 ug/L.
- Analyte detected at a concentration greater than the screening level and less than 0.01 ug/L.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- Fill Unit Monitoring Well
- Alluvium Unit Monitoring Well (SAIC 2007; decommissioned)

Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

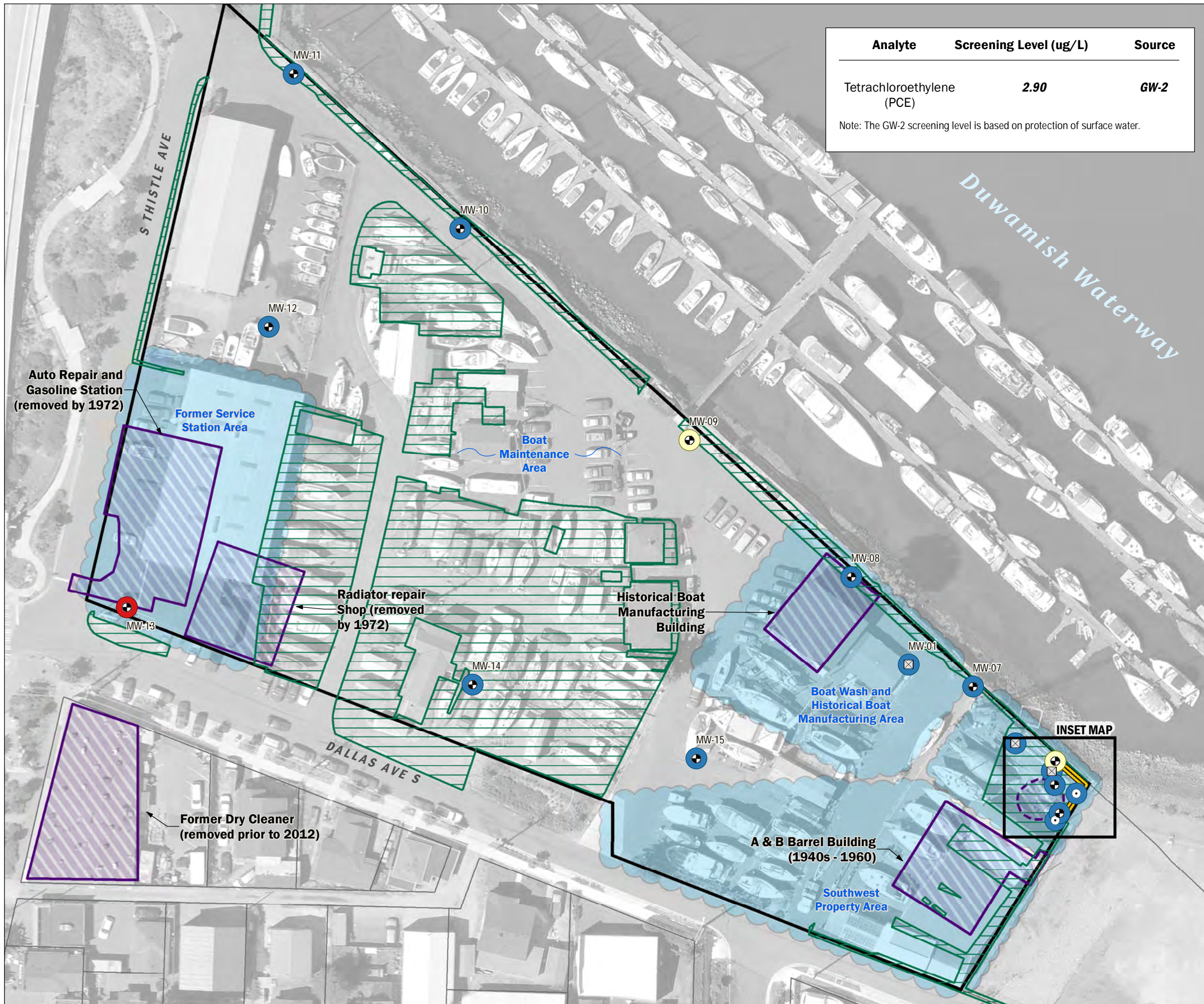
Notes:

- Total PCBs is the sum of Aroclors or sum of congeners, with non-detected results summed as zero. For locations with both Aroclor and congener results, the higher of the two sums is shown.
- ug/L = micrograms per liter
- Site features are approximate.



Total PCB Results in Groundwater
 RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\projects_8\Seattle\RIWP\SouthParkMarina_190293\Deliverables\2021\Figure\B.24_Tot PCB Results in Groundwater.mxd | Coordinates System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: mkephie | Print Date: 6/3/2022

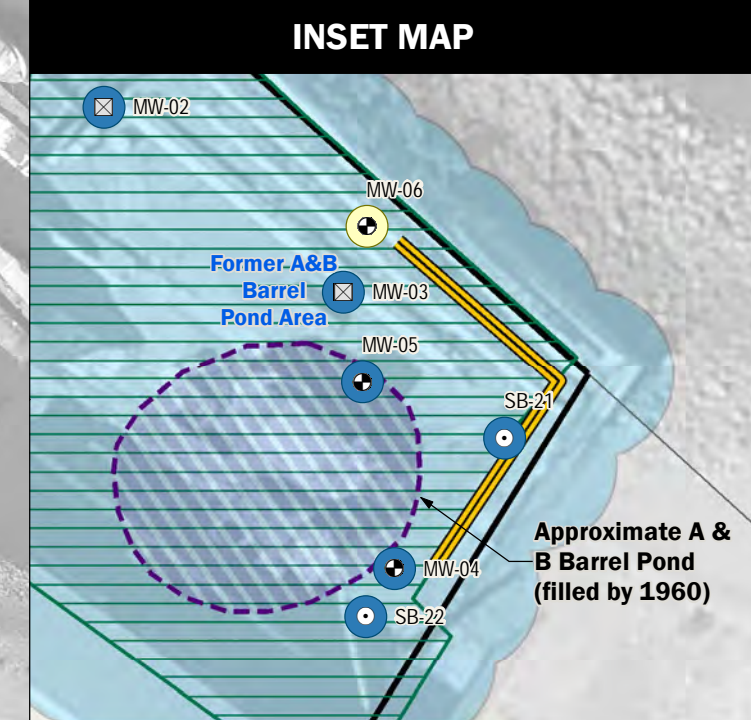


- Analyte detected at a concentration 100 times greater than the screening level.
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well
- ⊗ Alluvium Unit Monitoring Well (SAIC 2007; decommissioned)

Site Features

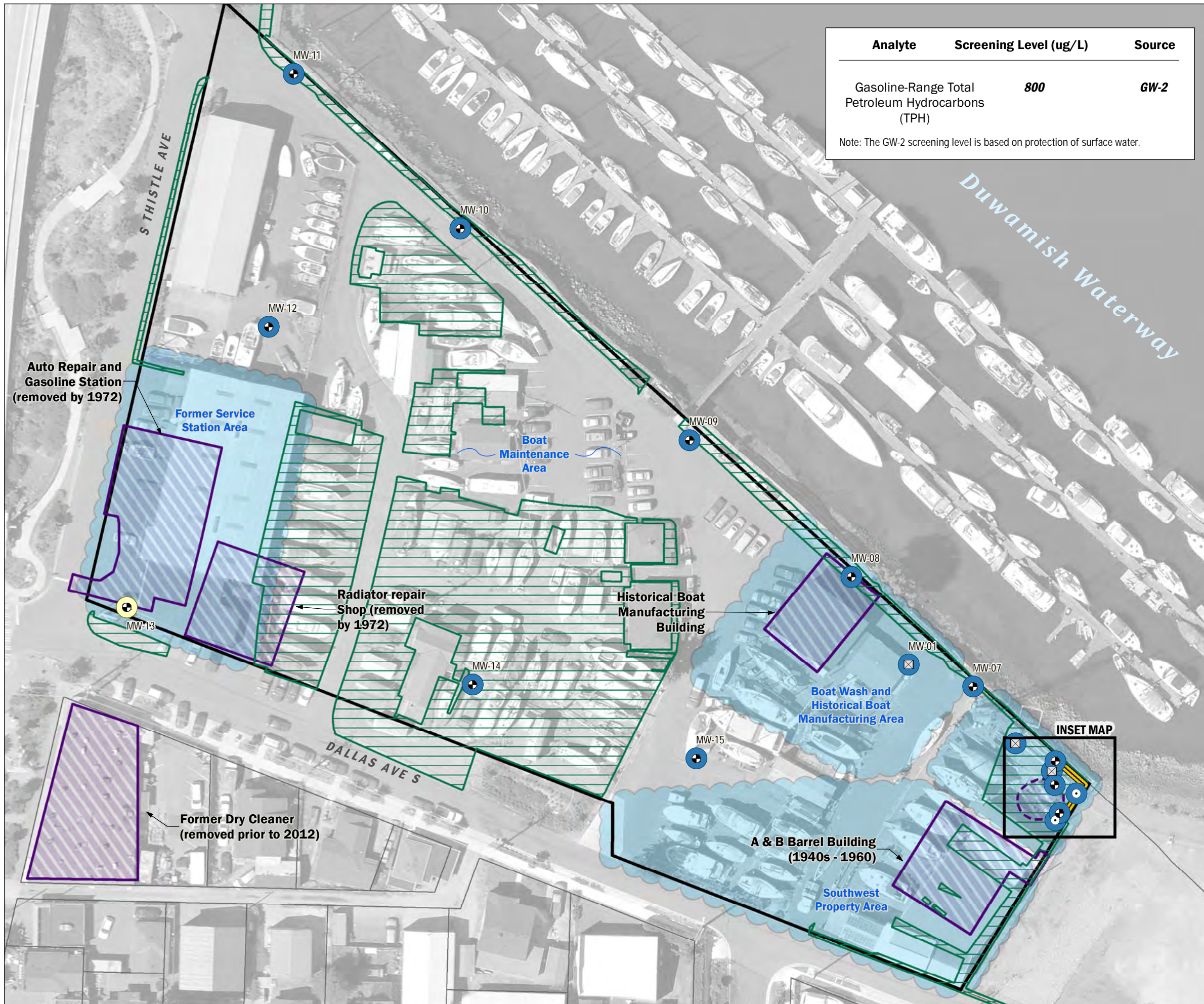
- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

Notes:
 - ug/L = micrograms per liter
 - Site features are approximate.



PCE Results in Groundwater
 RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\projects_8_SouthParkMarina\SouthParkMarina_190293\Deliverables\RIWP_2021\FigureAddendum\Map\B.25_PCE_Results_in_Groundwater.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: mcinchie | Print Date: 6/9/2022



Analyte	Screening Level (ug/L)	Source
Gasoline-Range Total Petroleum Hydrocarbons (TPH)	800	GW-2

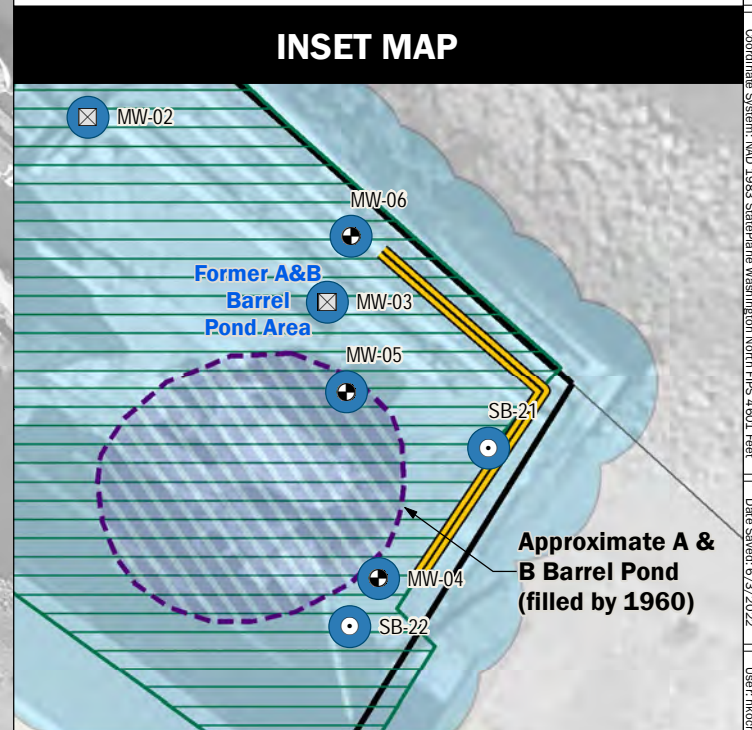
Note: The GW-2 screening level is based on protection of surface water.

- Analyte detected at a concentration 100 times greater than the screening level.
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well
- ⊗ Alluvium Unit Monitoring Well (SAIC 2007; decommissioned)

Site Features

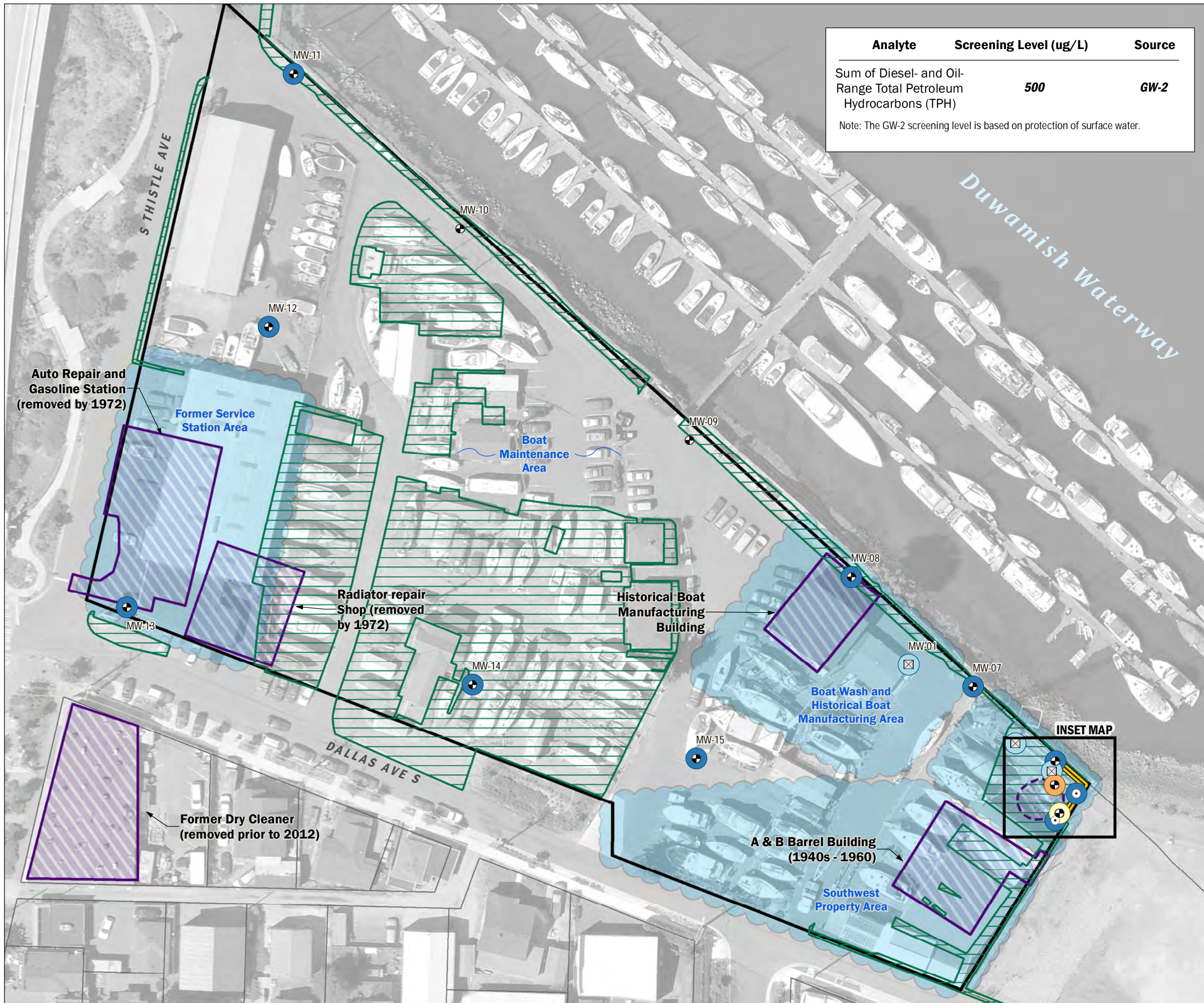
- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

Notes:
 - ug/L = micrograms per liter
 - Site features are approximate.



Gasoline-Range TPH in Groundwater
 RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\projects_8\Seattle\RIWP\SouthParkMarina_190293\Delivered\RIWP_2021\Final\Deliverables_Maps\B.26 Gasoline-Range TPH in Groundwater.mxd | Coordinates System: NAD 83 StatePlane Washington North FIPS 4601 Feet | Date Saved: 6/3/2022 | User: mitchie | Print Date: 6/3/2022



Analyte	Screening Level (ug/L)	Source
Sum of Diesel- and Oil-Range Total Petroleum Hydrocarbons (TPH)	500	GW-2

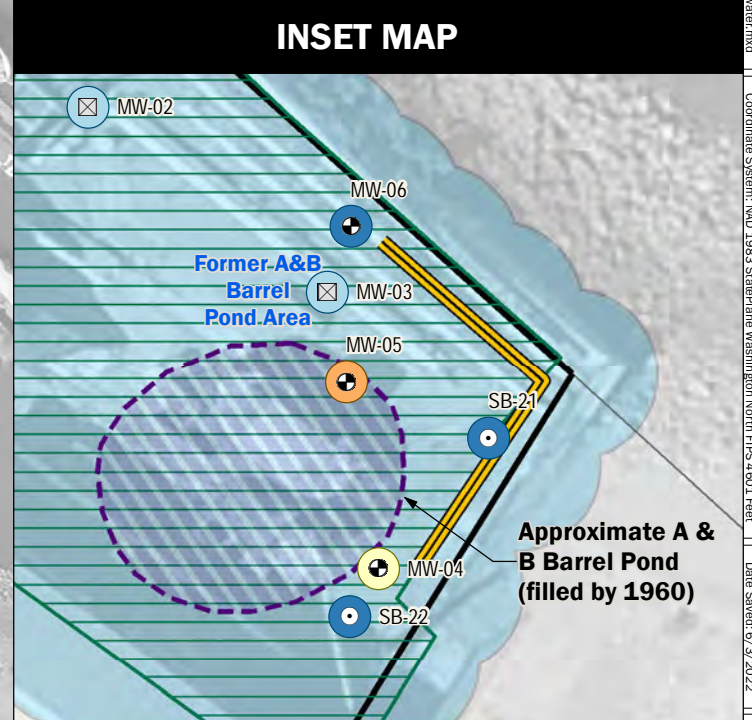
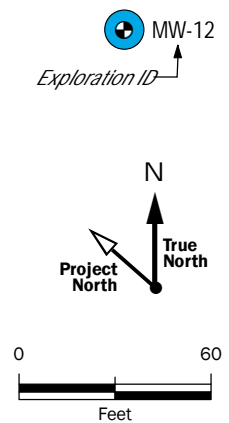
Note: The GW-2 screening level is based on protection of surface water.

- Analyte detected at a concentration 100 times greater than the screening level.
- Analyte detected at a concentration 10 times greater than the screening level.
- Analyte detected at a concentration greater than the screening level.
- Analyte not detected and non-detect value greater than the screening level.
- Analyte not detected or detected at a concentration less than the screening level.
- Soil Boring / Surface Soil / Hand Auger Boring
- ⊕ Fill Unit Monitoring Well
- ⊗ Alluvium Unit Monitoring Well (SAIC 2007; decommissioned)

Site Features

- Site Boundary
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

Notes:
 - ug/L = micrograms per liter
 - Site features are approximate.



Sum of Diesel- and Oil-Range TPH in Groundwater

RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

GIS Path: T:\projects_8\Seattle\RIWP\SouthParkMarina_190293\Deliverables\2021\Figure\B.27_Sum of Diesel and Oil-Range TPH in Groundwater.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4901 Feet | Date Saved: 6/3/2022 | User: nicole | Print Date: 6/3/2022

APPENDIX C

Phase 2 Sampling and Analysis Plan and Quality Assurance Project Plan

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C.1. Introduction

This Phase 2 Sampling and Analysis Plan (SAP)/Quality Assurance Project Plan (QAPP) has been prepared for the South Park Marina Property (SPM Property; Site) as Appendix C to the Remedial Investigation (RI) Work Plan Addendum (Work Plan Addendum) on behalf of the Potentially Liable Parties (PLP) Group, which consists of South Park Marina Limited Partnership (SPM), the Port of Seattle (Port), and the City of Seattle (City). This document meets the requirements of Agreed Order No. DE 16185 (the Agreed Order) between the Washington State Department of Ecology (Ecology) and the PLP Group.

The purpose of this SAP/QAPP is to ensure that field sample collection, handling, and laboratory analysis conducted during the Phase 2 RI data collection program will generate data to meet project-specific data needs defined in Section 7 of the Work Plan Addendum, in accordance with the Model Toxics Control Act (MTCA) requirements (Washington Administrative Code [WAC] 173-340-350). The SAP identifies the proposed number and location of environmental samples and defines field protocols for sample collection. The QAPP defines analytical laboratory methods and field and laboratory quality assurance (QA) protocols for the samples' chemical analysis. It is the responsibility of the Aspect Consulting, LLC (Aspect) personnel and subcontracted analytical laboratory and data validation personnel performing the RI sampling and analysis activities to adhere to the requirements of the SAP/QAPP.

The Phase 2 field scope includes further investigation (soil borings; monitoring well installation; and soil, groundwater, soil gas, and potentially indoor air sampling) to fill data gaps related to characterization of Site physical characteristics, including geology and hydrogeology; nature and extent of contamination in Site environmental media; and fate and transport of contaminants of potential concern (COPCs), including the potential migration of contaminants to potential receptors such as the Lower Duwamish Waterway (LDW). The following activities have been planned for Phase 2 site characterization:

- Advancement of 25 soil borings extending to depths between 15 and 40 feet below ground surface (bgs), and five hand auger borings extending to 3 feet bgs.
- Collection of discrete soil samples during subsurface explorations. Laboratory analysis of select soil samples for physical properties and chemicals identified as potential Site contaminants.
- Completion of 17 soil borings as permanent groundwater monitoring wells (7 wells screened in the Fill Unit, and 10 screened in the Alluvial Unit).
- Development and one round of sampling of the groundwater monitoring wells. Laboratory analysis of groundwater samples for potential Site contaminants.
- Installation of two sub-slab vapor pins inside the existing South Park Tire Shop, and collection and laboratory analysis of soil gas samples for Site COPCs detected in soil and groundwater that exceeded the MTCA screening levels for the protection of indoor air quality.

- Evaluation of contaminant migration pathways to the LDW including refining Fill Unit and Alluvial Unit groundwater flow characteristics.

C.2. Sampling and Analysis Plan

Field investigation and sampling procedures to be followed during Phase 2 RI data collection are described in the following sections. Specific sample locations and chemical analyses are summarized in Tables C.1 (soil and soil gas) and C.2 (groundwater). The rationale for the sampling program is described in Section 7 of the Work Plan Addendum. Figure C.1 depicts locations of the Phase 2 explorations to be completed. Explorations will be field-located with hand-held global positioning system (GPS) equipment using the survey coordinates of proposed explorations included in Tables C.1 and C.2. Explorations may be adjusted in the field based on the presence of utilities, structures, or other obstructions that may be encountered.

C.2.1. Pre-Sampling Activities

There are a number of field-related activities that must be accomplished prior to initiating the drilling and sample collection:

- Field locating borings and surveying drilling locations with a hand-held GPS unit.
- Obtain a street use permit from King County for proposed borings/wells in the rights-of-way (ROWs).
- Public and private utility locating on the SPM property and in the Dallas Ave and S. Thistle Street ROWs.
- Use a vactor truck to clear any drilling locations proposed using an air knife within 5 feet of utilities identified by the private and/or public utility locates to prevent striking potential utilities. A hand auger will be used to collect shallow samples prior to vac clearance of the borehole to avoid disturbing soil samples before collection for laboratory analysis.

All of these activities will be documented in field notes and photographs.

C.2.2. Soil Sampling

Soil sampling for the Phase 2 RI will be conducted using a combination of soil borings and hand auger sampling to address existing data gaps related to the nature and extent of soil contamination at the SPM Property. For the purposes of this investigation, surface soils are considered to be those collected between 0 and 1 foot bgs, where 0 feet ground surface is the top of soil below any paving, pavement gravel base course, or gravel surfacing. Subsurface soils are considered those collected deeper than 1 foot bgs. The specific soil sample locations and chemical analyses are provided in Table C.1, with further discussion provided in Sections 7.1 of the Work Plan Addendum. The planned depth intervals for soil samples at each location are provided in Table C.1.

The following subsections detail the procedures for completing subsurface soil borings and surface soil samples, and for soil sample collection, handling, identification, and sample quality assurance/quality control (QA/QC) applicable to both exploration types. Table C.3 presents a list of containers to be used for sample collection.

C.2.3. Hand Auger Soil Explorations

At the five locations (HA-3 to HA-7) shown on Figure C.1, explorations from 0- to 3-foot bgs will be completed using a hand auger. At each hand auger location, soil cuttings will be field screened continuously during hand auger advancement in accordance with the procedures outlined in Section C.2.4.2 below. Between the ground surface and 1 foot bgs, one discrete sample will be collected (excluding any paving, pavement base course, or gravel surfacing).¹ One discrete sample will be collected from the 2- to 3-foot depth interval and archived.

Fill material in these locations may not be amenable to hand augering due to the presence of large gravels or sloughing of noncohesive soils. If refusal is met due to the presence of a subsurface obstruction, the location will be abandoned using bentonite chips, and up to two additional nearby locations will be attempted for hand auger sampling. Likewise, if sloughing of the borehole prevents advancement of the hand auger borehole, up to two additional nearby locations will be attempted. All borings attempted via hand auger will be backfilled with hydrated bentonite chips and covered with up to 3 inches of surface soil.

C.2.4. Soil Borings

Aspect will subcontract with Holt Services, Inc. (Holt), a Washington-licensed resource protection well driller, to complete soil borings in accordance with requirements of Chapter 173-160 WAC. Soil borings will be advanced to depths ranging from 15 to 40 feet bgs using a combination of direct-push (i.e., Geoprobe) and sonic drilling. Sonic drilling methods will be used at locations where the Till Unit is expected to be encountered and locations where conductor casing methods will be used in order to prevent carry-down of contamination during drilling. Direct-push methods will be used at all other locations.

The drilling methodology for each boring is identified in Table C.1. If the direct-push drilling encounters refusal on subsurface conditions, the drillers will step out the boring a minimum of 3 feet and attempt to reach the target depth. If refusal is met at a location two times, and in Aspect's judgement could be advanced using a sonic drill rig, then drilling will be switched to sonic methods. If sonic drilling methods are utilized and refusal is still encountered, a maximum of two attempts will be made at each boring location.

Direct-push and sonic soil borings will be sampled on a continuous basis. Each boring will be advanced to collect samples at depth intervals specified in Table C.1 and as determined by field screening. Default depth intervals for laboratory analysis at each soil boring are shown on Table C.1 and will be adjusted based on field observations as noted in the table.

¹ For the purposes of this investigation, ground surface is the top of soil below any paving, pavement gravel base course, or gravel surfacing.

The direct-push drilling method provides continuous soil cores, depending on soil recovery, returned within disposable 3-inch-diameter² plastic liners (4- or 5-foot lengths). The liners are sliced longitudinally and opened to access the soil core. If core recovery is less than 40 percent and results in insufficient soil volume for chemical analysis, an additional soil core will be advanced adjacent to the original boring.

If sonic drilling methods are employed, soil samples will be collected continuously in 5-foot intervals to the total depth of the exploration using a 3- to 4-inch diameter sampling core barrel inside an outer sonic drill casing. The sampling core barrel is driven by a high-frequency, vibrating sonic head, driven by hydraulic motors, in conjunction with rotational and downforce. The sampling core barrel is removed from the borehole after being driven, and vibration is used to remove the soil core from the barrel where it is placed into a plastic bag the length of the core, resulting in a relatively undisturbed soil core for sampling.

Each soil boring not completed as a monitoring well will be decommissioned by pressurized grouting or hydrated bentonite chips, in accordance with requirements of Chapter 173-160 WAC. Borings in the alluvial aquifer will be decommissioned by pressurized grout, while shallow borings in the fill will be decommissioned using hydrated bentonite chips. Decommissioning notes will be documented on boring logs, which will be included in the RI. For borings to be completed as groundwater monitoring wells, the installation procedure is described in Section C.2.5.

At boring locations where field screening indicates the potential for heavy contamination in the Fill Unit, a conductor casing will be seated into the Tidal Flat Unit (the aquitard layer below the Fill Unit) to minimize the potential for carry-down into the Alluvial Unit. The procedures for field screening potential contamination are outlined in Section C.2.4.2.2, and procedures for conductor casing methods are further outlined in Section C.2.4.1.

C.2.4.1. Drilling in Areas with Potential for Carry-Down of Contamination

Drilling for borings SB-42, MW-04D, MW-05D, MW-06D, MW-16, and MW-16D, located adjacent to or near the former A&B Barrel Pond (Figure C.1), will be conducted using sonic conductor casing methods to minimize potential for carry-down of contaminants. In addition, for borings in other areas of the Site that target sampling depths below the Tidal Flat Unit (such as MW-13D), if field screening indicates heavy contamination in the fill during drilling, conductor casing methods will be used to complete the remainder of the boring or well. If a direct-push boring is started, and evidence of heavy contamination is noted in or above the Tidal Flat Unit, the boring may be completed using direct-push drilling if a dual tube drilling system is used in which the

² Typically, 2.25-inch outer-diameter tooling is used for direct push, which uses 1.5-inch inner diameter plastic liners for collecting soil cores. During the Phase 1 RI fieldwork, the volume of soil from these 1.5-inch cores was insufficient to fill all the containers requested by the analytical laboratory. Therefore, 3.75-inch outer-diameter tooling was used with 3-inch inner-diameter liners to increase soil volume for chemical analysis.

outer core barrel remains in place while extracting soil cores, similar to the conductor casing methods outlined for sonic drilling.

In the vicinity of the former A&B Barrel Pond, the Tidal Flat Unit is present at approximately 10 feet bgs. Therefore, sampling starting at 8 feet bgs will proceed in 2-foot intervals until the top of the Tidal Flat Unit has been identified. Then, a conductor casing will be advanced into the Tidal Flat Unit and a layer of bentonite will be placed in the bottom of the casing, prior to advancing the drill through the seal into the underlying Alluvial Unit.

C.2.4.2. Logging, Field Screening, and Soil Sample Collection

C.2.4.2.1. Logging and Soil Descriptions

A qualified individual with field logging experience, under the direction of a Licensed Geologist (LG), will oversee the drilling activities, conduct all soil sampling, and prepare a geologic log for each of the explorations completed. For the purposes of this SAP/QAPP, a qualified individual for soil logging is defined as an LG, licensed engineer (PE), or a geologist- or engineer-in training (GIT/EIT) under the direction of an LG. The qualified individual will visually classify the soils in accordance with ASTM International (ASTM) Method D2488 and record soil descriptions, amount of soil recovery, field screening results, and other relevant details (e.g., staining, debris, odors, etc.) on the boring log form (Attachment C.1). If samples are collected for chemical analysis, the sample ID and depth will also be recorded on the log.

C.2.4.2.2. Field Screening

The qualified individual will conduct field screening of soil samples that includes a visual examination to note sheens and staining, olfactory observations, volatile organic vapor screening, and water sheen testing, as described below. Field screening observations will be documented on the boring log form.

Chemical odors and their relative magnitude will be noted qualitatively using the descriptions “slight, moderate, and strong.” Odors may be qualitatively described if they possess a distinct scent (e.g., “petroleum-like”).

Volatile organic vapor screening of soil cores from borings will be conducted at multiple depths using a 10.6 electron volt photoionization detector (PID) to monitor for the presence of volatile organic compounds (VOCs). A minimum of one PID reading will be recorded in the vadose zone and for each soil type within each soil core. Additional readings will be recorded where elevated PID readings (i.e., greater than 5 parts per million [ppm] above background³) are noted. Soil removed during hand auger advancement will also be screened using the PID as noted above. For the purposes of field screening, the following limits are set for determining elevated PID readings:

- Greater than 5 ppm above background – Additional readings will be collected from within the same area of the soil core to ensure that a representative sample was screened.

³ Background concentrations are those measured in ambient air, away from the soil core, typically 0-1 ppm.

- Greater than 15 ppm above background – These concentrations could indicate potential contamination. Additional soil samples will be collected and analyzed for potential Site contaminants. Additionally, if these readings are observed in the Fill Unit, care will be taken to set a conductor casing in the Tidal Flat Unit as detailed in Section C.2.4.1.

Soil samples will be field-screened for presence of petroleum using a sheen test: placing a small aliquot of soil into a clean, disposable container, or black-plastic gold pan that is filled with water, observe the water surface for signs of sheen, and gently agitate the soil and record observations. Care will be taken to differentiate sheen created by petroleum (i.e., iridescent swirl of colors, coalesces after being disturbed) versus other organic matter (i.e., angular “waxy” sheets that do not coalesce after being disturbed), and recording the information appropriately. The relative magnitude of sheens will be logged during field screening using the following qualifiers:

- Slight – only light colors; irregular spread; does not cover entire water surface
- Moderate – some colors; covers majority of water surface
- Heavy – pronounced colors, rapid spread, covers entire water surface

C.2.4.2.3. Sample Collection

A minimum of three soil samples will be collected from each boring. At a minimum, one soil sample will be archived from each 5-foot interval, except for intervals that were previously sampled in collocated borings. As shown in Table C.1, some samples will be submitted for chemical analysis, and some will be archived in case additional analysis is warranted. Analyses with a shorter hold time (i.e., 14 days or less) will be analyzed on a fast turnaround time in order to receive results in time to request archive analysis within hold time, if deemed necessary. Archive samples may be released for laboratory analysis if laboratory analysis of other samples at that or nearby explorations detect compounds above the reporting limits exceeding screening levels. Conditions triggering archive analysis are described in Section 9.1.3.1 of the Remedial Investigation Work Plan. Generally, the planned sample depths are based on previous nearby analytical results or lack of data, as well as the location of each boring relative to the historical and current uses of the SPM Property and the objective of the investigation in that area.

The planned interval for sample collection and analysis in each boring is shown in Table C.1. However, if borings contain field indications of contamination, intervals may be adjusted up or down, additional samples may be collected and/or additional analyses may be run as indicated in the table. If collocated borings show substantial differences in lithology or field indicators of contamination, additional samples may also be collected.

All soil samples to be submitted for gasoline-range total petroleum hydrocarbons (TPH) and VOC analyses will be collected in accordance with U.S. Environmental Protection Agency (EPA) Method 5035A. The soil aliquot for gasoline-range total petroleum hydrocarbons (TPH) and VOC analyses will be collected from the undisturbed soil sample core using a laboratory-supplied modified disposable plastic syringe as required by EPA Method 5035A and placed in pre-weighed laboratory-supplied vials. For logistical purposes due to the EPA 5035 method, sample volume for gasoline-range TPH and VOCs will be collected first in every investigation area.

For all other analyses, the soil samples will be removed from the sampler using a clean, stainless-steel spoon and placed into certified-clean jars supplied by the analytical laboratory. Gravel-sized material greater than approximately 0.5 inch will be removed from the sample.

Table C.1 lists the chemical analyses for each soil sample to be collected during the Phase 2 RI. QC soil samples (e.g., trip blanks) will be collected at the respective frequencies prescribed in Section C.3.6. If for a specific drill interval, sample recovery is poor, insufficient volume may be present to collect enough material for all of the planned analyses. The analytical laboratory has indicated 24 ounces⁴ will provide sufficient volume for all planned analyses. If there is insufficient volume to fill at least 24 ounces of sample jars, no samples will be collected, and the boring will be redrilled using the redrilling procedure as described for refusal outlined in Section C.2.4 above. Soil sample volume from the original boring will be retained until all required samples have been collected from the redrilled boring. If sufficient volume cannot be obtained from the redrilled boring, soil from the original boring will be used to ensure that all analyses will be completed.

C.2.5. Catch Basin Solids Sampling

One catch basin solids sample will be collected from each of three catch basins: CB-2, CB-6, and SWRX-Pre (the pump vault downstream from CB-9). These sampling locations were selected to represent different property subbasins and potential contributions to the two active property outfalls to the river (UOF-1 and SPM Outfall).

Prior to collecting catch basin solids samples, Aspect staff will coordinate with SPM operations to adapt to their maintenance and cleaning schedule to attempt to ensure sufficient volume. Each catch basin solids sample will be collected and handled in accordance with the procedures described below using equipment decontaminated between each sample location:

- Solids samples will be collected from material accumulated in the sump and/or pipes at each catch basin. A telescoping extension pole with a stainless-steel cup attachment will be utilized for scooping solids material. Solids materials will be collected by hand using stainless steel spoons and scoops. Sample material from each station will be placed into a stainless-steel bowl for sampling.
- Particles and organic debris larger than approximately 0.5-inch will be noted in field documentation and then removed from the material before sampling. In addition, the sample color, odor, texture, VOC content and presence of sheen will be noted based on visual, olfactory, PID readings, and tactile observations.

⁴ A minimum volume of three 8 oz jars (one for each lab) and a 5035 kit (4 vials) is required for the soil samples that are analyzed for all constituents.

- Solids material will then be homogenized in the bowl using a decontaminated stainless-steel spoon and placed into certified-clean jars supplied by the analytical laboratory.

Catch basin solids samples will be analyzed for the chemical analyses summarized in Table C.1. Due to the catch basins' small size and periodic cleaning, there is a possibility that insufficient sample material will be present to analyze for all proposed analyte groups. In case of insufficient sample volume to analyze for all constituents, the analyte list will be prioritized as listed in Table E.6 of the RI Work Plan, with instructions documented on the chain of custody form. The rationale for prioritization was developed based on knowledge of the historical and current uses of the property with emphasis on the known key contaminants that potentially may contribute to contaminant loading in the LDW via stormwater discharge.

C.2.6. Monitoring Well Installation and Development

C.2.6.1. Monitoring Well Installation

Monitoring wells will be constructed by Holt in accordance with Chapter 173-160 WAC. A qualified individual with field experience will oversee and document installation of each monitoring well, under the direction of a Licensed Geologist in Washington State. Documentation will include completion of an As-Built Well Completion Diagram and construction details.

As described in Section C.2.1, soil samples will be logged continuously from the ground surface to the maximum depth of each boring. During soil logging, the following intervals of interest will be carefully noted:

- The apparent depth to water (if present) in the Fill Unit
- The depths to the top and the bottom of the Tidal Flat Unit
- The apparent depth to water in the Alluvial Unit

A soil sample representative of the screen interval will be collected, if enough material is available, and archived for potential future grain size analysis, if needed. New monitoring wells will be constructed with 2-inch-diameter threaded Schedule 40 PVC slotted screen and blank casing. If field conditions prevent driving larger-diameter casing to install the 2-inch casing, ¾-inch well screens may be used. Well screens will be 5-foot-long 0.010-inch (10 slot) slotted screen with an artificial filter pack consisting of 20/40 silica sand. The following steps will determine the exact screen interval:

- Fill Unit monitoring wells (MW-16, MW-17, MW-18, MW-19, MW-20, MW-21, and MW-22):
 - If the Tidal Flat Unit is encountered, the 5-foot screen will be placed in the Fill Unit directly on top of the Tidal Flat Unit.
 - If the Tidal Flat Unit is not encountered, and the Fill unit is saturated, the top of the screen will be placed just below the water table at the time of

drilling⁵. If the Fill Unit is not saturated, the screen will be placed in the Fill Unit directly on top of the Alluvial Unit (as typified by a sand with only trace amount of fines).

- Alluvial Unit monitoring wells (MW-04D, MW-05D, MW-06D, MW-08D, MW-09D, MW-11D, MW-13D, MW-16D, MW-18D, and MW-19D):
 - If the Tidal Flat Unit is encountered and the Alluvial Unit is saturated, the 5-foot screen will be placed a minimum of 2 feet below the bottom of the Tidal Flat Unit to ensure the bentonite annular seal separates the well screen's filter pack from the shallower water bearing zone in the Fill Unit.
 - If the Tidal Flat Unit is not encountered, the 5-foot screen will be placed at a similar elevation to other nearby Alluvial Unit monitoring wells to characterize groundwater quality within the same water bearing zone. For paired Fill-Alluvial monitoring wells, if the Tidal Flat Unit is not encountered, and a monitoring well is installed in the Fill Unit, the Alluvial Unit monitoring well will be screened in a distinctly different vertical interval from the Fill Unit monitoring well with a minimum vertical separation of three feet between the bottom of the Fill Unit monitoring well screen and the top of the Alluvial Unit monitoring well screen.
 - If there is an unsaturated zone in the Alluvial Unit greater than 5 feet thick, the top of the screen will be placed approximately 2 feet above the water table to allow for seasonal and/or tidal fluctuations. SAIC (2008a) performed a short-term tidal study in historical Alluvial Unit monitoring wells MW-01 through MW-03. The short-term tidal study was only conducted over a few hours, but groundwater elevations in the Alluvial Unit fluctuated by 2.5 to 4 feet depending on the distance from the LDW shoreline; over the tidal study monitoring period, the LDW surface water elevation fluctuated by approximately 12 feet. The tidal study was performed during a rising tide, and fluctuations of groundwater elevations in the Alluvial Unit during a full tide cycle may be much larger. Well screen placement will consider the tidal stage at the time of drilling.
- The approximate well screen interval anticipated for each location based on Phase 1 explorations is shown in Table C.2. If subsurface conditions are significantly different than expected, the well screen will be adjusted to an interval deemed appropriate by the project hydrogeologist that meets the data needs outlined in Section 7 of the Work Plan Addendum.

An annular seal consisting of bentonite chips will be placed above the filter pack. A concrete surface seal will be set at grade for each new monitoring well. The finished monitoring wells will be protected with steel flush-mount monument (truck rated), embedded in the concrete surface seal. The top of the monitoring well casing will be

⁵ If there are field screening indications of gross petroleum contamination, the top of the screen will be placed 1.5 feet above the water table at the time of drilling and 3.5 feet below to allow for seasonal fluctuations.

marked (through either a notch or other permanent mark) to indicate the location from which depth-to-water measurements will be collected and for surveying top of casing elevation.

C.2.6.2. Monitoring Well Development

Following installation, each new monitoring well will be developed to remove fine-grained material from inside the well casing and filter pack to the extent practical, and to improve hydraulic communication between the well screen and the surrounding water-bearing formation. Well development will be performed by means of a surge block and a 12-volt submersible pump. During development, the surge block will be gently surged through the entire length of the well screen. Each well will be developed until visual turbidity is reduced to minimal levels (below 10 nephelometric turbidity units [NTU] if practical) or until a maximum of 15 casing volumes of water has been removed. Well development will be recorded on the forms included in Attachment C.1.

C.2.7. Communication Plan

As discussed in Section 7 of the Work Plan Addendum, additional explorations may be needed during the Phase 2 investigation fieldwork beyond those shown on Figure C.1. The need for and scope of additional investigations will be based on field conditions observed during sampling and best professional judgment. Step-out borings will be advanced if clear evidence of contamination (strong odors, very heavy sheens or product) is observed in the field at a boring that is not horizontally bounded.⁶ If a step-out boring is performed, Ecology will be notified at the end of the day via email or phone call.

Archive soil samples at additional depth intervals may be collected, beyond those outlined in Table C.1, based on field observations and best professional judgement. Archive samples will be analyzed in accordance with the Work Plan Addendum and this SAP.

Any deviations from the Work Plan Addendum will be documented in the RI Report.

C.2.8. Groundwater Sampling Procedures

Prior to sampling, a down-hole Van Essen Instruments, CTD-Diver® data-logger capable of measuring pressure, temperature, and conductivity will be installed in all Site monitoring wells and a stilling well will be installed in the LDW offshore of the SPM Property. Measurements will be recorded at 5-minute intervals for a minimum of 72 hours to determine the effects of tidal influence on groundwater conductivity (surrogate for salinity) and to determine flow and gradient characteristics in the Fill and Alluvial Units at the SPM Property. The data collected by the data loggers will be used to calculate the optimal window for collecting groundwater samples when conductivity and/or water level measurements indicate lesser tidal influence. The lowest conductivity

⁶ To facilitate rapid follow up, potential step-out boring locations from proposed Phase 2 borings will be identified prior to conducting utility clearances for the field program.

and water level measurements at each well will be correlated with the low tide recorded at the National Oceanographic and Atmospheric Administration's (NOAA) station number 9447130, which is located in Elliott Bay and measures actual tide fluctuations. To facilitate the groundwater sampling field program, samples may be collected during either the period of lesser tidal influence during either the lower-low tide or the higher-low tide portion of each daily tide cycle.

Based on the Phase 1 groundwater sampling event, it is expected that monitoring wells along the shoreline (and particularly those wells in the Fill Unit) will go dry during lower-low tide cycles. The sampling window for each well will be established based on the data collected during the tidal study and the following criteria:

- For monitoring wells that are not tidally influenced or only minimally influenced (i.e., less than 0.5 foot of water level variation over a tide cycle), sampling may be conducted at any time.
- For monitoring wells that are tidally influenced but do not go dry during lower tide cycles, the average lag time between the tidal minimums observed at the NOAA gauge and the conductivity and water level minimums in each well will be used to determine the optimal timing of future groundwater sampling events. Each well will have a specific lag time relative to low tide and low conductivity/groundwater elevations. Groundwater sampling will be conducted within a 3-hour window bracketing this specific lag time for each well.
- For monitoring wells that are tidally influenced and do go dry during lower tide cycles, the groundwater sampling windows during Phase 1 were adjusted to be 1.5 hours before the predicted time for the groundwater elevation to reach the bottom of each screen and for the well to go dry. This modification to the sampling window was previewed to and approved by Ecology during the monthly Ecology-PLP meeting on April 8, 2021. However, insufficient volume was still present in some of these wells for all identified laboratory analyses. Therefore, for Phase 2, the conductivity and water level measurements collected by the dataloggers will be used to determine when adequate groundwater may be present within the well screen to collect sufficient sample volume for all analyses. For select monitoring wells, particularly shoreline monitoring wells MW-08, MW-09, and MW-10, the sampling window may need to be adjusted to start as water begins to infiltrate the well screen during a rising tide. If insufficient volume is available for all identified laboratory analyses, additional volume will be collected from the monitoring well during high tides on subsequent days.

Groundwater samples will be collected from monitoring wells and analyzed as summarized in Table C.2. Table C.3 presents a list of containers to be used for sample collection. Groundwater samples will be collected and handled in accordance with the procedures described below:

- Groundwater sampling at any new or recently developed monitoring wells will occur 1 week after development to allow for equilibration and settling of any suspended solids that may remain inside the well casing.

- Groundwater samples from wells located within 100 feet of the LDW shoreline will be sampled during low-tide during the 3-hour window bracketing the lowest conductivity measured during the conductivity analysis.
- The locking well cap will be removed, and the well will be allowed to equilibrate with atmospheric pressure for at least 15 minutes. Once equilibrated, the depth-to-groundwater will be measured from the surveyed location (marked on the casing with a “V” notch or black mark) to the nearest 0.01 foot using an electronic water level measuring device. If there are indications of light non-aqueous phase liquid (NAPL) during the drilling of the wells, an oil-water interface probe will be used to measure water levels and evaluate the presence of separate-phase product. If separate-phase product is present, the monitoring wells will still be sampled to determine the composition of the NAPL.
- Each monitoring well will be purged at a low-flow rate using a peristaltic pump and new, clean tubing. The dedicated tubing will consist of polyethylene tubing down well with a short length of silicon tubing through the pump head. The tubing intake will be placed just below the center of the saturated section of well screen.
- VOC loss will be minimized by regulating flowrate to prevent the entrainment of air bubbles in the tubing. The flowrate will be adjusted to minimize drawdown; however, a minimum purge flowrate of 100 milliliters per minute (mL/min) will be maintained throughout purging and sampling.
- During well purging, field parameters (temperature, pH, specific electrical conductance, dissolved oxygen [DO], and oxygen reduction potential [ORP]) will be monitored using a YSI meter and flow-through cell, or equivalent. Additionally, turbidity will be recorded using a turbidimeter and the depth-to-water will be recorded during purging. These field parameters and depth-to-water will be recorded at 2- to 5-minute intervals on the groundwater sampling form (Attachment C.1) throughout well purging until they stabilize. Stabilization is defined as three successive readings where:
 - The water level is stable, in accordance with EPA’s low-flow groundwater guidance (i.e., water level drawdown is less than 0.33 foot below the initial water level reading),
 - Temperature varies by less than 0.1 degree Celsius,
 - Specific conductance varies by less than 3 percent
 - Dissolved oxygen varies by less than 10 percent (or 0.5 milligrams per liter [mg/L] if the readings are below 1 mg/L)
 - pH varies by less than 0.1
 - ORP varies by less than 10 mV
 - Turbidity varies by less than 10 percent (or if three consecutive readings are less than 10 NTU)

- However, no more than three well casing volumes will be purged prior to groundwater sample collection.
- Samples with a field-measured specific electrical conductance greater than 1,000 microsiemens per centimeter ($\mu\text{S}/\text{cm}$) or turbidity greater than 25 NTU will be denoted as such on the chain-of-custody (COC) form, so that the laboratory can employ appropriate sample preparation techniques to avoid analytical interferences for specific analyses (refer to Section C.3.3.2).
- If the monitoring well is completely dewatered during purging, samples will be collected when sufficient recharge has occurred to allow filling of all sample containers, or when recharge has reached its maximum for a tidally influenced monitoring well. If insufficient volume is available for all identified laboratory analyses, similar to the situation encountered during Phase 1 groundwater sampling at MW-9 and MW-10, additional volume will be collected from the monitoring well during high tides on subsequent days. Low-flow purging will not be conducted prior to sample collection on subsequent days, for wells that produce insufficient volume.
- Once purging is complete, the groundwater samples will be collected using the same low-flow rate from the dedicated tubing upstream of the flow-through cell to avoid potential cross-contamination and directly into laboratory-supplied sample containers for analysis of parameters presented in Table C.2.
- Samples for dissolved metals analysis will be field filtered using a 0.45-micron filter attached to the discharge end of the dedicated tubing. All other analytes will be unfiltered.
- If the monitoring well is completely dewatered during purging or drawdown is significant even with a 100 mL/min purge rate, the well will be dewatered and samples will be collected when sufficient recharge has occurred to allow all sample containers to be filled. In accordance with standard groundwater sampling standard of care, bottles for volatile analytes (e.g., gasoline-range TPH and VOCs) will be collected first.
- QC groundwater samples (e.g., field duplicates, and trip blanks) will be collected at the respective frequencies prescribed in Section C.3.6.1.
- After sample collection is complete, the depth to the bottom of the monitoring well will also be measured to evaluate siltation of the monitoring well. If there are indications of dense NAPL during drilling, an oil-water interface probe will be used to gauge siltation and whether separate-phase product is present at the bottom of the monitoring well.
- Following sampling, the well cap and monument cap will be secured. Damaged or defective well caps or monuments will be noted and scheduled for replacement, if necessary.

C.2.9. Stormwater Sampling Procedures

Stormwater samples will be collected from SPM drainage structures, including catch basins and the pre-and post-StormwaterRx™ treatment system. All samples will be analyzed as summarized in Table C.2. Table C.3 presents a list of containers to be used for sample collection. Stormwater samples will be collected and handled in accordance with the procedures described below:

- Sampling events will be targeted during periods with weather forecasts that predict at least 0.2 inches of rainfall over a minimum of 3 hours and less than 2 inches over a period of 24 hours⁷. In addition, sampling will occur after a 24-hour antecedent dry period (less than 0.1 inch of rainfall) prior to the onset of precipitation.
 - Forecasts from the National Weather Service will be used to track and document weather forecast data leading up to sampling events.
 - Precipitation data will be obtained from the on-Property rain gauge installed and maintained by TIG Environmental.
- Tidal fluctuations in the LDW will not affect stormwater sampling since sampling locations will be from catch basins and other structures on the SPM Property that are above high tide elevation.
- Stormwater samples will be collected as discrete grab samples using a peristaltic pump or an extension pole with a clean sample container attached. Laboratory bottles will be filled directly as much as possible. For samples that require adding a field preservative or need to not have headspace left in the bottle, a clean HPDE or glass container will be used to collect the sample, which will be then be transferred to the laboratory container with preservative in the field.
 - Sampling at catch basins will be done after removing CB lids/grates, filter fabric, and/or strainer baskets, which will be replaced each time after sampling. Stormwater samples will be collected from standing water within each catch basin.
 - Insufficient flow on the boat ramp was observed during Phase 1 for sampling; therefore, this location will not be sampled in Phase 2.
- In conjunction with the stormwater samples, field measurements will be made of pH, specific conductivity, temperature, turbidity, DO concentration and ORP, using a calibrated water quality sonde and turbidimeter at each sampling location during each sampling event. These measurements will be made from an aliquot of sample water collected into a decontaminated sample cup, jar, or bowl, or with a flow-through cell if using a peristaltic pump.

⁷ The purpose of this maximum criteria is to ensure that the collected sample represents the entire storm hydrograph and to avoid sampling during less frequent high-precipitation storms that would significantly dilute the presence of any contaminants. This value represents the 2-year, 24-hour rain event for Seattle as calculated using NOAA's Precipitation Frequency Estimate tool.

- Visual observations will also be noted at the sampling locations during sampling events, including for the presence of floatable materials, visible sheen, discoloration, turbidity, settled solids (if any), and odor.
- Field notes will be collected during each sampling event with the date, time, site and general runoff conditions, water quality field measurements, and other observations.
- QC stormwater samples will be collected at the respective frequencies prescribed in Section C.3.6.1.

Stormwater samples will be analyzed for the chemical analyses summarized in Table C.2. Due to the unpredictability of stormwater runoff, even while targeting storm events, there is a possibility that insufficient water will be present to analyze for all proposed analyte groups. In case of insufficient sample volume to analyze for all constituents, the analyte list will be prioritized as shown in Table E.6 of the RI Work Plan with instructions documented on the chain of custody form. The rationale for prioritization was developed based on knowledge of the historical and current uses of the property with emphasis on the known key contaminants that potentially may contribute to contaminant loading in the LDW via stormwater discharge.

C.2.10. Soil Gas and Indoor Air Sampling Procedures

Based on the lateral and vertical distribution of soil and groundwater impacts at the Site, the Tire Factory Shop is located within prescribed screening distances for further assessing the potential for vapor intrusion (Ecology, 2022). Ecology guidance indicates that the next step is to use a Tier I or Tier II assessment approach (i.e., subslab soil gas or indoor air sampling) to further assess the potential for vapor intrusion (Ecology, 2022). A Tier I assessment will be conducted to evaluate the potential for vapor intrusion from soil gas due to subsurface sources. Additional Tier I assessments may be conducted at other SPM Property buildings if Phase 2 analytical data shows a potential for vapor intrusion at those locations.

C.2.10.1. Subslab Soil Gas Sampling

Two soil gas samples will be obtained from beneath the concrete slab of the Tire Factory Shop building, or to the west of the building, using temporary soil gas vapor pins. Prior to drilling, a search for publicly available data sets for utility information will also be conducted (and public and private utility locates will have been conducted as part of the soil boring mobilization). Utility information will be documented and overlain on a site map to evaluate the potential for preferential vapor migration pathways at the Site. The temporary soil gas vapor pins will be installed through the slab using a rotary hammer drill. The vapor pins will be set a minimum of 5 feet away from the slab edge to avoid any potential dilution from ambient air at the concrete/asphalt interface.

Prior to soil gas sampling, the weather forecast will be monitored in an effort to synchronize sampling with a period of declining or low barometric pressure and without precipitation. However, it is recognized that this may not be possible given all the logistical considerations for the field effort. Regardless, barometric pressures will be monitored and recorded during sampling. Following installation of the soil gas sampling

points, the barometric pressure will be recorded and noted to be rising or falling at the time of sampling collection. Additionally, a cross-slab differential pressure measurement will be collected using a digital micro-manometer. The ventilation system for the building will also be observed to determine whether it is likely to have an influence on cross-slab pressure differential. Barometric and cross-slab pressures at the time of sampling will be used to inform conservativeness of the sampling results.

Soil gas samples will be collected using laboratory-supplied, evacuated, 1-L SUMMA canisters with flow controllers set to a flow rate of less than 150 mL/min in accordance with the following procedures:

- The sampling train and SUMMA canister will be leak-tested prior to sampling using a shut-in test to verify there are no leaks in the fittings or connections between the leak-testing shroud and the sample media.
- The vapor pin or gas probe monument will be enclosed in a leak-testing shroud and a known concentration (between 50 and 100 percent) of tracer gas (helium) will be added to the shroud. The selected concentration of tracer gas will be maintained and monitored for the duration of sampling.
- Prior to sample collection, the sampling train will be purged at a rate of 200 mL/minute using a peristaltic pump (or equivalent), taking care that the entire sampling train volume has been purged to ensure the sample is representative of subsurface conditions. Purged soil gas will be collected in Tedlar® bags and field-screened to ensure leakage is less than 5 percent of the shroud concentration. During purging, concentrations of carbon dioxide, oxygen, and methane will be field-measured prior to sample collection.
- After confirming there is no significant leakage in the sampling train or around the vapor point, a soil gas sample will be collected by opening the valve on the SUMMA canister. Sampling will be complete when the vacuum gauge on the canister reaches -5 inches of mercury. Notes regarding the usage of each building, including windows, doorways, and HVAC, will be recorded during sampling.
- A final vacuum of -5 inches of mercury will be maintained in SUMMA canister and submitted to the laboratory for verification that the SUMMA canister did not leak in transit.

Upon completion of soil gas sampling, the SUMMA canisters will be packed in their original shipping containers and maintained under chain-of-custody procedures until they are delivered to the laboratory.

After completion of sampling, the temporary soil gas sampling points will be extracted, and the holes will be patched with concrete.

C.2.10.2. Soil Gas Sampling

Based on the Phase 2 soil and groundwater analytical results, additional buildings at the SPM Property may require a Tier I vapor intrusion assessment. The construction characteristics of these buildings has not been evaluated; therefore, detailed procedures cannot be produced at this time. If the buildings are constructed as slab-on-grade, soil gas sampling will be conducted via vapor pins as described above. If the buildings are not

constructed as slab-on-grade (i.e., contain a crawlspace), soil gas sampling may be conducted adjacent to the buildings using soil gas probes.

For soil gas probe installation, borings will be advanced using direct-push techniques, and surface completions will be traffic-rated 8-inch-diameter flush monuments. Screen bottom depths will be approximately 5 feet bgs. Typical soil gas probe construction includes a 6-inch-long by 0.5-inch-outer-diameter stainless-steel slotted screen and 0.25-inch-outer-diameter Teflon tubing. The screen filter pack will be silica sand or glass beads with an appropriate bentonite seal and concrete to grade.

C.2.10.3. Indoor and Ambient Air Sampling

If soil gas samples exceed the MTCA Method B screening levels for subslab soil gas, adjusted to a commercial exposure scenario⁸, indoor air sampling may be conducted. Prior to indoor air sampling, a Site visit will be conducted to evaluate the Tire Factory Shop. The purpose of the evaluation is to identify building construction characteristics, heating and ventilation systems, and background sources of possible chemical contaminants that may influence the results of indoor sampling. Potential sources of VOCs will be identified in the building by visual observation and by using a photoionization detector (PID), or similar air-monitoring device, to screen the building. As discussed in Ecology's guidance (2022), Ecology does not recommend conducting indoor air sampling as part of the VI evaluation when the chemicals used as part of the building operations are the same substances found in soil gas beneath the building. Therefore, indoor air sampling may not be conducted if the evaluation indicates that the chemicals exceeding screening levels in soil gas are routinely used by the business and represent a larger impact to indoor air quality than vapor intrusion. The site reconnaissance will be completed at least 48 hours prior to indoor air sampling to ensure that possible sources of cross-contamination are removed and/or documented to the extent practical.

Indoor and ambient air sampling will consist of collecting indoor air samples in the same locations where subslab soil gas samples were collected and up to two ambient background air samples. The exact number and locations of samples will be chosen based on the observations during the site reconnaissance.

Time-integrated 24-hour samples will be collected over the course of a day. Air samples will be collected using 6-L canisters prepared under negative pressure and lab-certified clean for VOCs. The canisters will be equipped with dedicated flow regulators set at a fill rate set for an approximate 24-hour sampling event.

The pressure in the canister prior to commencement of the sampling event will be noted, as will the time the canister is opened. During the sampling period, the pressure in the canister will be monitored to ensure that the flow regulator is functioning properly. The final pressure at the end of sampling should be -5 to -6 inches of mercury. Once the canister has reached this point, sampling is complete, and the final pressure is recorded.

⁸ If Phase 2 groundwater or soil data indicates the potential for vapor intrusion into one of the residential buildings, subslab soil gas sampling will be conducted at those locations and the analytical results will be compared to the MTCA Method B subslab soil gas screening levels for unrestricted use.

Sample collection will be considered complete after 24 hours if the pressure in the canister is less than -10 inches of mercury.

Ambient background air samples will be obtained concurrently with the indoor air sampling. An outdoor air sample will be collected using the same procedures as the indoor air samples, using 6-L canisters prepared under negative pressure and lab-certified clean for VOCs. The canister will be placed upwind of the building and/or at the intake to the HVAC system, dependent on results of the site reconnaissance.

If the site reconnaissance identifies potential sources of background contamination to indoor air that cannot be removed from the building, then additional background indoor air samples may be collected. The background air sample will be collocated with the potential background source and collected concurrently with the other ambient air and indoor air samples, using a 6-L canister as described above.

As recommended by Ecology's guidance (2022), subslab soil gas sampling will be conducted immediately following the collection of indoor and ambient air samples so that temporal variability and the potential for cross-slab vapor intrusion can be evaluated.

C.2.10.4. Soil Gas and Air Sample Analysis and Evaluation

Soil gas and air samples will be transferred under appropriate chain-of-custody documentation to the analytical laboratory, Friedman and Bruya, Inc. in Seattle, Washington. Samples will be analyzed using Massachusetts Department of Environmental Protection (MDEP) Method for Air Phase Hydrocarbons (APHs) and EPA Method TO-15 for VOCs. Soil gas samples will also be analyzed for helium using ASTM D1946. If possible, low-level analysis or Selective Ion Mode (SIM) analysis will be used to obtain the lowest achievable detection and reporting limits.

Analytical results from air and soil gas sampling will be compared against applicable MTCA Method B cleanup and screening levels for commercial use⁸. Data analysis may include the use of predictive modeling to evaluate potential contributions from soil gas to indoor air as an additional line of evidence in accordance with Ecology's guidance (2022). Helium results for soil gas samples will also be evaluated to ensure no significant dilution from ambient air occurred during the sampling.

C.2.11. Sample Nomenclature and Labeling

Sample nomenclature for each type of sample to be collected during the Phase 2 RI data collection program is described below. The symbology used for the different types of samples to be collected in Phase 2 will include:

- SB = soil boring
- HA = hand auger
- MW = monitoring well (for groundwater)
- SG = subslab soil vapor pin
- GP = gas probe
- CB = catch basin

- SW = stormwater
- IA = indoor air
- AA = ambient air
- BA = background air
- TB = trip blank
- EB = equipment blank

C.2.11.1. Soil Samples from Borings, Monitoring Wells, and Hand Auger Locations

Each soil sample collected from a boring for chemical analysis will be assigned a unique sample identification number, including the boring number and the depth from which the sample was collected. For example, the soil sample collected from boring SB-31 at a depth of 7 to 8 feet bgs would be identified as SB-31-7-8. A hand auger sample from HA-03 at a depth of 0 to 1 foot bgs would be identified as HA-03-0-1. See Table C.1 and Figure C.1 for proposed boring locations and names.

C.2.11.2. Catch Basin Solid Samples

Each catch basin solids sample will be assigned a unique sample identification number that includes the sample location abbreviation, and the 6-digit date on which the sample was collected. For example, a catch basin solids sample collected from catch basin CB-02 on October 30, 2022, would be identified as CB-02-221030. See Table C.1 and Figure C.1 for proposed catch basin solids sampling locations and names.

C.2.11.3. Groundwater Samples

Each groundwater sample will be assigned a unique sample identification number that includes the well number, the six-digit date on which the sample was collected. For example, a groundwater sample collected from monitoring well MW-04D on September 30, 2022, would be identified as MW-04D-220930. See Table C.2 and Figure C.1 for proposed monitoring well locations and names.

C.2.11.4. Stormwater Samples

Each stormwater sample will be assigned a unique sample identification number that includes the sample location abbreviation, “SW” for stormwater media type, and the 6-digit date on which the sample was collected. For example, a stormwater sample collected from catch basin CB-02 on October 30, 2022, would be identified as CB-02-SW-221030. See Table C.2 and Figure C.1 for proposed stormwater sampling locations and names.

C.2.11.5. Soil Gas and Indoor Air Samples

Each soil gas sample will be assigned a unique sample identification number that includes the exploration number and the six-digit date on which the sample was collected. For example, a soil gas sample collected from soil vapor pin SG-01 on September 30, 2022, would be identified as SG-01-220930. See Table C.1 and Figure C.1 for proposed

soil gas locations and names. A sample collected from a soil gas GP-01 probe on November 5, 2023, would be identified as GP-01-231105.

Each indoor air sample, if collected, will be assigned a unique sample identification number that includes the exploration number and the six-digit date on which the sample was collected. For example, an indoor air sample collected from indoor air point IA-01 on September 30, 2022, would be identified as IA-01-220930. Ambient air and potential background air samples would be prefixed as AA- and IA-, respectively.

C.2.11.6. Field Quality Control Samples

Each field quality control sample will be assigned a unique sample identification number that includes the quality control type abbreviation in addition to other identifying information as described below. See Section C.4.6.1 for further information on the field quality control program.

C.2.11.6.1. Field Duplicates

Sample nomenclature for field duplicates will include the same nomenclature as the parent sample ID with the addition of “FD” indicating this is a field duplicate. Examples for each media are as follows:

- Soil example: SB-31-FD-7-8
- Groundwater example: MW-04D-FD-220930
- Soil gas example: SG-01-FD-220930

C.2.11.6.2. Equipment Blank

Equipment blanks will be identified by an “EB” and will be numbered sequentially. For example, the first equipment blank sample collected during Phase 2, collected on September 30, 2022, would be labeled: EB-01-220930.

C.2.11.6.3. Trip Blank

Trip blanks will be identified by an “TB” and will be numbered sequentially. For example, the first trip blank accompanying samples to the laboratory on September 30, 2022, would be labeled: TB-01-220930.

C.2.12. Sample Custody and Field Documentation

C.2.12.1. Sample Custody

The collected sample containers will be sealed inside clean, unused Ziploc bags and placed upright in a cooler. Ice will be placed in each cooler to ensure samples maintain the preservation requirements summarized in Table C.3. Inert cushioning material will be placed in the remaining space inside the cooler as needed to limit movement of the sample containers. If the sample coolers are shipped (not hand carried) to the laboratory, the COC form will be placed in a waterproof bag within the cooler for shipment.

After collection, samples will be maintained in Aspect’s custody until formally transferred to the analytical laboratory, courier, or the shipper. For purposes of this work, custody of the samples is defined as follows:

- In plain view of the field representatives;
- Inside a cooler that is in plain view of the field representative; or
- Inside any locked space such as a locker, car, or truck to which the field representative has the only immediately available key(s).

A COC record provided by the laboratory will be initiated at the time of sampling for all samples collected. The record will be signed by the field representative and others who subsequently take custody of the sample. Couriers or other professional shipping representatives are not required to sign the COC form; however, shipping receipts will be collected and maintained in project files as a part of custody documentation. A copy of the COC form with appropriate signatures will be kept by Aspect's project coordinator.

Upon sample receipt, the laboratory will fill out a cooler receipt form to document sample delivery conditions. A designated sample custodian will accept custody of the shipped samples and will verify that the COC form matches the samples received. The laboratory will notify the Aspect project coordinator as soon as possible of any issues noted with the sample shipment or custody.

C.2.12.2. *Field Documentation*

While conducting field work, the field representative will document pertinent observations and events specific to each activity on field forms (Attachment C.1) and/or in a field notebook, and, when warranted, provide photographic documentation of specific sampling efforts. Field notes will include a description of the field activity, sample descriptions, and associated details such as the date, time, and field conditions.

C.2.13. Surveying of Exploration Locations

For each exploration location, a short description of relative location will be recorded (e.g., 5 feet north of NE corner of shed). Horizontal coordinates for each soil sampling location not completed as a monitoring well will be recorded using a hand-held GPS instrument with real-time differential correction at the time of sample collection.

The horizontal coordinates and elevations of new monitoring wells will be surveyed by a professional land surveyor relative to the Washington State Plane South horizontal coordinate system and the North American Vertical Datum of 1988 (NAVD88) vertical datum. Monitoring well top-of-casing elevations will be surveyed to the nearest 0.01 foot, and horizontal coordinates to the nearest 0.1 foot, or better. Each well will be surveyed at the marked spot (i.e., notch in the PVC casing, or permanent ink mark, etc.) on the top of the PVC well casing from which depth-to-water measurements are collected.

C.2.14. Equipment Decontamination

All non-disposable sampling equipment (e.g., stainless steel spoons and bowls) will be decontaminated before collection of each sample. The decontamination sequence consists of a scrub with a non-phosphate detergent (Alconox) solution, followed by a distilled water rinse. If heavy sheens or nonaqueous phase liquids (NAPL) are observed, additional decontamination using hexane or isopropanol will occur.

C.2.15. Investigative-Derived Waste Management

Investigation-derived waste (IDW) water generated during equipment decontamination and monitoring well development and sampling will be placed in labeled United States Department of Transportation (DOT) approved drums pending the analytical results to determine appropriate disposal. The drums will be temporarily consolidated onsite, profiled based on available analytical data, and disposed appropriately at a permitted off-site disposal facility. Any liquid IDW, including water drums, will be stored on secondary containment pallets regardless of its classification.

Soil cuttings from borings will be placed in labeled DOT-approved drums pending the analytical results to determine appropriate disposal. The drums will be temporarily consolidated onsite, profiled based on available analytical data, and disposed appropriately at a permitted off-site disposal facility. Documentation for off-site disposal of IDW will be maintained in Aspect's project file.

PPE, gloves, paper towels, baggies, and other disposable field supplies will be placed in a garbage bag, sealed, and placed in a municipal dumpster.

C.3. Quality Assurance Project Plan

This QAPP identifies QC procedures and criteria required to ensure that data collected during the Phase 2 RI are of known quality and acceptable to achieve project objectives. Specific protocols and criteria are also set forth in this QAPP for a data quality evaluation, upon the completion of data collection to determine the level of completeness and usability of the data. It is the responsibility of the project personnel performing or overseeing the sampling and analysis activities to adhere to the requirements of the SAP and this QAPP.

C.3.1. Purpose of the QAPP

As stated in Ecology's *Guidelines for Preparation of Quality Assurance Project Plans for Environmental Studies* (Ecology Publication No. 04-03-030, revised December 2016), the specific goals of this QAPP are as follows:

- Focus the project coordinator and project team to factors affecting data quality during the planning stage of the project.
- Facilitate communication among field, laboratory, and management staff as the project progresses.
- Document the planning, implementation, and assessment procedures for QA/QC activities for the investigation.
- Ensure that the Data Quality Objectives (DQOs) are achieved.
- Provide a record of the project to facilitate final report preparation.

The DQOs for the project include both qualitative and quantitative objectives, which define the appropriate type of data and specify the tolerable levels of potential decision errors that will be used as a basis for establishing the quality and quantity of data needed to support the environmental assessment. This QAPP describes both quantitative and qualitative measures of data and details aspects of data collection including analytical methods, QA/QC procedures, and data quality reviews to ensure that the DQOs are achieved. DQOs dictate data collection rationale, sampling and analysis designs that are presented in the main body of the Work Plan Addendum, and sample collection procedures that are presented in the SAP (Section C.2).

C.3.2. Project Organization and Responsibilities

The project consultant team involved with data generation includes representatives from Aspect and, under subcontract to Aspect, Laboratory Data Consultants, Inc. (LDC; data validation), Friedman & Bruya Inc. (F&B; laboratory analysis) of Seattle, Washington, Vista Analytical (Vista; laboratory analysis) of California, and Analytical Resources Inc. (ARI; laboratory analysis) of Seattle, Washington. F&B is the main analytical laboratory for the RI data collection program. Specialty chemical analyses will be sent to Vista (PCB congeners, dioxins/furans) and ARI (tributyl tins). Key individuals and their roles on this project are as follows, and contact information is listed in Table C.4:

Project Coordinator for PLP Group – Jeremy Porter, PE, Aspect. The project coordinator is responsible for the successful completion of all aspects of this project, including day-to-day management, production of reports, liaison with the Port and South Park Marina, and coordination with the project team members. The project coordinator is also responsible for resolution of non-conformance issues, is the lead author on project plans and reports, and will provide regular, up-to-date progress reports and other requested project information to the PLP Group and Ecology.

RI Lead – Zanna Satterwhite, LG, Aspect. The RI lead is responsible for overseeing the field sampling program outlined in this plan, including collecting representative samples and ensuring that they are handled properly prior to transfer of custody to the project laboratory and overseeing the field manager.

Field Manager – Andrew Yonkofski, LHG, Aspect. The field manager will manage procurement of necessary field supplies, assure that monitoring equipment is operational and calibrated in accordance with the specifications provided herein, and act as the Site Health and Safety Officer.

Project Data Quality Management Lead – Lea Beard, Aspect. The project data quality management lead is responsible for overseeing the management, validation, and submission of data between the analytical laboratory and delivery to Ecology.

Data Validation Manager – Pei Geng, LDC. The data validation manager is responsible for conducting QA validation of the analytical data reports received from the project laboratory.

Laboratory Project Manager – Eric Young, F&B; Karen Volpendesta, Vista; and Shelly Fishel, ARI. The laboratory project managers are responsible for ensuring that all laboratory analytical work for soil and water media complies with project requirements. The laboratory project manager also, while acting as liaison with the project coordinator, field manager, and data quality manager, fulfills project needs on the analytical laboratory work.

Table C.4. Project Personnel Contact Information

Person	Role	Phone Number	E-mail Address
Jeremy Porter	Project Coordinator for PLP Group	206.790.2129	jporter@aspectconsulting.com
Zanna Satterwhite	RI Lead	206.499.7588	zsatterwhite@aspectconsulting.com
Andrew Yonkofski	Field Manager	404.272.3488	ayonkofski@aspectconsulting.com
Lea Beard	Project Data Quality Manager	206.780.7749	lbeard@aspectconsulting.com
Pei Geng	Data Validator	760.827.1141	pgeng@lab-data.com
Eric Young	Lab Manager (F&B)	206.683.1731	eyoung@friedmanandbruya.com
Karen Volpendesta	Lab Manager (Vista)	916.673.1520	kvolpendesta@vista-analytical.com
Shelly Fishel	Lab Manager (ARI)	206.695.6200	shelly.fishel@arilabs.com

C.3.3. Analytical Methods and Reporting Limits

Analytical methodologies applied to the analyses of samples collected during Phase 2 of the RI are in accordance with the following documents:

- EPA SW Methods – EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, Third Edition, Final Updates I (1993), II (1995), IIA (1994), IIB (1995), III (1997), IIIA (1999), IIIB (2005), IV (2008), V (2015), and VI (2017-2019).
- EPA Clean Water Act (CWA) Methods – 40 CFR, Part 136.
- Standard Methods for the Examination of Water and Wastewater, American Public Health Association, 20th Edition, 1995.
- Ecology Analytical Methods for Petroleum Hydrocarbons, Publication No. ECY 97-602, June 1997.

Table C.3 lists the laboratory analytical methods for soil, soil gas, and water analyses to be performed during the RI, along with samples containers, preservation, and analytical holding times for each analysis.

C.3.4. Method Detection Limit and Method Reporting Limit

The method detection limit (MDL) is the minimum concentration of a compound that can be measured and reported with a 99 percent confidence that the analyte concentration is greater than zero. MDLs are established by the laboratory using prepared samples, not samples of environmental media.

The method reporting limit (MRL) is defined as the lowest concentration at which a chemical can be accurately and reproducibly quantified, within specified limits of precision and accuracy, for a given environmental sample. The MRL can vary from sample to sample depending on sample size, sample dilution, matrix interferences, moisture content, and other sample-specific conditions. As a minimum requirement for organic analyses, the MRL should be equal to or greater than the concentration of the lowest calibration standard in the initial calibration curve and equal to or, preferably less than, the project screening levels. The expected MRLs are summarized in Tables C.5, C.6, and C.7 for soil, water, and soil gas samples, respectively.

The most stringent RI screening levels for soil, water, and soil gas are compared relative to MRLs in Tables C.5, C.6, and C.7, respectively. MRLs greater than screening levels are highlighted in the tables. MRLs are operationally equivalent to practical quantitation limits (PQLs) as defined in MTCA.

C.3.4.1. Sample Preparation for Analysis of Brackish and/or Turbid Water Samples

Saline water samples may create analytical interferences for trace metals analyses due to the high levels of dissolved solids in the samples. Saline groundwater samples are indicated by their elevated specific electrical conductance. Friedman & Bruya. employs a

triple quadrupole ICP-MS which has Universal Cell Technology (UCT) that assists with sodium interference in the analyses. To assist the laboratory in identifying saline groundwater samples so that analytical adjustments may be taken, the field-measured specific conductance for each groundwater sample with conductance greater than 1,000 $\mu\text{S}/\text{cm}$ will be recorded on the corresponding COC document.

Turbid water samples may create high bias not representative of groundwater quality for analyses of hydrophobic compounds (e.g., high molecular weight PAHs, PCBs, dioxins/furans). To limit potential for turbidity bias, groundwater samples with field-measured turbidities greater than 10 NTU will be recorded on the corresponding chain of custody and will be centrifuged in the laboratory prior to analysis for PAHs, SVOCs, PCBs, or pesticides.

C.3.5. Measurement Quality Objectives

Measurement quality objectives (MQOs), including the Measurement Quality Indicators (MQIs)—precision, accuracy, representativeness, comparability, completeness, and sensitivity (namely PARCCS parameters)—and sample-specific reporting limits (RLs) are dictated by the project requirements and intended uses of the data. For this project, the analytical data must be of sufficient technical quality to determine whether contaminants are present and, if present, whether their concentrations are greater than or less than applicable screening levels as adjusted for PQLs.

The quality of data generated through this RI will be assessed against the MQIs set forth in this QAPP. Specific QC parameters associated with each of the PARCCS are summarized in Table C.8. Specific MQI goals and evaluation criteria (i.e., percent recovery (%R) for accuracy measurements, relative percent difference (RPD) for precision measurements, are defined in Tables C.5, C.6, and C.7 along with the MRLs. Definitions of these parameters and the applicable QC procedures are presented below.

C.3.5.1. Precision

Precision measures the reproducibility of measurements under a given set of conditions. Specifically, it is a quantitative measure of the variability of a group of measurements compared with their average values. Analytical precision is measured through matrix spike/matrix spike duplicate (MS/MSD) samples and laboratory control samples/laboratory control sample duplicate (LCS/LCSD) for organic analysis and through laboratory duplicate samples for inorganic analyses.

Analytical precision is quantitatively expressed as the RPD between the LCS/LCSD, MS/MSD, or laboratory duplicate pairs, and is calculated with the following formula:

$$RPD (\%) = 100 \times \frac{|S - D|}{(S + D)/2}$$

where:

S = analyte concentration in sample

D = analyte concentration in duplicate sample

Analytical precision measurements will be carried out at a minimum frequency of 1 per 20 samples for each matrix sampled, or 1 per laboratory analysis group. Laboratory precision will be evaluated against laboratory quantitative RPD performance criteria provided with the laboratory's analytical data report. If the control criteria are not met, the laboratory will supply a justification of why the limits were exceeded and implement the appropriate corrective actions. The RPD will be evaluated during data review and validation. The data reviewer will note deviations from the specified limits and will comment on the effect of the deviations on reported data.

C.3.5.2. Accuracy

Accuracy measures the closeness of the measured value to the true value. The accuracy of chemical test results is assessed by "spiking" samples with known standards (surrogates, blank spikes, labeled compounds, or matrix spikes) and establishing the recovery. Accuracy is quantified as the %R. The closer the %R is to 100 percent, the more accurate the data.

Surrogate, LCS/LCSD, and labeled compound recovery will be calculated as follows:

$$\text{Recovery (\%)} = \frac{MC}{SC} \times 100$$

where:

SC = spiked concentration

MC = measured concentration

MS/MSD percent recovery will be calculated as follows:

$$\text{Recovery (\%)} = \frac{MC - USC}{SC} \times 100$$

where:

SC = spiked concentration

MC = measured concentration

USC = unspiked sample concentration

Accuracy measurements on MS samples will be carried out at a minimum frequency of 1 in 20 samples per matrix analyzed, as applicable to the method. Some methods, such as dioxins/furans, do not require MS/MSD analyses. Blank spikes will also be analyzed at a minimum frequency of 1 in 20 samples per matrix analyzed. Surrogate recoveries for organic compounds will be determined for each sample analyzed for respective compounds. Laboratory accuracy will be evaluated against the laboratory's quantitative MS and surrogate spike recovery performance criteria as provided with the laboratory's analytical data report. Labeled compound recoveries for HRMS methods will be evaluated against the method criteria. If the control criteria are not met, the laboratory will supply a justification of why the limits were exceeded and implement the appropriate corrective actions. Percent recoveries will be evaluated during data review and validation, and the data reviewer will comment on the effect of the deviations on the reported data.

C.3.5.3. Representativeness

Representativeness measures how closely the measured results reflect the actual concentration or distribution of the chemical compounds in the matrix sampled. The SAP sampling techniques and sample handling protocols (e.g., homogenizing, storage, preservation, and use of duplicates and blanks) have been developed to ensure representative samples. Sampling locations for RI activities are described in Section 7 of the Work Plan Addendum. The RI field sampling procedures are described in Section C.2 of this SAP.

C.3.5.4. Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. This goal will be achieved through the use of standard techniques to collect samples, EPA-approved standard methods to analyze samples, and consistent units to report analytical results. Data comparability also depends on data quality. Data of unknown quality cannot be compared.

C.3.5.5. Completeness

Completeness is defined as the percentage of measurements made that are judged to be valid. Results will be considered valid if the precision, accuracy, and representativeness objectives are met and if RLs are sufficient for the intended uses of the data.

Completeness is calculated as follows:

$$\text{Completeness (\%)} = \frac{V}{P} \times 100$$

where:

V = number of valid measurements

P = number of measurements taken

Valid and invalid data (i.e., data qualified with the R flag [rejected]) will be identified during data validation. The target completeness goal for this project is 95 percent.

C.3.5.6. Sensitivity

Sensitivity depicts the level of ability an analytical system (i.e., sample preparation and instrumental analysis) has in detecting a target component in a given sample matrix with a defined level of confidence. Factors affecting the sensitivity of an analytical system include: analytical system background (e.g., laboratory artifact or method blank contamination), sample matrix (e.g., mass spectrometry ion ratio change, co-elution of peaks, or baseline elevation), and instrument instability.

C.3.6. Quality Control Procedures

Field and laboratory QC procedures are outlined below.

C.3.6.1. Field Quality Control

Beyond use of standard sampling and decontamination protocols defined in the SAP, field QC procedures include maintaining the field instruments. Field instruments (e.g.,

PID for evaluating presence of VOCs in soil samples, and the YSI or equivalent meter for measuring field parameters during groundwater and stormwater sampling) are maintained and calibrated regularly prior to use, in accordance with manufacturer recommendations.

In addition, field QC samples will be collected and submitted for analyses to monitor the precision and accuracy associated with field procedures. Field QC samples to be collected and analyzed for this RI include trip blanks, field duplicates, and equipment rinsate blanks. The definition and sampling requirements for field QC samples are presented below.

C.3.6.1.1. Trip Blank

Trip blank samples will be used to monitor possible VOC and PCB cross-contamination occurring during sample handling and transport. Trip blank samples will be prepared and supplied by the laboratory; organic-free reagent-grade water will be placed into a VOC vial and glass sample bottle prior to the collection of field samples. The trip blank sample vials will be placed with and accompany the VOC and gasoline-range TPH samples through the entire transporting process from the laboratory to the field and back to the laboratory. One trip blank will be placed in each cooler containing samples where VOC or gasoline-range TPH analyses are conducted. Similarly, the trip blank sample bottles will be placed with and accompany the PCB samples throughout the entire process.

In case a target compound is present in a trip blank, results for all samples shipped with this trip blank will be evaluated and data qualified accordingly if determined that the results are affected.

C.3.6.1.2. Field Duplicates

Field duplicate samples are used to check for sampling and analysis reproducibility; however, the field duplicate sample results include variability introduced during both field sampling and laboratory preparation and analysis, and EPA data validation guidance provides no specific evaluation criteria for field duplicate samples. Advisory evaluation criteria are set forth at 35 percent for RPD (if both results are greater than five times the RL) and two times the RLs for concentration difference (if either result is less than five times the RL) between the original and field duplicate results.

Field duplicates will be submitted “blind” to the laboratory as discrete samples (i.e., given unique sample identifiers to keep the duplicate identity unknown to the laboratory), but will be clearly identified in the field log. Field duplicate samples will be collected at a frequency of 5 percent (1 per 20) of the field samples for each matrix and analytical method, but not less than one duplicate per sampling event per matrix.

If a given soil sample depth interval lacks sufficient volume (recovery) to supply material for a planned analysis and its field duplicate analysis, the field duplicate aliquot will be collected for that analysis from another depth interval in that same location if practical.

C.3.6.1.3. Equipment Rinsate Blank

Equipment rinsate blanks are collected to determine the potential of cross-contamination introduced by equipment that is used and decontaminated at multiple sample locations (e.g., stainless steel spoons used for placing soil samples in jars). Deionized water

(obtained from the laboratory) is rinsed through the decontaminated sampling equipment and collected into adequate sample containers for analysis of semivolatile organic compounds (SVOCs) (including phthalates), diesel- and oil-range TPH, organochlorine pesticides, PCB Aroclors, PCB congeners, dioxins/furans, and metals. The equipment rinsate blank is then handled in a manner identical to the primary samples collected with that piece of equipment. The blank is then processed, analyzed, and reported as a regular field sample. Equipment rinsate blanks will be collected at a frequency of 5 percent (1 per 20) of the field samples for each matrix and analytical method, but not less than one duplicate per sampling event per matrix. When dedicated equipment is used (e.g., during water sampling), these blanks are not needed.

C.3.6.2. Laboratory Quality Control

The laboratories' (F&B, ARI, and Vista) analytical procedures must meet requirements specified in the respective analytical methods or approved laboratory standard operating procedures (SOPs), such as instrument performance check, initial calibration, calibration check, blanks, surrogate spikes, internal standards, and/or labeled compound spikes. Specific laboratory QC analyses required for this project will consist of the following at a minimum:

- Instrument tuning, instrument initial calibration, and calibration verification analyses as required in the analytical methods and the laboratory SOPs.
- Laboratory and/or instrument method blank measurements at a minimum frequency of 5 percent (1 per 20 samples) or in accordance with method requirements, whichever is more frequent.
- Accuracy and precision measurements as defined in Table C.8, at a minimum frequency of 5 percent (1 per 20 samples) or in accordance with method requirements, whichever is more frequent. In cases where a pair of MS/MSD or MS/laboratory duplicate analyses are not performed on a project sample, a set of LCS/LCSD analyses will be performed to provide sufficient measures for analytical precision and accuracy evaluation.

The laboratory's QA officers are responsible for ensuring that the laboratory implements the internal QC and QA procedures detailed in each laboratory's Quality Assurance Manual.

C.3.7. Corrective Actions

If routine QC audits by the laboratory result in detection of unacceptable conditions or data, actions specified in the laboratory SOPs will be taken. Specific corrective actions are outlined in each SOP used and can include the following:

- Identifying the source of the violation
- Reanalyzing samples if holding time criteria permit
- Resampling and analyzing
- Evaluating and amending sampling and analytical procedures
- Accepting but qualifying data to indicate the level of uncertainty

If unacceptable conditions occur, the laboratory will contact Aspect's project coordinator to discuss the issues and determine the appropriate corrective action. Corrective actions taken by the laboratory during analysis of samples for this project will be documented by the laboratory in the case narrative associated with the affected samples.

In addition, the project data quality manager will review the laboratory data generated for this investigation to ensure that project DQOs are met. If the review indicates that non-conformances in the data have resulted from field sampling or documentation procedures or laboratory analytical or documentation procedures, the impact of those non-conformances on the overall project data usability will be assessed. Appropriate actions, including re-sampling and/or re-analysis of samples may be recommended to the project coordinator to achieve project objectives.

C.3.8. Data Reduction, Quality Review, and Reporting

All data will undergo a QA/QC evaluation at the laboratory, which will then be reviewed by the Aspect database manager and the project data quality manager. Initial data reduction, evaluation, and reporting at the laboratory will be carried out in full compliance with the method requirement and laboratory SOPs. The laboratory internal review will include verification (for correctness and completeness) of electronic data deliverable (EDD) accompanied with each laboratory report. The Aspect database manager will verify the completeness and correctness of all laboratory deliverables (i.e., laboratory report and EDDs) before releasing the deliverables for data validation.

C.3.9. Minimum Data Reporting Requirements

The following sections specify general and specific requirements for analytical data reporting to provide sufficient deliverables for project documentation and data quality assessment.

C.3.9.1. General Requirements

The following requirements apply to laboratory reports for all types of analyses:

- A laboratory report will include a cover page signed by the laboratory director, the laboratory QA officer, or his/her designee to certify the eligibility of the reported contents and the conformance with applicable analytical methodology.
- Definitions of abbreviations, data flags, and data qualifiers used in the report.
- Cross reference of field sample names and laboratory sample identity for all samples in the sample delivery group (SDG).
- Completed COC document signed and dated by parties who acquired and received the samples.
- Completed sample receipt document with record of cooler temperature and sample conditions upon receipt at the laboratory. Anomalies such as inadequate sample preservation, inconsistent bottle counts, and sample container breakage, and the communication record and corrective actions in response to the anomalies

will be documented and incorporated in the sample receipt document. The document will be initialed and dated by personnel that complete the document.

- Case narrative that addresses any anomalies or QC outliers in relation to sample receiving, sample preparation, and sample analysis on samples in the SDG. The narrative will be presented separately for each analytical method and each sample matrix.
- All pages in the report are to be paginated. Any insertion of pages after the laboratory report is issued will be paginated with starting page number suffixed with letters (e.g., pages inserted between pages 134 and 135 should be paginated as 134A, 134B, etc.)
- Any resubmitted or revised report pages will be submitted to Aspect with a cover page stating the reason(s) and scope of the resubmission or revision, and signed by the laboratory director, QA officer, or the designee.

C.3.9.2. Specific Requirements

The following presents specific requirements for laboratory reports:

- Sample results: Sample results will be evaluated and reported down to the MDLs. Detections at levels greater than the MDLs but less than the MRLs will be reported and flagged with “J”. Results less than the MDLs (or estimated detection limits [EDLs] for dioxin/furans) will be reported at the MDLs and flagged with “U”. All soil sample results will be reported on a dry-weight basis. The report pages for sample results (namely Form 1s) will, at a minimum, include sample results, MRLs, unit, proper data flags, dates of sample collection, preparation, and analysis, dilution factor, percent moisture (for solid samples), and sample volume (used for analysis).
- Instrument run log: The run log will list, in chronological order, all analytical runs on field samples, QC samples, calibrations, and calibration verification analyses in the SDG with data file name (and/or legible laboratory codes) and analysis date/time for each analytical run.
- Original sample preparation and analyst worksheet: The worksheet will be initialed and dated by analyst and reviewer.
- Gas Chromatography/Mass Spectrometry (GC/MS) and inductively coupled plasma (ICP)/MS tune report: The report will include ion abundance ratios and criteria for all required ions.
- Initial calibration summary: The summary will include the data file name for each calibration standard file; response factor (RF) or calibration factor (CF) for each calibration standard and each target and surrogate compound; average RF or CF, percent relative standard deviation (%RSD), correlation coefficient, or coefficient of determination; and absolute and relative retention times and ion ratios for high-resolution GC/MS (HRGC/HRMS) methods for each target compound and surrogate (labeled) compounds.

- Calibration verification summary: The summary will include the true amount, calculated amount, and percent difference (%D), or percent drift (%D_f) as applicable for target compounds.
- Method blank results will be included.
- LCS and LCSD (if MSD analysis is not performed) results with laboratory acceptance criteria for %R and RPD.
- Surrogate spike and labeled compound results with laboratory acceptance criteria for %R.
- MS and MSD results with laboratory acceptance criteria for %R and RPD. In cases where MS/MSD analyses were not performed on a project sample, LCS/LCSD analyses should be performed and reported instead.
- Laboratory duplicate results with RPD and acceptance criteria
- Internal standard (as applicable) results: Internal standard response areas in field samples, QC analyses, and associated calibration verification analyses.
- Interference check standards
- Serial dilutions (metals)
- All instrument printouts (raw data) for tests receiving EPA Stage 4 data validation (PCB congener analysis).

C.3.10. Data Quality Verification and Validation

Reported analytical results will be qualified by the laboratory to identify QC concerns in accordance with the specifications of the analytical methods. Additional laboratory data qualifiers may be defined and reported by the laboratory to more completely explain QC concerns regarding a particular sample result. All data qualifiers will be defined in the laboratory's narrative reports associated with each case.

LDC Inc., under subcontract to Aspect, will conduct an independent Level 4 validation (as defined in EPA, 2009) on any dioxins/furans and PCB congener analytical data collected, and will perform Level 2a validation on the remaining analytical data. Data validation will be conducted following the guidance below:

- EPA, Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, Office of Superfund Remediation and Technical Innovation, U.S. Environmental Protection Agency, January 2017, EPA-540-R-21017-001
- EPA, Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, Office of Superfund Remediation and Technical Innovation, U.S. Environmental Protection Agency, January 2017, EPA-540-R-2017-002
- EPA R10 [Region 10] Data Validation and Review Guidelines for Polychlorinated Dibenzo-p-Dioxin and Polychlorinated Dibenzofuran data

(PCDD/PCDF) Using Method 1613B, and SW846 Method 8290A, May 2014, EPA-910-R-14-003

- EPA, National Functional Guidelines for High Resolution Superfund Methods Data Review, April 2016, EPA 542-B-16-001

In the event that Region 10 guidance for dioxins/furans differs from the Natural Functional Guidelines, the Region 10 guidance will be followed.

The data validation will examine and verify the following parameters against the method requirements and laboratory control limits specified in Tables C.5, C.6, and C.7 for soil, water, and soil gas analyses, respectively:

- Sample management and holding times
- Instrument performance check, calibration, and calibration verification
- Laboratory and field blank results
- Detection and reporting limits
- Laboratory replicate results
- MS/MSD results
- LCS and/or standard reference material results
- Field duplicate results
- Surrogate spike recovery (organic analyses only)
- Internal standard recovery (internal calibration methods only)
- Inter-element interference check (inductively coupled plasma analyses only)
- Serial dilution (metals only)
- Labeled compound recovery (isotope dilution methods only)
- Ion ratios for detected compounds (HRGC/HRMS methods only)

Data qualifiers will be assigned based on the outcome of the data validation. Data qualifiers are limited to and defined as follows:

- **U** - The analyte was analyzed for but was determined to be non-detect above the reported sample quantitation limit, or the quantitation limit was raised to the concentration found in the sample due to blank contamination.
- **J** - The analyte was positively identified at levels greater than the MDLs but less than the RLs; the associated numerical value is an estimate of the concentration of the analyte in the sample.
- **UJ** - The analyte was not detected above the reported quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.
- **H** – The sample was analyzed outside the method specified holding time requirement.

- **R** - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be verified.
- **DNR** - Do not report from this analysis; the result for this analyte is to be reported from an alternative analysis.

In cases of multiple analyses (such as an undiluted and a diluted analysis) performed on one sample, the most representative result will be determined and only the determined result will be reported for the sample.

The scope and findings of the data validation will be documented and discussed in the Data Validation Report(s). The Data Validation Report(s) will be included as an appendix to the RI report.

C.3.11. Preventative Maintenance Procedures and Schedules

Preventative maintenance in the laboratory will be the responsibility of the laboratory personnel and analysts. This maintenance includes routine care and cleaning of instruments and inspection and monitoring of carrier gases, solvents, and glassware used in analyses. Details of the maintenance procedures are addressed in the respective laboratory SOPs.

Precision and accuracy data are examined for trends and excursions beyond control limits to determine evidence of instrument malfunction. Maintenance will be performed when an instrument begins to change as indicated by the degradation of peak resolution, shift in calibration curves, decrease in sensitivity, or failure to meet one or another of the method-specific QC criteria.

Maintenance and calibration of instruments used in the field for sampling (e.g., PID for evaluating presence of VOCs in soil samples, and the YSI meter for measuring field parameters during groundwater sampling) will be conducted regularly in accordance with manufacturer recommendations prior to use.

C.3.12. Performance and System Audits

The Aspect project coordinator has responsibility for reviewing the performance of the laboratory QA program; this review will be achieved through regular contact with the analytical laboratory's project manager. To ensure comparable data, all samples of a given matrix to be analyzed by each specified analytical method will be processed consistently by the same analytical laboratory.

C.3.13. Data and Records Management

Records will be maintained documenting all activities and data related to field sampling and chemical analyses.

C.3.13.1. Field Documentation

The Aspect field manager will ensure that the field team receives and understands the final approved version of this QAPP, the Site Health and Safety Plan (Appendix F of the RI Work Plan), and the SAP prior to initiation of field activities and that all approved plans are followed at all times. Field documents will be maintained in the project file.

C.3.13.2. Analytical Data Management

Raw data received from the analytical laboratory in electronic data deliverable (EDD) format will be reviewed, entered into a computerized database, and verified for consistency and correctness. The database will be updated based on data review and independent validation if necessary.

The following data will be included in the database:

- Laboratory analytical results, including laboratory data qualifiers
- Data validator qualifiers
- Sample location name and coordinates
- Sample media (i.e., groundwater or soil)
- Sample date
- Sample ID
- Sampling depth interval for soil samples
- Sample fraction (e.g., total or dissolved phase)
- Sample type (e.g., parent, field duplicate, trip blank, rinsate blank, or dilution)
- Calculated values, such as the total toxic equivalency for carcinogenic PAHs, PCBs, and dioxins/furans.

Data will be submitted to Ecology's Environmental Information Management (EIM) database once data have been reviewed and validated.

C.4. References

- American Public Health Association, Standard Methods for the Examination of Water and Wastewater, American Public Health Association, 20th Edition, 1995.
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- United States Environmental Protection Agency (EPA), 2009, Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use, Office of Solid Waste and Emergency Response, EPA 540-R-08-005, dated January 13, 2009.
- United States Environmental Protection Agency (EPA), 2014, R10 [Region 10] Data Validation Review Guidelines for Polychlorinated Dibenzo-p-Dioxin and Polychlorinated Dibenzofuran Data (PCDD/PCDF) Using Method 1613B, and SW846 Method 8290A, Office of Environmental Assessment, EPA-910-R-14-003, dated May 2014.
- United States Environmental Protection Agency (EPA), 2016, National Functional Guidelines for High Resolution Superfund Methods Data Review, Office of Superfund Remediation and Technology Innovation, EPA-542-B-16-001, dated April 2016.
- United States Environmental Protection Agency (EPA), 2017a, Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, Office of Superfund Remediation and Technology Innovation, EPA-540-R-2017-001, dated January 2017.
- United States Environmental Protection Agency (EPA), 2017b, Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review, Office of Superfund Remediation and Technology Innovation, EPA-540-R-2017-002, dated January 2017.
- Washington State Department of Ecology (Ecology), 1997, Ecology Analytical Methods for Petroleum Hydrocarbons, Publication No. ECY 97-602, June 1997.
- Washington State Department of Ecology (Ecology), 2016, Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies, Ecology, No. 04-03-030.
- Washington State Department of Ecology (Ecology), 2022, Guidance for Evaluating Vapor Intrusion in Washington State, Investigation and Remedial Action, Toxics Cleanup Program, Publication No. 09-09-047, dated: March 2022.

APPENDIX C

Tables

Table C.1. Phase 2 Field Investigation Sampling Matrix - Soil, Soil Gas, and Catch Basin Solids
 Project No. 190293, South Park Marina, Seattle, Washington

Investigation Area	Exploration	Proposed Boring Methodology	Proposed Easting / Northing ⁽¹⁾	Planned Exploration Depth (ft bgs)	Target Sample Depths (ft bgs) ⁽²⁾	Objective(s)	Analyses													
							Metals ⁽³⁾	Tributyl Tin	TPH	VOCs	SVOCs	Low-Level PAHs (SIM)	Organochlorine Pesticides	Aroclors	Congeners ⁽⁴⁾	Dioxins / Furans ⁽⁵⁾				
Former A&B Barrel Pond Area	MW-04D	Sonic	1275109	195752	30	0-1	Assess surface soil to characterize direct contact pathways and characterize changes to surface soil quality from fire and evaluation of D/F.	Standard	Rush	Rush	Rush	Rush	Rush	Rush	Rush	Standard	Archive	Archive		
						5-6	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
						10-11.5	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
						13.5-14.5	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
						18-20	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
	MW-05D	Sonic	1275104	195776	40	0-1	Assess surface soil to characterize direct contact pathways and characterize changes to surface soil quality from fire and evaluation of D/F.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Archive	Archive		
						6-7	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
						8-9.5	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
						15-16	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
						17-19	Collect and analyze additional samples in the alluvial/Till layers of MW-05D to confirm previous exceedances in alluvium and Till at MW-05 to rule out potential cross contamination issue.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	
Southwest Property Area	MW-06D	Sonic	1275105	195786	30	0-1	Assess surface soil to characterize direct contact pathways and characterize changes to surface soil quality from fire and evaluation of D/F.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Archive	Archive		
						4-5	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
						9-10	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
						14-15	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
						18-20	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
	MW-16 ⁽⁶⁾	Sonic	1275065	195739	30	0-1	Assess surface soil to characterize direct contact pathways and characterize changes to surface soil quality from fire and evaluation of D/F.	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard		
						4-5	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
						9-10	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
						14-15	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
						18-20	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
Boat Wash and Historical Boat Manufacturing Area	SB-35 ⁽⁶⁾	Direct Push	1275048	195686	20	0-1	Lateral delineation of metals, TBT, PCB, SVOC, PAHs, TPH, and VOC exceedances at HA-01 and HA-02.	Standard	Rush	Rush	Rush	Rush	Rush	Rush	Rush	Rush	Standard	Archive		
						3-5	Nature and extent of contamination beneath former building footprints and in fire area.	Standard	Rush	Rush	Rush	Rush	Rush	Rush	Rush	Rush	Rush	Standard	Archive	
						Water Table	Nature and extent of contamination beneath former building footprints and in fire area.	Standard	Rush	Rush	Rush	Rush	Rush	Rush	Rush	Rush	Rush	Standard	Archive	
						13-15	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	
						18-20	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	
	SB-36 ⁽⁶⁾	Direct Push	1275072	195707	20	0-1	Assess surface soil to characterize direct contact pathways and characterize changes to surface soil quality (at HA-02) from fire.	Standard	Rush	Rush	Rush	Rush	Rush	Rush	Rush	Rush	Standard	Archive		
						3-5	Assess surface soil to characterize direct contact pathways and characterize changes to surface soil quality (at HA-02) from fire.	Standard	Rush	Rush	Rush	Rush	Rush	Rush	Rush	Rush	Standard	Archive		
						Water Table	Vertical delineation of metals, PCB, TPH, and VOC exceedances at HA-02.	Standard	Rush	Rush	Rush	Rush	Rush	Rush	Rush	Rush	Standard	Archive		
						13-15	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
						18-20	Archive samples for vertical delineation, if necessary.	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive	Archive		
Catch Basin Solids	CB-02	--	1274675	196004	--	--	Assess erodible soil to characterize transport to stormwater-to-surface water sediment pathways, since 2021 fire, and analyze for LDW COCs.	Standard*												
						CB-06	--	1274787	195957	--	--	Assess erodible soil to characterize transport to stormwater-to-surface water sediment pathways, since 2021 fire, and analyze for LDW COCs.	Standard*							
						SWRX-Pre	--	1275080	195804	--	--	Assess erodible soil to characterize transport to stormwater-to-surface water sediment pathways, since 2021 fire, and analyze for LDW COCs.	Standard*							

Notes:
 (1) - These are approximate locations for planning purposes. Actual investigation locations will be documented using a hand-held GPS unit during field work. Actual well locations will be surveyed by a licensed surveyor upon completion. Coordinates provided in NAD83 State Plane Washington North, feet.
 (2) - Target Sample Depths indicates the targeted range from which soil samples will be collected and submitted for laboratory analysis or archival. Depths are subject to change, based on field observations. Additional samples from each boring may be collected and/or archived based on field screening and observations at the time of drilling. Sample intervals are approximate: intervals (except surface soil intervals) may be adjusted up or down, or additional archive intervals added, based on field observations. Archived samples may be released for laboratory analysis if needed for lateral or vertical delineation. If field screening indicators of contamination are present at the bottom of any boring, the boring will be extended until no evidence of contamination is observed (to a maximum of an additional 10 feet below the Planned Exploration Depth); in this event, an additional sample will be collected from the bottom of the boring and submitted for laboratory analysis.
 (3) - Metals - As, Cd, Cu, Cr, Pb, Hg, Ni, Zn. Metals to be analyzed in catchbasin solids samples are As, Cd, Cu, Cr, Pb, Hg, and Zn only.
 (4) - One archive sample each from Former Pond Area, Southwest Property Area, Boat Wash Area will be selected for PCB congener analysis based on initial PCB Aroclor results. At each of these four Investigation Areas, only one soil sample from the depth with the highest Aroclor results will be submitted for congener analysis. If not detected, samples for analysis will be selected from locations based on Site history including historical PCB data. Additional samples may be collected and archived.
 (5) - At the Former Pond Area and Southwest Area, three surface soil samples will be selected in each of these two areas for dioxin/furan analysis as follows: (1) one surface soil sample from the location and depth with the highest chlorinated PCB concentrations (2) one surface soil sample with the lowest detect chlorinated PCB concentration, and (3) one subsurface soil sample with the highest chlorinated PCB concentration will be submitted for dioxin/furan analysis. In the remaining three Investigation Areas, two surface soil samples will be selected from each of the three areas for dioxin/furan analysis from the location with the highest and lowest chlorinated PCB concentrations detected above the reporting limit.
 (6) - If field screening conducted during the advancement of soil borings SB-35 to SB-39 indicates a potential discrete point source of contamination, one new Alluvial Unit well will be installed near the boring location with the highest field screening indicators to assess groundwater quality within the Southwest Property Area. Absent of field screening indicators of contamination at soil borings SB-35 to SB-37, the new Alluvial Unit well (MW-16D) will be installed collocated with Fill Unit well MW-16 in the Former A&B Barrel Area.
 (7) - If a sample was not collected and analyzed during Phase 1 and if the proposed sample depths in this table are not within the well screen interval, an additional sample from the well screen interval will be collected and analyzed for all COCs.
 TPH - total petroleum hydrocarbons, including gasoline-, diesel-, and oil-ranges
 VOCs - volatile organic compounds
 SVOCs - semi-volatile organic compounds
 CVOCs - chlorinated volatile organic compounds
 PAHs - polycyclic aromatic hydrocarbons
 PCBs - polychlorinated biphenyls
 TBT - tributyl tin
 APH - air-phase hydrocarbons
 Orange shading - Analyze on 3-day rush turnaround time. The rush turnaround time samples will be reported prior to standard TAT samples analyses being completed, and the rush turnaround time sample results will form the basis for analysis of archived samples prior to expiration of the hold time.
 Gray shading - Archive sample and analyze pending rush results.
 Blue shading - Analyze on a standard turnaround time.
 * Metals to be analyzed in catchbasin solids samples are As, Cd, Cu, Cr, Pb, Hg, and Zn. SVOCs to be analyzed in catch basin solids samples are LDW COCs, as listed in Table 4 of the Source Control Review Memorandum (Aspect 2022), only.

Table C.2. Proposed Phase 2 Field Investigation Sampling Matrix - Groundwater and Stormwater
 Project No. 190293, South Park Marina, Seattle, Washington

Investigation Area	Exploration	Groundwater Unit	Proposed Easting / Northing ⁽¹⁾		Planned Exploration Depth (ft bgs)	As-Built or Planned Screen Interval (ft bgs) ⁽²⁾	Objective(s)	Analyses									
			Metals ⁽³⁾	Tributyl Tin				TPH	VOCs	SVOCs	Low-Level PAHs (SIM)	Organochlorine Pesticides	PCBs Aroclors	TSS	Dioxins / Furans		
Former A&B Barrel Pond Area	MW-04	Fill	1275106	195755	--	6-11	Seasonal variation in groundwater quality, targeting dry season	x	x	x	x	x	x	x	x	x	x
	MW-04D	Alluvial	1275109	195752	30	15.5-20.5	Current alluvium groundwater quality, best available detection limits; Groundwater flow around sheetpile wall (collocated with MW-04). Leaching of former pond contamination to groundwater and migration from pond area and groundwater-to-surface water sediment pathway.	x	x	x	x	x	x	x	x	x	x
	MW-05	Fill	1275103	195772	--	4.5-9.5	Seasonal variation in groundwater quality, targeting dry season	x	x	x	x	x	x	x	x	x	x
	MW-05D	Alluvial	1275104	195776	40	14-19	Current alluvium groundwater quality, best available detection limits; Groundwater flow around sheetpile wall (collocated with MW-04). Leaching of former pond contamination to groundwater and migration from pond area and groundwater-to-surface water sediment pathway.	x	x	x	x	x	x	x	x	x	x
	MW-06*	Fill	1275103	195787	--	3.5-8.5	Seasonal variation in groundwater quality, targeting dry season	x	x	x	x	x	x	x	x	x	x
	MW-06D*	Alluvial	1275105	195786	30	14-19	Current alluvium groundwater quality, best available detection limits; Groundwater flow around sheetpile wall (collocated with MW-04). Leaching of former pond contamination to groundwater and migration from pond area and groundwater-to-surface water sediment pathway.	x	x	x	x	x	x	x	x	x	x
	MW-16	Fill	1275065	195740	20	3.5-8.5	Lateral extent of groundwater contamination upgradient of the Former A&B Barrel Pond.	x	x	x	x	x	x	x	x	x	x
TBD ⁽⁴⁾	Alluvial	TBD	TBD	30	15-20	Vertical extent of groundwater contamination; lateral extent of groundwater contamination downgradient of Southwest Property Area and upgradient of the Former A&B Barrel Pond.	x	x	x	x	x	x	x	x	x	x	
Southwest Property Area	MW-17	Fill	1274862	195724	20	6.5-11.5	Groundwater quality in Fill Unit along western property line	x	x	x	x	x	x	x	x	x	x
	MW-18	Fill	1275045	195656	15	6.5-11.5	Groundwater quality in Fill Unit at SW property corner	x	x	x	x	x	x	x	x	x	x
	MW-18D	Alluvial	1275041	195651	30	20-25	Groundwater quality in Alluvial Unit at SW property corner	x	x	x	x	x	x	x	x	x	x
Boat Wash and Historical Boat Manufacturing Area	MW-07*	Fill	1275052	195833	--	4-9	Seasonal variation in groundwater quality. Resample wells sampled in Phase 1. Target dry season. Assess the groundwater-to-surface water sediment pathway.	x	x	x	x	x	x	x	x	x	x
	MW-08*	Fill	1274977	195901	--	7-12	Seasonal variation in groundwater quality, targeting dry season	x	x	x	x	x	x	x	x	x	x
	MW-08D*	Alluvial	1274991	195883	20	14-19	Vertical extent of groundwater contamination in Alluvial Unit along shoreline and groundwater-to-surface water sediment pathway.	x	x	x	x	x	x	x	x	x	x
Boat Maintenance Area	MW-09*	Fill	1274877	195985	--	4.5-9.5	Seasonal variation in groundwater quality, targeting dry season. Collect sufficient sample volume over potentially multiple tide cycles for analysis of all analyte classes.	x	x	x	x	x	x	x	x	x	x
	MW-09D*	Alluvial	1274884	195979	20	14-19	Vertical extent of groundwater contamination in Alluvial Unit along shoreline and groundwater-to-surface water sediment pathway.	x	x	x	x	x	x	x	x	x	x
	MW-10*	Fill	1274735	196116	--	5-10	Seasonal variation in groundwater quality, targeting dry season. Collect sufficient sample volume over potentially multiple tide cycles for analysis of all analyte classes.	x	x	x	x	x	x	x	x	x	x
	MW-11*	Fill	1274632	196211	--	5-10	Seasonal variation in groundwater quality, targeting dry season. Collect sufficient sample volume over potentially multiple tide cycles for analysis of all analyte classes.	x	x	x	x	x	x	x	x	x	x
	MW-11D*	Alluvial	1274618	196226	25	20-25	Assess current Alluvial Unit groundwater quality at north end of SPM Property.	x	x	x	x	x	x	x	x	x	x
	MW-12	Fill	1274617	196055	--	7-12	Seasonal variation in groundwater quality, targeting dry season	x	x	x	x	x	x	x	x	x	x
	MW-14	Fill	1274743	195834	--	10.5-15.5	Seasonal variation in groundwater quality, targeting dry season	x	x	x	x	x	x	x	x	x	x
	MW-15	Fill	1274881	195789	--	8-13	Seasonal variation in groundwater quality, targeting dry season	x	x	x	x	x	x	x	x	x	x
	MW-19	Fill	1274702	195917	20	4-9	Fill Unit groundwater quality upgradient of shoreline, between MW-9 and MW-13. Assess potential PCE connection/migration between MW-13 and MW-09.	x	x	x	x	x	x	x	x	x	x
Former Service Station Area	MW-13	Fill	1274529	195882	--	10-15	Seasonal variation in groundwater quality, targeting dry season	x	x	x	x	x	x	x	x	x	x
	MW-13D	Alluvial	1274517	195888	40	23-28	Vertical extent of groundwater contamination	x	x	x	x	x	x	x	x	x	x
	MW-20	Fill	1274521	195851	20	10-15	Fill Unit groundwater quality - assess contribution of VOCs from off-site dry cleaner, lateral extent of groundwater contamination	x	x	x	x	x	x	x	x	x	x
	MW-21	Fill	1274482	195911	20	10-15	Fill Unit groundwater quality - assess contribution of VOCs from off-site dry cleaner, lateral extent of groundwater contamination	x	x	x	x	x	x	x	x	x	x
	MW-22	Fill	1274531	195938	20	10-15	Fill Unit groundwater quality - assess contribution of VOCs from off-site dry cleaner, lateral extent of groundwater contamination	x	x	x	x	x	x	x	x	x	x
Stormwater	CB-02	--	1274675	196004	--	--	Evaluate the stormwater-to-surface water sediment pathway, since 2021 fire, and analyze for LDW COCs.	x**				x**	x		x	x	
	CB-06	--	1274787	195957	--	--	Evaluate the stormwater-to-surface water sediment pathway, since 2021 fire, and analyze for LDW COCs.	x**				x**	x		x	x	
	SWRX-Pre	--	1275080	195804	--	--	Evaluate the stormwater-to-surface water sediment pathway, since 2021 fire, and analyze for LDW COCs.	x**				x**	x		x	x	x
	SWRX-Post	--	1275061	195805	--	--	To demonstrate removal efficiency of the system for LDW COCs.	x**				x**	x		x	x	

Notes:
 (1) - These are actual locations for existing wells and approximate locations for Phase 2 wells for planning purposes. Actual well locations will be surveyed by a licensed surveyor upon completion. Coordinates provided in NAD83 State Plan Washington North, feet.
 (2) - As-built well screen intervals are listed for existing wells (gray shading). Planned well screen intervals are listed for proposed wells (white), and will be adjusted based on the observed stratigraphic units at the time of drilling. Fill Unit monitoring wells will be screened from 5 feet above to the top of the Tidal Flat Unit. Alluvial Unit monitoring wells will be screened from 2 to 7 feet below the bottom of the Tidal Flat Unit. Well screen intervals may be adjusted to match well screen intervals for other nearby monitoring wells within the same unit. E.g., the screen at MW-06D may be adjusted downwards greater than 2 feet below the bottom of the Tidal Flat Unit to match the screen interval for MW-05D.
 (3) - Metals - As, Cd, Cu, Cr, Pb, Hg, Ni, Zn. For groundwater, metals samples will be collected for both total and dissolved concentrations. Metals to be analyzed in stormwater samples are As, Cd, Cu, Cr, Pb, Hg, and Zn only.
 (4) - If field screening conducted during the advancement of soil borings SB-35 to SB-39 indicates a potential discrete point source of contamination, one new Alluvial Unit well will be installed near the boring location with the highest field screening indications to assess groundwater quality within the Southwest Property Area, and called MW-23D. Absent of field screening indications of contamination at soil borings SB-35 to SB-39, the new Alluvial Unit well (MW-16D) will be installed collocated with Fill Unit well MW-16.
 TPH - total petroleum hydrocarbons, including gasoline-, diesel-, and oil-ranges
 VOCs - volatile organic compounds
 SVOCs - semivolatile organic compounds
 CVOCs - chlorinated volatile organic compounds
 PAHs - polycyclic aromatic hydrocarbons
 PCBs - polychlorinated biphenyls
 TBT - tributyl tin
 TSS - total suspended solids
 One round of groundwater sampling is proposed. See Appendix C for additional details on sampling protocol, procedures, and analytical methods.
 Gray shading indicates existing monitoring well; other monitoring wells are proposed.
 * Shoreline well
 ** Metals to be analyzed in stormwater samples are As, Cd, Cu, Cr, Pb, Hg, and Zn. SVOCs to be analyzed in stormwater samples are LDW COCs, as listed in Table 4 of the Source Control Review Memorandum (Aspect 2022), only.
 SWRX-Pre - Vault located downstream from CB-09, from which water is pumped into the StormwaterRx system for treatment.

Table C.3. Analytical Methods, Sample Containers, Preservation, and Holding Times

Project No. 190293, South Park Marina, Seattle, Washington

Sample Matrix	Analytical Parameter	Laboratory	Analytical Method	Sample Container	No. Containers	Preservation Requirements	Holding Time
Soil and Catch Basin Solids	Metals Other than Mercury	Friedman&Bruya	EPA 6020B	4 or 8 ounce jar	1	None	6 Months
	Mercury	Friedman&Bruya	EPA 1631E	4 ounce jar	1	Cool 0 - 6°C	28 Days
	Tributyl Tins	Analytical Resources, Inc.	EPA 8270D-SIM	8 ounce jar	1	Cool 0 - 6°C	14 Days
	Diesel-and Oil-Range TPH	Friedman&Bruya	NWTPH-Dx	8 ounce jar	1	Cool 0 - 6°C	14 Days to extract, 40 to analyze
	Gasoline-Range TPH	Friedman&Bruya	NWTPH-Gx	Method 5035, 40 mL vials	4	Cool 0 - 6°C, Methanol or Freeze within 48 hours	14 Days
	VOCs (low level)	Friedman&Bruya	EPA 8260	Method 5035, 40 mL vials	4	Cool 0 - 6°C, Methanol or Freeze within 48 hours	14 Days
	SVOCs including PAHs (low level)	Friedman&Bruya	EPA 8270E	8 ounce jar	1	Cool 0 - 6°C	14 Days to extract, 40 to analyze
	Organochlorine Pesticides (low level)	Friedman&Bruya	EPA 8081	8 ounce jar	1	Cool 0 - 6°C	14 Days to extract, 40 to analyze
	PCB Aroclors (low level - 4 ug/kg)	Friedman&Bruya	EPA 8082	8 ounce jar	1	Cool 0 - 6°C	None
	PCB Congeners	Vista Analytical	EPA 1668	8 ounce jar	1	Cool 0 - 6°C	1 Year
Chlorinated Dioxins/Furans by HRGC/HRMS	Vista Analytical	EPA 1613B	8 ounce amber jar	1	Freeze	1 Year	
Groundwater and Stormwater	Metals other than Mercury - Total	Friedman&Bruya	EPA 6020B/EPA 200.8	500 mL HDPE	1	pH <2 with HNO ₃ , Cool 0 - 6°C	6 Months
	Metals other than Mercury - Dissolved (field filtered)*	Friedman&Bruya	EPA 6020B/EPA 200.8	500 mL HDPE	1	pH <2 with HNO ₃ , Cool 0 - 6°C	6 Months
	Total Mercury	Friedman&Bruya	EPA 1631E	100 mL glass amber	1	pH <2 with HCl, Cool 0 - 6°C	28 Days
	Dissolved Mercury (field filtered)(low level)*	Friedman&Bruya	EPA 1631E	100 mL glass amber	1	pH <2 with HCl, Cool 0 - 6°C	28 Days
	Tributyl Tins	Analytical Resources, Inc.	EPA 8270D-SIM	500 mL or 1L glass amber	2	Cool 0 - 6°C	7 Days
	Diesel- and Oil-Range TPH	Friedman&Bruya	NWTPH-Dx	500 mL or 1L glass amber	1	Cool 0 - 6°C	7 days to extract, 40 to analyze
	Gasoline-Range TPH	Friedman&Bruya	NWTPH-Gx	40 mL vials	3	HCl to pH < 2.0, Cool 0 - 6°C	14 Days
	VOCs	Friedman&Bruya	EPA 8260	40 mL vials	3	HCl to pH < 2.0, Cool 0 - 6°C	14 Days
	SVOCs including PAHs (low level)	Friedman&Bruya	EPA 8270E	1 L glass amber	2	Cool 0 - 6°C	7 Days, 40 to analyze
	Organochlorine Pesticides (low level)	Friedman&Bruya	EPA 8081	1 L glass amber	2	Cool 0 - 6°C	7 Days, 40 to analyze
	PCB Aroclors (low level - 0.0035 ug/L)	Friedman&Bruya	EPA 8082	1 L glass amber	2	Cool 0 - 6°C	None
	Chlorinated Dioxins/Furans by HRGC/HRMS	Vista Analytical	EPA 1613B	1 L glass amber	2	Cool ≤ 6°C	1 Year
	TSS, Residue Non-Filterable	Friedman&Bruya	SM-2540D	500 mL HDPE	1	Cool 0 - 6°C	7 Days
Soil Gas	VOCs (BTEX, Naphthalene, CVOCs)	Friedman&Bruya	EPA TO15	1 L stainless steel silicone coated canister with flow regulator (150-200mL/min)	1	None	30 days
	APH	Friedman&Bruya	MA-APH				
	Helium	Friedman&Bruya	ASTM D1946				
Indoor/ Ambient Air	VOCs (BTEX, Naphthalene, CVOCs)	Friedman&Bruya	EPA TO15	6 L stainless steel silicone coated canister with flow regulator (8 hour or 24 hour)	1	None	30 days
	APH	Friedman&Bruya	MA-APH				

Notes:

* If groundwater analyzed for dissolved metals is not field filtered, use unpreserved 500 mL HDPE.

EPA - United States Environmental Protection Agency

HCl - hydrochloric acid

HNO₃ - nitric acid

H₂SO₄ - sulfuric acid

HDPE - high density polyethylene

CVAA - cold vapor atomic absorption spectroscopy

VOC - volatile organic compounds

SVOCs - semi-volatile organic compounds

CVOCs - chlorinated volatile organic compounds

PAHs - polycyclic aromatic hydrocarbons

BTEX - benzene, toluene, ethylbenzene, and xylenes

TPH - total petroleum hydrocarbons

APH - air-phase petroleum hydrocarbons

PCB - polychlorinated biphenyl

HRGC/HRMS - high-resolution gas chromatography/high-resolution mass spectrometry

SIM - secondary ion mass spectrometry

Plumb, 1981 - Plumb, R.H. Jr., *Procedures for Handling and Chemical Analysis of Sediment and Water Samples*, May 1981, USACE

Publication AD/A103788.

PSEP - Puget Sound Estuary Protocol

mL - milliliters

L - liters

Table C.5. Measurement Quality Objectives for Soil and Catch Basin Solids Samples

Project No. 190293, South Park Marina, Seattle, Washington

Analyte Name	MRL	Lab Reporting Units	MRL (mg/kg)	Most Stringent Screening Level for Soil (mg/kg)	MDL ^(A)	LCS/LCS %R ^(A)	MS/MSD %R ^(A)	RPD (%)	Surrogate %R ^(A)
Metals (other than Mercury) by 6020B (mg/kg) (Friedman & Bruya)									
Arsenic	0.2	mg/kg dry wt	2.00E-01	7.30E+00	0.133	80-120	70-130	20	--
Cadmium	0.2	mg/kg dry wt	2.00E-01	7.70E-01	0.031	80-120	70-130	20	--
Chromium	0.5	mg/kg dry wt	5.00E-01	4.82E+01	0.276	80-120	70-130	20	--
Copper	1	mg/kg dry wt	1.00E+00	3.64E+01	0.156	80-120	70-130	20	--
Lead	0.2	mg/kg dry wt	2.00E-01	5.00E+01	0.049	80-120	70-130	20	--
Nickel	0.2	mg/kg dry wt	2.00E-01	4.80E+01	0.047	80-120	70-130	20	--
Zinc	1	mg/kg dry wt	1.00E+00	8.51E+01	0.834	80-120	70-130	20	--
Mercury by 1631E (mg/kg) (Friedman & Bruya)									
Mercury	0.025	mg/kg dry wt	2.50E-02	7.00E-02	0.0128	78-125	71-125	20	--
Tributyl Tins by 8270D-SIM (ug/kg) (Analytical Resources, Inc.)									
Butyltin Ion	4.08	ug/kg dry wt	4.08E-03	na	1.89	30-160	30-160	30	-
Dibutyltin Ion	5.78	ug/kg dry wt	5.78E-03	na	1.73	30-160	30-160	30	-
Tetrabutyltin	5	ug/kg dry wt	5.00E-03	na	5	-	-	-	-
Tributyltin Ion	3.86	ug/kg dry wt	3.86E-03	1.11E-04	0.45	30-160	30-160	30	-
Diesel- and Oil-Range Total Petroleum Hydrocarbons (TPH) by NWTPH-Dx (mg/kg) (Friedman & Bruya)									
Diesel Range Organics	10	mg/kg dry wt	1.00E+01	2.60E+02	4.15	80-120	50-150	20	n/a
Motor Oil Range Organics	50	mg/kg dry wt	5.00E+01	2.60E+02	9.72	80-120	50-150	20	n/a
Gasoline-Range TPH by NWTPH-Gx (mg/kg) (Friedman & Bruya)									
Gasoline Range Organics	2	mg/kg dry wt	2.00E+00	3.00E+01	0.796	--	--	--	--
Volatile Organic Compounds (VOCs) (low level) by 8260 (mg/kg) (Friedman & Bruya)									
1,1,1,2-Tetrachloroethane	0.05	mg/kg dry wt	5.00E-02	1.87E+01	0.0009	64-121	31-143	20	n/a
1,1,1-Trichloroethane	0.002	mg/kg dry wt	2.00E-03	2.11E+01	0.0003	62-131	10-156	20	n/a
1,1,2,2-Tetrachloroethane	0.05	mg/kg dry wt	5.00E-02	1.87E+01	0.0009	64-121	31-143	20	n/a
1,1,2-Trichloroethane	0.005	mg/kg dry wt	5.00E-03	3.26E-04	0.0004	64-115	10-205	20	n/a
1,1-Dichloroethane	0.002	mg/kg dry wt	2.00E-03	1.08E+02	0.0003	68-115	19-140	20	n/a
1,1-Dichloroethene	0.001	mg/kg dry wt	1.00E-03	1.41E+00	0.0003	47-128	10-160	20	n/a
1,1-Dichloropropene	0.05	mg/kg dry wt	5.00E-02	na	0.0012	69-128	17-140	20	n/a
1,2,3-Trichlorobenzene	0.25	mg/kg dry wt	2.50E-01	1.21E+01	0.0031	63-138	20-144	20	n/a
1,2,3-Trichloropropane	0.05	mg/kg dry wt	5.00E-02	2.73E-03	0.0023	61-137	25-144	20	n/a
1,2,4-Trichlorobenzene	0.01	mg/kg dry wt	1.00E-02	1.88E-03	0.0009	64-135	22-142	20	n/a
1,2,4-Trimethylbenzene	0.05	mg/kg dry wt	5.00E-02	1.79E+02	0.0005	76-125	10-182	20	n/a
1,2-Dibromo-3-chloropropane	0.5	mg/kg dry wt	5.00E-01	1.02E-01	0.0041	58-138	11-161	20	n/a
1,2-Dibromoethane (EDB)	0.005	mg/kg dry wt	5.00E-03	2.77E-01	0.0004	74-132	28-142	20	n/a
1,2-Dichlorobenzene	0.05	mg/kg dry wt	5.00E-02	2.99E-03	0.0008	76-121	31-132	20	n/a
1,2-Dichloroethane (EDC)	0.002	mg/kg dry wt	2.00E-03	2.37E-02	0.0007	56-135	12-160	20	n/a
1,2-Dichloropropane	0.05	mg/kg dry wt	5.00E-02	1.03E-03	0.0019	72-127	30-135	20	n/a
1,3,5-Trimethylbenzene	0.05	mg/kg dry wt	5.00E-02	1.80E+02	0.0009	76-126	18-149	20	n/a
1,3-Dichlorobenzene	0.05	mg/kg dry wt	5.00E-02	1.32E-03	0.0008	75-121	30-131	20	n/a
1,3-Dichloropropane	0.05	mg/kg dry wt	5.00E-02	8.84E+02	0.0016	72-130	31-137	20	n/a
1,4-Dichlorobenzene	0.05	mg/kg dry wt	5.00E-02	8.07E-03	0.0009	74-117	29-129	20	n/a
2,2-Dichloropropane	0.05	mg/kg dry wt	5.00E-02	na	0.0023	52-170	10-158	20	n/a
2-Butanone (MEK)	1	mg/kg dry wt	1.00E+00	4.80E+04	0.1421	30-197	19-147	20	n/a
2-Chlorotoluene	0.05	mg/kg dry wt	5.00E-02	4.14E+02	0.0005	74-121	31-134	20	n/a
2-Hexanone	0.5	mg/kg dry wt	5.00E-01	4.00E+02	0.0090	33-152	15-166	20	n/a
4-Chlorotoluene	0.05	mg/kg dry wt	5.00E-02	na	0.0009	75-122	31-136	20	n/a
4-Methyl-2-pentanone	1	mg/kg dry wt	1.00E+00	6.40E+03	0.0152	45-145	24-155	20	n/a
Acetone	5	mg/kg dry wt	5.00E+00	7.20E+04	0.2249	52-141	10-163	20	n/a
Benzene	0.001	mg/kg dry wt	1.00E-03	5.58E-04	0.0002	71-118	29-129	20	n/a
Bromobenzene	0.05	mg/kg dry wt	5.00E-02	2.01E+02	0.0024	72-122	34-130	20	n/a
Bromodichloromethane	0.005	mg/kg dry wt	5.00E-03	8.92E-04	0.0010	57-126	23-155	20	n/a
Bromoform	0.05	mg/kg dry wt	5.00E-02	4.95E-03	0.0033	56-132	21-156	20	n/a
Bromomethane	0.1	mg/kg dry wt	1.00E-01	7.92E-02	0.0391	38-114	10-163	20	n/a
Carbon tetrachloride	0.005	mg/kg dry wt	5.00E-03	1.54E-04	0.0013	60-139	9-164	20	n/a
Chlorobenzene	0.05	mg/kg dry wt	5.00E-02	1.02E-01	0.0006	76-111	32-129	20	n/a
Chloroethane	0.1	mg/kg dry wt	1.00E-01	na	0.0029	9-163	10-176	20	n/a
Chloroform	0.05	mg/kg dry wt	5.00E-02	5.24E-02	0.0011	66-120	21-145	20	n/a
Chloromethane	0.5	mg/kg dry wt	5.00E-01	na	0.0048	27-133	10-126	20	n/a
cis-1,2-Dichloroethene	0.001	mg/kg dry wt	1.00E-03	na	0.0003	72-127	25-135	20	n/a
cis-1,3-Dichloropropene	0.01	mg/kg dry wt	1.00E-02	3.76E-04	0.0019	67-122	28-144	20	n/a
Dibromochloromethane	0.01	mg/kg dry wt	1.00E-02	7.01E-04	0.0028	55-121	28-150	20	n/a
Dibromomethane	0.05	mg/kg dry wt	5.00E-02	4.72E+02	0.0013	62-123	23-145	20	n/a

Table C.5. Measurement Quality Objectives for Soil and Catch Basin Solids Samples

Project No. 190293, South Park Marina, Seattle, Washington

Analyte Name	MRL	Lab Reporting Units	MRL (mg/kg)	Most Stringent Screening Level for Soil (mg/kg)	MDL ^(A)	LCS/LCS %R ^(A)	MS/MSD %R ^(A)	RPD (%)	Surrogate %R ^(A)
Volatile Organic Compounds (VOCs) (low level) by 8260 (mg/kg) (Friedman & Bruya)									
Dichlorodifluoromethane	0.5	mg/kg dry wt	5.00E-01	1.12E+04	0.0026	10-146	10-142	20	n/a
Ethylbenzene	0.001	mg/kg dry wt	1.00E-03	1.03E-02	0.0003	64-123	32-137	20	n/a
Hexachlorobutadiene	0.01	mg/kg dry wt	1.00E-02	1.13E-05	0.0011	50-153	10-142	20	n/a
Hexane	0.25	mg/kg dry wt	2.50E-01	8.25E+02	0.0052	43-142	10-137	20	n/a
Isopropylbenzene	0.05	mg/kg dry wt	5.00E-02	1.73E+03	0.0008	76-127	31-142	20	n/a
m,p-Xylene	0.002	mg/kg dry wt	2.00E-03	na	0.0005	78-122	34-136	20	n/a
Methyl t-butyl ether (MTBE)	0.001	mg/kg dry wt	1.00E-03	5.56E+02	0.0003	60-123	21-145	20	n/a
Methylene chloride	0.1	mg/kg dry wt	1.00E-01	2.97E-02	0.0526	10-184	10-156	20	n/a
n-Propylbenzene	0.05	mg/kg dry wt	5.00E-02	1.67E+03	0.0006	74-124	23-146	20	n/a
o-Xylene	0.001	mg/kg dry wt	1.00E-03	na	0.0002	77-124	33-134	20	n/a
p-Isopropyltoluene	0.05	mg/kg dry wt	5.00E-02	na	0.0007	70-132	21-149	20	n/a
sec-Butylbenzene	0.05	mg/kg dry wt	5.00E-02	1.52E+03	0.0007	71-130	23-145	20	n/a
Styrene	0.05	mg/kg dry wt	5.00E-02	3.00E+02	0.0010	74-126	35-137	20	n/a
tert-Butylbenzene	0.05	mg/kg dry wt	5.00E-02	1.60E+03	0.0006	73-130	30-137	20	n/a
Tetrachloroethene	0.001	mg/kg dry wt	1.00E-03	1.60E-03	0.0006	72-114	20-133	20	n/a
Toluene	0.001	mg/kg dry wt	1.00E-03	4.35E-02	0.0003	66-126	35-130	20	n/a
trans-1,2-Dichloroethene	0.002	mg/kg dry wt	2.00E-03	3.25E-01	0.0005	67-129	14-137	20	n/a
trans-1,3-Dichloropropene	0.01	mg/kg dry wt	1.00E-02	3.76E-04	0.0023	72-132	26-149	20	n/a
Trichloroethene	0.001	mg/kg dry wt	1.00E-03	2.66E-04	0.0005	63-121	21-139	20	n/a
Trichlorofluoromethane	0.5	mg/kg dry wt	5.00E-01	1.68E+04	0.0026	10-196	10-176	20	n/a
Vinyl chloride	0.001	mg/kg dry wt	1.00E-03	5.55E-05	0.0005	22-139	10-138	20	n/a
1,2-Dichloroethane-d4	n/a	mg/kg dry wt	n/a	na	--	n/a	n/a	n/a	90-109
Toluene-d8	n/a	mg/kg dry wt	n/a	na	--	n/a	n/a	n/a	89-112
4-Bromofluorobenzene	n/a	mg/kg dry wt	n/a	na	--	n/a	n/a	n/a	84-115
Semivolatile Organic Compounds (SVOCs) (low level) by 8270E (mg/kg) (Friedman & Bruya)									
1,2,4-Trichlorobenzene	0.01	mg/kg dry wt	1.00E-02	1.88E-03	0.0009	64-135	22-142	20	n/a
1,2-Dichlorobenzene	0.05	mg/kg dry wt	5.00E-02	2.99E-03	0.0008047	76-121	31-132	20	n/a
1,2-Diphenylhydrazine	0.0025	mg/kg dry wt	2.50E-03	9.09E+00	0.0002	68-115	49-122	20	n/a
1,3-Dichlorobenzene	0.05	mg/kg dry wt	5.00E-02	1.32E-03	0.0008	75-121	30-131	20	n/a
1,4-Dichlorobenzene	0.05	mg/kg dry wt	5.00E-02	8.07E-03	0.0009	74-117	29-129	20	n/a
1-Methylnaphthalene	0.0005	mg/kg dry wt	5.00E-04	2.26E+00	0.0001	66-107	37-119	20	n/a
2,2'-Oxybis(1-Chloropropane)	0.0025	mg/kg dry wt	2.50E-03	3.33E-01	0.0005	58-97	50-150	20	n/a
2,4,5-Trichlorophenol	0.025	mg/kg dry wt	2.50E-02	6.98E-05	0.0011	67-117	20-139	20	n/a
2,4,6-Trichlorophenol	0.025	mg/kg dry wt	2.50E-02	4.01E-01	0.0016	65-116	15-140	20	n/a
2,4-Dichlorophenol	0.025	mg/kg dry wt	2.50E-02	4.34E-03	0.0010	67-109	24-130	20	n/a
2,4-Dimethylphenol	0.025	mg/kg dry wt	2.50E-02	2.27E-03	0.0024	53-119	38-124	20	n/a
2,4-Dinitrophenol	0.075	mg/kg dry wt	7.50E-02	2.87E-02	0.0018	10-233	10-135	20	n/a
2,4-Dinitrotoluene	0.0125	mg/kg dry wt	1.25E-02	1.55E-04	0.0002	63-137	50-150	20	n/a
2,6-Dinitrotoluene	0.0125	mg/kg dry wt	1.25E-02	6.54E-02	0.0004	70-130	50-150	20	n/a
2-Chloronaphthalene	0.0025	mg/kg dry wt	2.50E-03	2.77E-01	0.0003	67-109	42-117	20	n/a
2-Chlorophenol	0.025	mg/kg dry wt	2.50E-02	1.15E-02	0.0021	58-111	30-122	20	n/a
2-Methylnaphthalene	0.0005	mg/kg dry wt	5.00E-04	3.88E-02	0.0001	67-108	29-130	20	n/a
2-Methylphenol	0.025	mg/kg dry wt	2.50E-02	6.36E-03	0.0017	65-107	38-120	20	n/a
2-Nitroaniline	0.0125	mg/kg dry wt	1.25E-02	2.92E+02	0.0031	46-148	50-150	20	n/a
2-Nitrophenol	0.025	mg/kg dry wt	2.50E-02	na	0.0022	62-119	22-137	20	n/a
3,3'-Dichlorobenzidine	0.025	mg/kg dry wt	2.50E-02	na	0.0073	9-115	12-125	20	n/a
3-Methylphenol + 4-Methylphenol	0.05	mg/kg dry wt	5.00E-02	6.24E-02	0.0026	67-109	39-121	20	n/a
3-Nitroaniline	0.25	mg/kg dry wt	2.50E-01	na	0.0010	43-133	36-110	20	n/a
4,6-Dinitro-2-methylphenol	0.075	mg/kg dry wt	7.50E-02	7.28E-03	0.0019	51-152	10-148	20	n/a
4-Bromophenyl phenyl ether	0.0025	mg/kg dry wt	2.50E-03	na	0.0002	70-130	50-150	20	n/a
4-Chloro-3-methylphenol	0.025	mg/kg dry wt	2.50E-02	2.80E-02	0.0012	70-130	49-120	20	n/a
4-Chloroaniline	0.25	mg/kg dry wt	2.50E-01	9.60E-01	0.0684	10-136	23-111	20	n/a
4-Chlorophenyl phenyl ether	0.0025	mg/kg dry wt	2.50E-03	na	0.0002	70-130	50-150	20	n/a
4-Nitroaniline	0.25	mg/kg dry wt	2.50E-01	3.05E+01	0.0031	45-150	10-150	20	n/a
4-Nitrophenol	0.075	mg/kg dry wt	7.50E-02	7.00E+00	0.0026	16-187	25-139	20	n/a
Benzoic acid	0.125	mg/kg dry wt	1.25E-01	1.69E-01	0.0066	13-223	10-101	20	n/a
Benzyl alcohol	0.025	mg/kg dry wt	2.50E-02	1.74E-02	0.0028	36-147	36-121	20	n/a
Benzyl butyl phthalate	0.025	mg/kg dry wt	2.50E-02	1.82E-04	0.0024	67-119	50-150	20	n/a
Bis(2-chloroethoxy)methane	0.0025	mg/kg dry wt	2.50E-03	na	0.0003	65-108	37-121	20	n/a
Bis(2-chloroethyl) ether	0.0025	mg/kg dry wt	2.50E-03	2.18E-05	0.0004	35-131	35-117	20	n/a
Bis(2-ethylhexyl) phthalate	0.04	mg/kg dry wt	4.00E-02	5.12E-03	0.0036	59-116	45-130	20	n/a
Carbazole	0.0025	mg/kg dry wt	2.50E-03	na	0.0002	70-130	50-150	20	n/a
Dibenzofuran	0.0025	mg/kg dry wt	2.50E-03	2.92E-02	0.0006	63-117	44-120	20	n/a
Diethyl phthalate	0.025	mg/kg dry wt	2.50E-02	3.41E-02	0.0014	64-120	48-126	20	n/a

Table C.5. Measurement Quality Objectives for Soil and Catch Basin Solids Samples

Project No. 190293, South Park Marina, Seattle, Washington

Analyte Name	MRL	Lab Reporting Units	MRL (mg/kg)	Most Stringent Screening Level for Soil (mg/kg)	MDL ^(A)	LCS/LCS %R ^(A)	MS/MSD %R ^(A)	RPD (%)	Surrogate %R ^(A)
Semivolatile Organic Compounds (SVOCs) (low level) by 8270E (mg/kg) (Friedman & Bruya)									
Dimethyl phthalate	0.025	mg/kg dry wt	2.50E-02	1.88E-02	0.0015	70-130	50-150	20	n/a
Di-n-butyl phthalate	0.025	mg/kg dry wt	2.50E-02	1.49E-02	0.0023	55-123	43-124	20	n/a
Di-n-octyl phthalate	0.025	mg/kg dry wt	2.50E-02	3.27E-01	0.0015	46-129	25-160	20	n/a
Hexachlorobenzene	0.0025	mg/kg dry wt	2.50E-03	4.01E-07	0.0005	70-130	50-150	20	n/a
Hexachlorobutadiene	0.01	mg/kg dry wt	1.00E-02	1.13E-05	0.0011	50-153	10-142	20	n/a
Hexachlorocyclopentadiene	0.0075	mg/kg dry wt	7.50E-03	1.69E-03	0.0009	46-127	10-136	20	n/a
Hexachloroethane	0.0025	mg/kg dry wt	2.50E-03	9.67E-06	0.0006	58-107	32-114	20	n/a
Isophorone	0.0025	mg/kg dry wt	2.50E-03	3.87E-02	0.0003	52-128	30-135	20	n/a
Nitrobenzene	0.0025	mg/kg dry wt	2.50E-03	4.06E-02	0.0006	63-112	42-118	20	n/a
N-Nitrosodimethylamine	0.0025	mg/kg dry wt	2.50E-03	1.05E-04	0.0005	42-110	34-109	20	n/a
N-Nitroso-di-n-propylamine	0.0025	mg/kg dry wt	2.50E-03	3.26E-05	0.0004	70-130	50-150	20	n/a
N-Nitrosodiphenylamine	0.0025	mg/kg dry wt	2.50E-03	1.61E-03	0.0003	70-130	50-150	20	n/a
Pentachlorophenol	0.0125	mg/kg dry wt	1.25E-02	1.76E-06	0.0025	60-133	23-145	20	n/a
Phenol	0.025	mg/kg dry wt	2.50E-02	4.79E-02	0.0024	47-128	39-127	20	n/a
Pyrene	0.0005	mg/kg dry wt	5.00E-04	1.37E-01	0.00004	70-130	50-150	20	n/a
2-Fluorophenol	n/a	mg/kg dry wt	--	na	--	n/a	n/a	n/a	24-111
Phenol-d6	n/a	mg/kg dry wt	--	na	--	n/a	n/a	n/a	37-116
Nitrobenzene-d5	n/a	mg/kg dry wt	--	na	--	n/a	n/a	n/a	38-117
2-Fluorobiphenyl	n/a	mg/kg dry wt	--	na	--	n/a	n/a	n/a	45-117
2,4,6-Tribromophenol	n/a	mg/kg dry wt	--	na	--	n/a	n/a	n/a	11-158
Terphenyl-d14	n/a	mg/kg dry wt	--	na	--	n/a	n/a	n/a	50-124
Polycyclic Aromatic Hydrocarbons (PAHs) (low level) by 8270E (mg/kg) (Friedman & Bruya)									
Naphthalene	0.0005	mg/kg dry wt	5.00E-04	2.07E-03	0.00013	58-108	34-118	20	n/a
Acenaphthene	0.0005	mg/kg dry wt	5.00E-04	2.77E-02	0.00007	66-112	36-125	20	n/a
Acenaphthylene	0.0005	mg/kg dry wt	5.00E-04	1.30E+00	0.00008	70-130	45-128	20	n/a
Anthracene	0.0005	mg/kg dry wt	5.00E-04	5.11E-02	0.00005	70-130	50-150	20	n/a
Benzo(a)anthracene	0.0005	mg/kg dry wt	5.00E-04	na	0.00004	70-130	50-150	20	n/a
Benzo(a)pyrene	0.0005	mg/kg dry wt	5.00E-04	1.55E-05	0.00003	68-120	50-150	20	n/a
Benzo(b)fluoranthene	0.0005	mg/kg dry wt	5.00E-04	na	0.00006	69-125	50-150	20	n/a
Benzo(g,h,i)perylene	0.0005	mg/kg dry wt	5.00E-04	6.70E-01	0.00009	64-127	33-131	20	n/a
Benzo(k)fluoranthene	0.0005	mg/kg dry wt	5.00E-04	na	0.00004	70-130	50-150	20	n/a
Chrysene	0.0005	mg/kg dry wt	5.00E-04	na	0.00002	70-130	50-150	20	n/a
Dibenz(a,h)anthracene	0.0005	mg/kg dry wt	5.00E-04	na	0.00007	67-128	44-130	20	n/a
Fluoranthene	0.0005	mg/kg dry wt	5.00E-04	8.99E-02	0.00004	70-130	50-150	20	n/a
Fluorene	0.0005	mg/kg dry wt	5.00E-04	2.94E-02	0.00005	67-117	48-121	20	n/a
Indeno(1,2,3-cd)pyrene	0.0005	mg/kg dry wt	5.00E-04	na	0.00007	67-129	41-134	20	n/a
Phenanthrene	0.0005	mg/kg dry wt	5.00E-04	1.50E+00	0.00004	70-130	50-150	20	n/a
Total cPAH TEQ			7.55E-04	1.55E-05					
Organochlorine Pesticides (low level) by 8081 (mg/kg) (Friedman & Bruya)									
4,4'-DDD	0.001	mg/kg dry wt	1.00E-03	3.64E-07	0.000168	54-137	26-155	20	n/a
4,4'-DDE	0.001	mg/kg dry wt	1.00E-03	7.63E-08	0.000129	70-130	41-118	20	n/a
4,4'-DDT	0.001	mg/kg dry wt	1.00E-03	8.14E-07	0.000155	25-169	39-123	20	n/a
Aldrin	0.0017	mg/kg dry wt	1.70E-03	2.01E-09	0.000080	63-124	44-121	20	n/a
alpha-BHC	0.0005	mg/kg dry wt	5.00E-04	9.82E-08	0.000117	58-117	45-111	20	n/a
beta-BHC	0.0005	mg/kg dry wt	5.00E-04	3.40E-06	0.000140	66-120	49-109	20	n/a
cis-Chlordane	0.0005	mg/kg dry wt	5.00E-04	5.29E-06	0.000115	70-130	44-120	20	n/a
delta-BHC	0.0005	mg/kg dry wt	5.00E-04	6.00E+00	0.000111	67-124	39-114	20	n/a
Dieldrin	0.001	mg/kg dry wt	1.00E-03	3.09E-08	0.000124	70-130	45-130	20	n/a
Endosulfan I	0.0005	mg/kg dry wt	5.00E-04	6.13E-05	0.000111	62-124	45-124	20	n/a
Endosulfan II	0.001	mg/kg dry wt	1.00E-03	6.13E-05	0.000161	42-140	40-135	20	n/a
Endosulfan Sulfate	0.001	mg/kg dry wt	1.00E-03	1.01E-01	0.000180	39-148	40-141	20	n/a
Endrin	0.001	mg/kg dry wt	1.00E-03	2.22E-05	0.000166	56-147	50-140	20	n/a
Endrin Aldehyde	0.001	mg/kg dry wt	1.00E-03	1.24E-04	0.000246	21-135	35-139	20	n/a
Endrin Ketone	0.001	mg/kg dry wt	1.00E-03	na	0.000257	46-134	41-147	20	n/a
gamma-BHC (Lindane)	0.0005	mg/kg dry wt	5.00E-04	2.05E-04	0.000109	60-121	50-117	20	n/a
Heptachlor	0.0005	mg/kg dry wt	5.00E-04	3.34E-09	0.000154	58-131	40-131	20	n/a
Heptachlor Epoxide	0.0005	mg/kg dry wt	5.00E-04	2.49E-08	0.000107	67-123	46-122	20	n/a
Methoxychlor	0.005	mg/kg dry wt	5.00E-03	1.61E-03	0.000216	44-160	28-162	20	n/a
Toxaphene	0.025	mg/kg dry wt	2.50E-02	3.07E-06	0.004581	56-145	36-133	20	n/a
trans-Chlordane	0.0017	mg/kg dry wt	1.70E-03	5.29E-06	0.000110	60-123	41-129	20	n/a
TCMX	n/a	mg/kg dry wt	n/a	na	--	n/a	n/a	n/a	41-106
DBC	n/a	mg/kg dry wt	n/a	na	--	n/a	n/a	n/a	32-150

Table C.5. Measurement Quality Objectives for Soil and Catch Basin Solids Samples

Project No. 190293, South Park Marina, Seattle, Washington

Analyte Name	MRL	Lab Reporting Units	MRL (mg/kg)	Most Stringent Screening Level for Soil (mg/kg)	MDL ^(A)	LCS/LCS %R ^(A)	MS/MSD %R ^(A)	RPD (%)	Surrogate %R ^(A)
Polychlorinated biphenyls (PCB) Aroclors (low level) by 8082 (mg/kg) (Friedman & Bruya)									
Aroclor 1016	0.004	mg/kg dry wt	4.00E-03	na	0.0007	55-137	29-125	20	n/a
Aroclor 1221	0.004	mg/kg dry wt	4.00E-03	na	0.0007	55-137	29-125	20	n/a
Aroclor 1232	0.004	mg/kg dry wt	4.00E-03	na	0.0007	55-137	29-125	20	n/a
Aroclor 1242	0.004	mg/kg dry wt	4.00E-03	na	0.0007	55-137	29-125	20	n/a
Aroclor 1248	0.004	mg/kg dry wt	4.00E-03	na	0.0007	55-137	29-125	20	n/a
Aroclor 1254	0.004	mg/kg dry wt	4.00E-03	na	0.0007	55-137	29-125	20	n/a
Aroclor 1260	0.004	mg/kg dry wt	4.00E-03	na	0.0008	51-150	25-137	20	n/a
Aroclor 1262	0.004	mg/kg dry wt	4.00E-03	na	0.0008	51-150	25-137	20	n/a
Aroclor 1268	0.004	mg/kg dry wt	4.00E-03	na	0.0008	51-150	25-137	20	n/a
Total PCB Aroclors			3.60E-02	5.49E-07					
TCMX	n/a	mg/kg dry wt	n/a	na	--	n/a	n/a	n/a	23-127
Polychlorinated Biphenyl (PCB) Congeners by 1668 (mg/kg) (Vista Analytical)									
PCB-1	0.564	pg/g dry wt	5.64E-07	na	--	--	--	--	--
PCB-2	0.719	pg/g dry wt	7.19E-07	na	--	--	--	--	--
PCB-3	0.473	pg/g dry wt	4.73E-07	na	--	--	--	--	--
PCB-4/10	0.845	pg/g dry wt	8.45E-07	na	--	--	--	--	--
PCB-5/8	1.08	pg/g dry wt	1.08E-06	na	--	--	--	--	--
PCB-6	1.24	pg/g dry wt	1.24E-06	na	--	--	--	--	--
PCB-7/9	0.75	pg/g dry wt	7.50E-07	na	--	--	--	--	--
PCB-11	9.05	pg/g dry wt	9.05E-06	na	--	--	--	--	--
PCB-12/13	1.04	pg/g dry wt	1.04E-06	na	--	--	--	--	--
PCB-14	0.417	pg/g dry wt	4.17E-07	na	--	--	--	--	--
PCB-15	0.624	pg/g dry wt	6.24E-07	na	--	--	--	--	--
PCB-16/32	1.43	pg/g dry wt	1.43E-06	na	--	--	--	--	--
PCB-17	0.669	pg/g dry wt	6.69E-07	na	--	--	--	--	--
PCB-18	1.38	pg/g dry wt	1.38E-06	na	--	--	--	--	--
PCB-19	1.11	pg/g dry wt	1.11E-06	na	--	--	--	--	--
PCB-20/21/33	2.51	pg/g dry wt	2.51E-06	na	--	--	--	--	--
PCB-22	0.845	pg/g dry wt	8.45E-07	na	--	--	--	--	--
PCB-23	1.08	pg/g dry wt	1.08E-06	na	--	--	--	--	--
PCB-24/27	1.2	pg/g dry wt	1.20E-06	na	--	--	--	--	--
PCB-25	0.89	pg/g dry wt	8.90E-07	na	--	--	--	--	--
PCB-26	0.655	pg/g dry wt	6.55E-07	na	--	--	--	--	--
PCB-28	3.05	pg/g dry wt	3.05E-06	na	--	--	--	--	--
PCB-29	0.982	pg/g dry wt	9.82E-07	na	--	--	--	--	--
PCB-30	0.638	pg/g dry wt	6.38E-07	na	--	--	--	--	--
PCB-31	1.99	pg/g dry wt	1.99E-06	na	--	--	--	--	--
PCB-34	1.28	pg/g dry wt	1.28E-06	na	--	--	--	--	--
PCB-35	1.15	pg/g dry wt	1.15E-06	na	--	--	--	--	--
PCB-36	1.08	pg/g dry wt	1.08E-06	na	--	--	--	--	--
PCB-37	0.464	pg/g dry wt	4.64E-07	na	--	--	--	--	--
PCB-38	0.823	pg/g dry wt	8.23E-07	na	--	--	--	--	--
PCB-39	1.34	pg/g dry wt	1.34E-06	na	--	--	--	--	--
PCB-40	1.11	pg/g dry wt	1.11E-06	na	--	--	--	--	--
PCB-41/64/71/72	3.07	pg/g dry wt	3.07E-06	na	--	--	--	--	--
PCB-42/59	0.825	pg/g dry wt	8.25E-07	na	--	--	--	--	--
PCB-43/49	1.94	pg/g dry wt	1.94E-06	na	--	--	--	--	--
PCB-44	1.18	pg/g dry wt	1.18E-06	na	--	--	--	--	--
PCB-45	0.603	pg/g dry wt	6.03E-07	na	--	--	--	--	--
PCB-46	0.544	pg/g dry wt	5.44E-07	na	--	--	--	--	--
PCB-47	1.5	pg/g dry wt	1.50E-06	na	--	--	--	--	--
PCB-48/75	0.712	pg/g dry wt	7.12E-07	na	--	--	--	--	--
PCB-50	0.769	pg/g dry wt	7.69E-07	na	--	--	--	--	--
PCB-51	0.804	pg/g dry wt	8.04E-07	na	--	--	--	--	--
PCB-52/69	1.46	pg/g dry wt	1.46E-06	na	--	--	--	--	--
PCB-53	1.08	pg/g dry wt	1.08E-06	na	--	--	--	--	--
PCB-54	0.639	pg/g dry wt	6.39E-07	na	--	--	--	--	--
PCB-55	0.516	pg/g dry wt	5.16E-07	na	--	--	--	--	--
PCB-56/60	1.18	pg/g dry wt	1.18E-06	na	--	--	--	--	--
PCB-57	0.859	pg/g dry wt	8.59E-07	na	--	--	--	--	--
PCB-58	0.83	pg/g dry wt	8.30E-07	na	--	--	--	--	--
PCB-61/70	1.49	pg/g dry wt	1.49E-06	na	--	--	--	--	--
PCB-62	1.23	pg/g dry wt	1.23E-06	na	--	--	--	--	--
PCB-63	0.532	pg/g dry wt	5.32E-07	na	--	--	--	--	--
PCB-65	0.982	pg/g dry wt	9.82E-07	na	--	--	--	--	--

Table C.5. Measurement Quality Objectives for Soil and Catch Basin Solids Samples

Project No. 190293, South Park Marina, Seattle, Washington

Analyte Name	MRL	Lab Reporting Units	MRL (mg/kg)	Most Stringent Screening Level for Soil (mg/kg)	MDL ^(A)	LCS/LCS %R ^(A)	MS/MSD %R ^(A)	RPD (%)	Surrogate %R ^(A)
Polychlorinated Biphenyl (PCB) Congeners by 1668 (mg/kg) (Vista Analytical)									
PCB-66/76	0.566	pg/g dry wt	5.66E-07	na	--	--	--	--	--
PCB-67	1.13	pg/g dry wt	1.13E-06	na	--	--	--	--	--
PCB-68	0.773	pg/g dry wt	7.73E-07	na	--	--	--	--	--
PCB-73	0.581	pg/g dry wt	5.81E-07	na	--	--	--	--	--
PCB-74	0.903	pg/g dry wt	9.03E-07	na	--	--	--	--	--
PCB-77	0.799	pg/g dry wt	7.99E-07	na	--	--	--	--	--
PCB-78	0.628	pg/g dry wt	6.28E-07	na	--	--	--	--	--
PCB-79	1.16	pg/g dry wt	1.16E-06	na	--	--	--	--	--
PCB-80	1.07	pg/g dry wt	1.07E-06	na	--	--	--	--	--
PCB-81	0.659	pg/g dry wt	6.59E-07	na	--	--	--	--	--
PCB-82	1.24	pg/g dry wt	1.24E-06	na	--	--	--	--	--
PCB-83	0.45	pg/g dry wt	4.50E-07	na	--	--	--	--	--
PCB-84/92	0.876	pg/g dry wt	8.76E-07	na	--	--	--	--	--
PCB-85/116	1.99	pg/g dry wt	1.99E-06	na	--	--	--	--	--
PCB-86	1.27	pg/g dry wt	1.27E-06	na	--	--	--	--	--
PCB-87/117/125	1.47	pg/g dry wt	1.47E-06	na	--	--	--	--	--
PCB-88/91	2.27	pg/g dry wt	2.27E-06	na	--	--	--	--	--
PCB-89	0.786	pg/g dry wt	7.86E-07	na	--	--	--	--	--
PCB-90/101	0.449	pg/g dry wt	4.49E-07	na	--	--	--	--	--
PCB-93	1.35	pg/g dry wt	1.35E-06	na	--	--	--	--	--
PCB-94	0.844	pg/g dry wt	8.44E-07	na	--	--	--	--	--
PCB-95/98/102	2.28	pg/g dry wt	2.28E-06	na	--	--	--	--	--
PCB-96	0.796	pg/g dry wt	7.96E-07	na	--	--	--	--	--
PCB-97	1.06	pg/g dry wt	1.06E-06	na	--	--	--	--	--
PCB-99	1.34	pg/g dry wt	1.34E-06	na	--	--	--	--	--
PCB-100	0.617	pg/g dry wt	6.17E-07	na	--	--	--	--	--
PCB-103	0.576	pg/g dry wt	5.76E-07	na	--	--	--	--	--
PCB-104	0.838	pg/g dry wt	8.38E-07	na	--	--	--	--	--
PCB-105	0.497	pg/g dry wt	4.97E-07	na	--	--	--	--	--
PCB-106/118	1.45	pg/g dry wt	1.45E-06	na	--	--	--	--	--
PCB-107/109	0.766	pg/g dry wt	7.66E-07	na	--	--	--	--	--
PCB-108/112	1.65	pg/g dry wt	1.65E-06	na	--	--	--	--	--
PCB-110	0.876	pg/g dry wt	8.76E-07	na	--	--	--	--	--
PCB-111/115	1.62	pg/g dry wt	1.62E-06	na	--	--	--	--	--
PCB-113	1.17	pg/g dry wt	1.17E-06	na	--	--	--	--	--
PCB-114	0.801	pg/g dry wt	8.01E-07	na	--	--	--	--	--
PCB-119	0.56	pg/g dry wt	5.60E-07	na	--	--	--	--	--
PCB-120	0.932	pg/g dry wt	9.32E-07	na	--	--	--	--	--
PCB-121	1.12	pg/g dry wt	1.12E-06	na	--	--	--	--	--
PCB-122	0.516	pg/g dry wt	5.16E-07	na	--	--	--	--	--
PCB-123	0.551	pg/g dry wt	5.51E-07	na	--	--	--	--	--
PCB-124	0.944	pg/g dry wt	9.44E-07	na	--	--	--	--	--
PCB-126	0.475	pg/g dry wt	4.75E-07	na	--	--	--	--	--
PCB-127	0.709	pg/g dry wt	7.09E-07	na	--	--	--	--	--
PCB-128/162	1.28	pg/g dry wt	1.28E-06	na	--	--	--	--	--
PCB-129	0.89	pg/g dry wt	8.90E-07	na	--	--	--	--	--
PCB-130	0.941	pg/g dry wt	9.41E-07	na	--	--	--	--	--
PCB-131/133	0.901	pg/g dry wt	9.01E-07	na	--	--	--	--	--
PCB-132/161	0.905	pg/g dry wt	9.05E-07	na	--	--	--	--	--
PCB-134/143	1.04	pg/g dry wt	1.04E-06	na	--	--	--	--	--
PCB-135	0.709	pg/g dry wt	7.09E-07	na	--	--	--	--	--
PCB-136	1.22	pg/g dry wt	1.22E-06	na	--	--	--	--	--
PCB-137	0.525	pg/g dry wt	5.25E-07	na	--	--	--	--	--
PCB-138/163/164	1.32	pg/g dry wt	1.32E-06	na	--	--	--	--	--
PCB-139/149	2.36	pg/g dry wt	2.36E-06	na	--	--	--	--	--
PCB-140	0.828	pg/g dry wt	8.28E-07	na	--	--	--	--	--
PCB-141	0.632	pg/g dry wt	6.32E-07	na	--	--	--	--	--
PCB-142	1.26	pg/g dry wt	1.26E-06	na	--	--	--	--	--
PCB-144	0.942	pg/g dry wt	9.42E-07	na	--	--	--	--	--
PCB-145	1.29	pg/g dry wt	1.29E-06	na	--	--	--	--	--
PCB-146/165	0.875	pg/g dry wt	8.75E-07	na	--	--	--	--	--
PCB-147	1.22	pg/g dry wt	1.22E-06	na	--	--	--	--	--
PCB-148	0.937	pg/g dry wt	9.37E-07	na	--	--	--	--	--
PCB-150	0.561	pg/g dry wt	5.61E-07	na	--	--	--	--	--
PCB-151	0.692	pg/g dry wt	6.92E-07	na	--	--	--	--	--

Table C.5. Measurement Quality Objectives for Soil and Catch Basin Solids Samples

Project No. 190293, South Park Marina, Seattle, Washington

Analyte Name	MRL	Lab Reporting Units	MRL (mg/kg)	Most Stringent Screening Level for Soil (mg/kg)	MDL ^(A)	LCS/LCS %R ^(A)	MS/MSD %R ^(A)	RPD (%)	Surrogate %R ^(A)
Polychlorinated Biphenyl (PCB) Congeners by 1668 (mg/kg) (Vista Analytical)									
PCB-152	0.866	pg/g dry wt	8.66E-07	na	--	--	--	--	--
PCB-153	0.225	pg/g dry wt	2.25E-07	na	--	--	--	--	--
PCB-154	1.74	pg/g dry wt	1.74E-06	na	--	--	--	--	--
PCB-155	0.665	pg/g dry wt	6.65E-07	na	--	--	--	--	--
PCB-156	0.378	pg/g dry wt	3.78E-07	na	--	--	--	--	--
PCB-157	0.604	pg/g dry wt	6.04E-07	na	--	--	--	--	--
PCB-158/160	0.882	pg/g dry wt	8.82E-07	na	--	--	--	--	--
PCB-159	0.378	pg/g dry wt	3.78E-07	na	--	--	--	--	--
PCB-166	0.823	pg/g dry wt	8.23E-07	na	--	--	--	--	--
PCB-167	0.595	pg/g dry wt	5.95E-07	na	--	--	--	--	--
PCB-168	0.594	pg/g dry wt	5.94E-07	na	--	--	--	--	--
PCB-169	0.731	pg/g dry wt	7.31E-07	na	--	--	--	--	--
PCB-170	0.575	pg/g dry wt	5.75E-07	na	--	--	--	--	--
PCB-171	1.2	pg/g dry wt	1.20E-06	na	--	--	--	--	--
PCB-172	1.09	pg/g dry wt	1.09E-06	na	--	--	--	--	--
PCB-173	1.37	pg/g dry wt	1.37E-06	na	--	--	--	--	--
PCB-174	1.1	pg/g dry wt	1.10E-06	na	--	--	--	--	--
PCB-175	1.14	pg/g dry wt	1.14E-06	na	--	--	--	--	--
PCB-176	0.648	pg/g dry wt	6.48E-07	na	--	--	--	--	--
PCB-177	1.13	pg/g dry wt	1.13E-06	na	--	--	--	--	--
PCB-178	0.521	pg/g dry wt	5.21E-07	na	--	--	--	--	--
PCB-179	0.43	pg/g dry wt	4.30E-07	na	--	--	--	--	--
PCB-180	0.731	pg/g dry wt	7.31E-07	na	--	--	--	--	--
PCB-181	0.917	pg/g dry wt	9.17E-07	na	--	--	--	--	--
PCB-182/187	1.38	pg/g dry wt	1.38E-06	na	--	--	--	--	--
PCB-183	1.23	pg/g dry wt	1.23E-06	na	--	--	--	--	--
PCB-184	0.764	pg/g dry wt	7.64E-07	na	--	--	--	--	--
PCB-185	0.567	pg/g dry wt	5.67E-07	na	--	--	--	--	--
PCB-186	0.592	pg/g dry wt	5.92E-07	na	--	--	--	--	--
PCB-188	0.705	pg/g dry wt	7.05E-07	na	--	--	--	--	--
PCB-189	0.704	pg/g dry wt	7.04E-07	na	--	--	--	--	--
PCB-190	0.89	pg/g dry wt	8.90E-07	na	--	--	--	--	--
PCB-191	0.681	pg/g dry wt	6.81E-07	na	--	--	--	--	--
PCB-192	0.632	pg/g dry wt	6.32E-07	na	--	--	--	--	--
PCB-193	0.669	pg/g dry wt	6.69E-07	na	--	--	--	--	--
PCB-194	0.666	pg/g dry wt	6.66E-07	na	--	--	--	--	--
PCB-195	0.397	pg/g dry wt	3.97E-07	na	--	--	--	--	--
PCB-196/203	2.5	pg/g dry wt	2.50E-06	na	--	--	--	--	--
PCB-197	0.73	pg/g dry wt	7.30E-07	na	--	--	--	--	--
PCB-198	2.52	pg/g dry wt	2.52E-06	na	--	--	--	--	--
PCB-199	1.25	pg/g dry wt	1.25E-06	na	--	--	--	--	--
PCB-200	1.06	pg/g dry wt	1.06E-06	na	--	--	--	--	--
PCB-201	1.21	pg/g dry wt	1.21E-06	na	--	--	--	--	--
PCB-202	1.09	pg/g dry wt	1.09E-06	na	--	--	--	--	--
PCB-204	1.54	pg/g dry wt	1.54E-06	na	--	--	--	--	--
PCB-205	0.826	pg/g dry wt	8.26E-07	na	--	--	--	--	--
PCB-206	1.21	pg/g dry wt	1.21E-06	na	--	--	--	--	--
PCB-207	0.887	pg/g dry wt	8.87E-07	na	--	--	--	--	--
PCB-208	0.63	pg/g dry wt	6.30E-07	na	--	--	--	--	--
PCB-209	1.83	pg/g dry wt	1.83E-06	na	--	--	--	--	--
Total PCB congeners			1.76E-04	5.49E-07	--	--	--	--	--
Total Dioxin-like PCB TEQ			6.99E-08	1.37E-09	--	--	--	--	--
Chlorinated Dioxin/Furans by 1613B (mg/kg) (Vista Analytical)									
2,3,7,8-TCDF	0.5	pg/g dry wt	5.00E-07	na	0.256	70-130	--	30	--
2,3,7,8-TCDD	0.5	pg/g dry wt	5.00E-07	na	0.273	70-130	--	30	--
1,2,3,7,8-PeCDF	2.5	pg/g dry wt	2.50E-06	na	0.724	70-130	--	30	--
2,3,4,7,8-PeCDF	2.5	pg/g dry wt	2.50E-06	na	0.736	70-130	--	30	--
1,2,3,7,8-PeCDD	2.5	pg/g dry wt	2.50E-06	na	0.608	70-130	--	30	--
1,2,3,4,7,8-HxCDF	2.5	pg/g dry wt	2.50E-06	na	0.764	70-130	--	30	--
1,2,3,6,7,8-HxCDF	2.5	pg/g dry wt	2.50E-06	na	0.924	70-130	--	30	--
2,3,4,6,7,8-HxCDF	2.5	pg/g dry wt	2.50E-06	na	0.765	70-130	--	30	--
1,2,3,7,8,9-HxCDF	2.5	pg/g dry wt	2.50E-06	na	0.737	70-130	--	30	--
1,2,3,4,7,8-HxCDD	2.5	pg/g dry wt	2.50E-06	na	0.71	70-130	--	30	--
1,2,3,6,7,8-HxCDD	2.5	pg/g dry wt	2.50E-06	na	0.668	70-130	--	30	--
1,2,3,7,8,9-HxCDD	2.5	pg/g dry wt	2.50E-06	na	0.694	70-130	--	30	--
1,2,3,4,6,7,8-HpCDF	2.5	pg/g dry wt	2.50E-06	na	0.889	70-130	--	30	--

Table C.5. Measurement Quality Objectives for Soil and Catch Basin Solids Samples

Project No. 190293, South Park Marina, Seattle, Washington

Analyte Name	MRL	Lab Reporting Units	MRL (mg/kg)	Most Stringent Screening Level for Soil (mg/kg)	MDL ^(A)	LCS/LCS %R ^(A)	MS/MSD %R ^(A)	RPD (%)	Surrogate %R ^(A)
Chlorinated Dioxin/Furans by 1613B (mg/kg) (Vista Analytical)									
1,2,3,4,7,8,9-HpCDF	2.5	pg/g dry wt	2.50E-06	na	0.765	70-130	--	30	--
1,2,3,4,6,7,8-HpCDD	2.5	pg/g dry wt	2.50E-06	na	0.655	70-130	--	30	--
OCDF	5	pg/g dry wt	5.00E-06	na	1.51	70-130	--	30	--
OCDD	5	pg/g dry wt	5.00E-06	na	1.85	70-130	--	30	--
Total chlorinated dioxins			3.78E-06	2.00E-06					
Total chlorinated furans			1.93E-06	2.00E-06					
Total dioxin/furan TEQ			5.70E-06	5.20E-06					

Notes:

^(A) – Based on current laboratory control criteria. Some values may vary slightly between instruments and can be subject to change as the laboratory updates the charted values periodically.

%R – percent recovery

LCS/LCSD – laboratory control samples and laboratory control sample duplicate

MDL – method detection limit

MRL – method reporting limit

MS/MSD - Matrix Spike and Matrix Spike Duplicate

na – screening level not available

RPD – relative percent difference

(--) – No value identified

TEQ - total toxic equivalent concentration calculated in accordance with MTCA.

mg/kg -- milligram per kilogram

ug/kg -- microgram per kilogram

pg/g -- picogram per gram

Red highlight indicates that the MRL is higher than the most stringent screening level.

Table C.6. Measurement Quality Objectives for Water Samples

Project No. 190293, South Park Marina, Seattle, Washington

Analyte Name	MRL	Lab Reporting Units	MRL (µg/L)	Most Stringent PCUL for Non-Potable Water (µg/L)	MDL ^(A)	LCS/LCS %R ^(A)	MS/MSD %R ^(A)	RPD (%)	Surrogate %R ^(A)
Metals (other than Mercury) by 6020B/200.8 (ug/L) (Friedman & Bruya)									
Arsenic	0.5	ug/L	5.00E-01	8.00E+00	0.078	80-120	70-130	20	--
Cadmium	0.2	ug/L	2.00E-01	1.19E+00	0.058	80-120	70-130	20	--
Chromium	0.5	ug/L	5.00E-01	na	0.276	80-120	70-130	20	--
Copper	0.5	ug/L	5.00E-01	3.10E+00	0.165	80-120	70-130	20	--
Lead	0.2	ug/L	2.00E-01	5.60E+00	0.057	80-120	70-130	20	--
Nickel	0.2	ug/L	2.00E-01	8.20E+00	0.051	80-120	70-130	20	--
Zinc	0.5	ug/L	5.00E-01	8.10E+01	0.241	80-120	70-130	20	--
Total and Dissolved Mercury by 1631E (ug/L) (Friedman & Bruya)									
Mercury	0.0008	ug/L	8.00E-04	2.50E-02	0.000615	78-125	71-125	20	--
Tributyl Tins by 8270D-SIM (ug/L) (Analytical Resources Inc.)									
Butyltin Ion	0.006	ug/L	6.00E-03	na	0.0058	30-160	30-160	30	-
Dibutyltin Ion	0.0077	ug/L	7.70E-03	na	0.0069	30-160	30-160	30	-
Tetrabutyltin	0.03	ug/L	3.00E-02	na	0.03	30-180	30-160	30	-
Tributyltin Ion	0.0052	ug/L	5.20E-03	4.27E-06	0.0022	30-160	30-160	30	-
Diesel- and Oil-Range Total Petroleum Hydrocarbons (TPH) by NWTPH-Dx (ug/L) (Friedman & Bruya)									
Diesel-Range Organics	50	ug/L	5.00E+01	5.00E+02	5.33	63-142	50-150	20	n/a
Motor Oil-Range Organics	250	ug/L	2.50E+02	5.00E+02	36.76	63-142	50-150	20	n/a
Gasoline-Range TPH by NWTPH-Gx (ug/L) (Friedman & Bruya)									
Gasoline-Range Organic	100	ug/L	1.00E+02	8.00E+02	15.4	69-134	50-150	20	n/a
Bromofluorobenzene	n/a	ug/L	n/a	na	--	n/a	n/a	20	50-132
Volatile Organic Compounds (VOCs) by 8260 (ug/L) (Friedman & Bruya)									
1,1,1,2-Tetrachloroethane	1	ug/L	1.00E+00	7.11E+00	0.058	70-130	50-150	20	n/a
1,1,1-Trichloroethane	1	ug/L	1.00E+00	5.45E+03	0.007	70-130	50-150	20	n/a
1,1,2,2-Tetrachloroethane	1	ug/L	1.00E+00	7.11E+00	0.058	70-130	50-150	20	n/a
1,1,2-Trichloroethane	0.5	ug/L	5.00E-01	9.00E-01	0.087	70-130	50-150	20	n/a
1,1-Dichloroethane	1	ug/L	1.00E+00	1.10E+01	0.006	70-130	50-150	20	n/a
1,1-Dichloroethene	1	ug/L	1.00E+00	1.30E+02	0.015	70-130	50-150	20	n/a
1,1-Dichloropropene	1	ug/L	1.00E+00	na	0.060	70-130	50-150	20	n/a
1,2,3-Trichlorobenzene	1	ug/L	1.00E+00	7.26E+03	0.036	70-130	50-150	20	n/a
1,2,3-Trichloropropane	1	ug/L	1.00E+00	6.77E+00	0.068	70-130	50-150	20	n/a
1,2,4-Trichlorobenzene	1	ug/L	1.00E+00	9.64E-01	0.053	70-130	50-150	20	n/a
1,2,4-Trimethylbenzene	1	ug/L	1.00E+00	2.39E+02	0.039	70-130	50-150	20	n/a
1,2-Dibromo-3-chloropropane	10	ug/L	1.00E+01	4.23E-02	0.072	70-130	50-150	20	n/a
1,2-Dibromoethane (EDB)	0.2	ug/L	2.00E-01	2.96E-01	0.022	70-130	50-150	20	n/a
1,2-Dichlorobenzene	1	ug/L	1.00E+00	4.48E+00	0.038	70-130	50-150	20	n/a
1,2-Dichloroethane (EDC)	0.2	ug/L	2.00E-01	3.48E+00	0.051	70-130	50-150	20	n/a
1,2-Dichloropropane	1	ug/L	1.00E+00	3.10E+00	0.133	70-130	50-150	20	n/a
1,3,5-Trimethylbenzene	1	ug/L	1.00E+00	1.67E+02	0.017	70-130	50-150	20	n/a
1,3-Dichlorobenzene	1	ug/L	1.00E+00	2.00E+00	0.052	70-130	50-150	20	n/a
1,3-Dichloropropane	1	ug/L	1.00E+00	2.46E+06	0.057	70-130	50-150	20	n/a
1,4-Dichlorobenzene	1	ug/L	1.00E+00	4.96E+00	0.040	70-130	50-150	20	n/a
2,2-Dichloropropane	1	ug/L	1.00E+00	na	0.137	70-130	50-150	20	n/a
2-Butanone (MEK)	20	ug/L	2.00E+01	1.71E+06	5.789	17-154	50-150	20	n/a
2-Chlorotoluene	1	ug/L	1.00E+00	6.18E+05	0.039	70-130	50-150	20	n/a
2-Hexanone	10	ug/L	1.00E+01	7.26E+03	0.247	45-138	50-150	20	n/a
4-Chlorotoluene	1	ug/L	1.00E+00	na	0.033	70-130	50-150	20	n/a
4-Methyl-2-pentanone	10	ug/L	1.00E+01	4.66E+05	0.474	68-130	50-150	20	n/a
Acetone	50	ug/L	5.00E+01	3.38E+08	7.684	10-140	50-150	20	n/a
Benzene	0.35	ug/L	3.50E-01	1.60E+00	0.017	70-130	50-150	20	n/a
Bromobenzene	1	ug/L	1.00E+00	6.33E+02	0.057	70-130	50-150	20	n/a
Bromodichloromethane	0.5	ug/L	5.00E-01	1.37E+00	0.061	70-130	50-150	20	n/a
Bromoform	5	ug/L	5.00E+00	1.20E+01	0.091	69-138	50-150	20	n/a
Bromomethane	5	ug/L	5.00E+00	1.09E+01	1.853	56-197	50-150	20	n/a
Carbon tetrachloride	0.2	ug/L	2.00E-01	3.50E-01	0.061	70-130	50-150	20	n/a
Chlorobenzene	1	ug/L	1.00E+00	2.00E+02	0.042	70-130	50-150	20	n/a
Chloroethane	1	ug/L	1.00E+00	1.47E+04	0.220	70-130	50-150	20	n/a
Chloroform	1	ug/L	1.00E+00	1.18E+00	0.049	70-130	50-150	20	n/a
Chloromethane	10	ug/L	1.00E+01	1.53E+02	0.367	70-142	50-150	20	n/a
cis-1,2-Dichloroethene	1	ug/L	1.00E+00	3.59E+05	0.015	70-130	50-150	20	n/a

Table C.6. Measurement Quality Objectives for Water Samples

Project No. 190293, South Park Marina, Seattle, Washington

Analyte Name	MRL	Lab Reporting Units	MRL (µg/L)	Most Stringent PCUL for Non-Potable Water (µg/L)	MDL ^(A)	LCS/LCS %R ^(A)	MS/MSD %R ^(A)	RPD (%)	Surrogate %R ^(A)
Volatile Organic Compounds (VOCs) by 8260 (ug/L) (Friedman & Bruya)									
cis-1,3-Dichloropropene	0.4	ug/L	4.00E-01	1.20E+00	0.058	69-131	50-150	20	n/a
Dibromochloromethane	0.5	ug/L	5.00E-01	2.20E+00	0.051	60-148	50-150	20	n/a
Dibromomethane	1	ug/L	1.00E+00	8.64E+01	0.043	70-130	50-150	20	n/a
Dichlorodifluoromethane	1	ug/L	1.00E+00	4.24E+00	0.152	46-206	50-150	20	n/a
Ethylbenzene	1	ug/L	1.00E+00	2.10E+01	0.016	70-130	50-150	20	n/a
Hexachlorobutadiene	0.2	ug/L	2.00E-01	1.00E-02	0.095	70-130	50-150	20	n/a
Hexane	5	ug/L	5.00E+00	4.08E+00	0.124	54-136	50-150	20	n/a
Isopropylbenzene	1	ug/L	1.00E+00	9.07E+02	0.011	70-130	50-150	20	n/a
m,p-Xylene	2	ug/L	2.00E+00	na	0.030	70-130	50-150	20	n/a
Methyl t-butyl ether (MTBE)	1	ug/L	1.00E+00	8.01E+02	0.004	70-130	50-150	20	n/a
Methylene chloride	5	ug/L	5.00E+00	1.00E+02	1.769	43-134	50-150	20	n/a
n-Propylbenzene	1	ug/L	1.00E+00	2.27E+03	0.027	70-130	50-150	20	n/a
o-Xylene	1	ug/L	1.00E+00	na	0.011	70-130	50-150	20	n/a
p-Isopropyltoluene	1	ug/L	1.00E+00	na	0.042	70-130	50-150	20	n/a
sec-Butylbenzene	1	ug/L	1.00E+00	9.40E+05	0.031	70-130	50-150	20	n/a
Styrene	1	ug/L	1.00E+00	8.17E+03	0.048	70-130	50-150	20	n/a
tert-Butylbenzene	1	ug/L	1.00E+00	1.24E+06	0.021	70-130	50-150	20	n/a
Tetrachloroethene	1	ug/L	1.00E+00	2.90E+00	0.023	70-130	50-150	20	n/a
Toluene	1	ug/L	1.00E+00	1.02E+02	0.018	70-130	50-150	20	n/a
trans-1,2-Dichloroethene	1	ug/L	1.00E+00	7.68E+01	0.021	70-130	50-150	20	n/a
trans-1,3-Dichloropropene	0.4	ug/L	4.00E-01	1.20E+00	0.063	70-130	50-150	20	n/a
Trichloroethene	0.5	ug/L	5.00E-01	7.00E-01	0.032	70-130	50-150	20	n/a
Trichlorofluoromethane	1	ug/L	1.00E+00	1.19E+02	0.063	70-130	50-150	20	n/a
Vinyl chloride	0.02	ug/L	2.00E-02	1.80E-01	0.017	70-130	50-150	20	n/a
1,2-Dichloroethane-d4	n/a	ug/L	n/a	na	--	n/a	n/a	n/a	85-117
Toluene-d8	n/a	ug/L	n/a	na	--	n/a	n/a	n/a	88-112
4-Bromofluorobenzene	n/a	ug/L	n/a	na	--	n/a	n/a	n/a	90-111
Semivolatile Organic Compounds (SVOCs) (low level) by 8270E (ug/L) (Friedman & Bruya)									
1,2,4-Trichlorobenzene	1	ug/L	1.00E+00	9.64E-01	0.053	70-130	50-150	20	n/a
1,2-Dichlorobenzene	1	ug/L	1.00E+00	4.48E+00	0.038	70-130	50-150	20	n/a
1,2-Diphenylhydrazine	0.1	ug/L	1.00E-01	na	0.017	70-130	50-150	20	n/a
1,3-Dichlorobenzene	1	ug/L	1.00E+00	2.00E+00	0.052	70-130	50-150	20	n/a
1,4-Dichlorobenzene	1	ug/L	1.00E+00	4.96E+00	0.040	70-130	50-150	20	n/a
1-Methylnaphthalene	0.1	ug/L	1.00E-01	8.04E+02	0.004	67-97	50-150	20	n/a
2,2'-Oxybis(1-Chloropropane)	0.1	ug/L	1.00E-01	9.00E+02	0.029	66-88	50-150	20	n/a
2,4,5-Trichlorophenol	1	ug/L	1.00E+00	3.70E-02	0.108	45-115	50-150	20	n/a
2,4,6-Trichlorophenol	1	ug/L	1.00E+00	6.00E+02	0.102	34-119	50-150	20	n/a
2,4-Dichlorophenol	1	ug/L	1.00E+00	1.00E+01	0.081	46-105	50-150	20	n/a
2,4-Dimethylphenol	1	ug/L	1.00E+00	2.91E+00	0.150	23-105	50-150	20	n/a
2,4-Dinitrophenol	3	ug/L	3.00E+00	1.00E+02	1.210	10-171	50-150	20	n/a
2,4-Dinitrotoluene	0.5	ug/L	5.00E-01	1.80E-01	0.063	70-134	50-150	20	n/a
2,6-Dinitrotoluene	0.5	ug/L	5.00E-01	7.49E+01	0.054	70-130	50-150	20	n/a
2-Chloronaphthalene	0.1	ug/L	1.00E-01	1.00E+02	0.018	70-130	50-150	20	n/a
2-Chlorophenol	1	ug/L	1.00E+00	1.70E+01	0.071	33-89	50-150	20	n/a
2-Methylnaphthalene	0.1	ug/L	1.00E-01	1.40E+01	0.004	68-98	50-150	20	n/a
2-Methylphenol	1	ug/L	1.00E+00	1.07E+01	0.061	28-65	50-150	20	n/a
2-Nitroaniline	0.5	ug/L	5.00E-01	7.35E+05	0.131	51-146	50-150	20	n/a
2-Nitrophenol	1	ug/L	1.00E+00	na	0.118	45-115	50-150	20	n/a
3,3'-Dichlorobenzidine	1	ug/L	1.00E+00	3.30E-03	0.167	70-130	50-150	20	n/a
3-Methylphenol + 4-Methylphenol	2	ug/L	2.00E+00	1.06E+02	0.117	23-55	50-150	20	n/a
3-Nitroaniline	10	ug/L	1.00E+01	na	0.178	42-134	50-150	20	n/a
4,6-Dinitro-2-methylphenol	3	ug/L	3.00E+00	7.00E+00	0.149	22-141	50-150	20	n/a
4-Bromophenyl phenyl ether	0.1	ug/L	1.00E-01	na	0.016	70-130	50-150	20	n/a
4-Chloro-3-methylphenol	1	ug/L	1.00E+00	3.60E+01	0.097	50-98	50-150	20	n/a
4-Chloroaniline	10	ug/L	1.00E+01	2.40E+03	0.104	40-141	50-150	20	n/a
4-Chlorophenyl phenyl ether	0.1	ug/L	1.00E-01	na	0.015	70-130	50-150	20	n/a
4-Nitroaniline	10	ug/L	1.00E+01	1.06E+05	0.293	42-150	50-150	20	n/a
4-Nitrophenol	3	ug/L	3.00E+00	na	0.300	10-46	50-150	20	n/a
Benzoic acid	5	ug/L	5.00E+00	5.89E+02	4.488	10-21	50-150	20	n/a
Benzyl alcohol	1	ug/L	1.00E+00	5.64E+01	0.064	14-82	50-150	20	n/a
Benzyl butyl phthalate	1	ug/L	1.00E+00	1.30E-02	0.130	61-124	50-150	20	n/a
Bis(2-chloroethoxy)methane	0.1	ug/L	1.00E-01	na	0.020	70-130	50-150	20	n/a

Table C.6. Measurement Quality Objectives for Water Samples

Project No. 190293, South Park Marina, Seattle, Washington

Analyte Name	MRL	Lab Reporting Units	MRL (µg/L)	Most Stringent PCUL for Non-Potable Water (µg/L)	MDL ^(A)	LCS/LCS %R ^(A)	MS/MSD %R ^(A)	RPD (%)	Surrogate %R ^(A)
Semivolatile Organic Compounds (SVOCs) (low level) by 8270E (ug/L) (Friedman & Bruya)									
Bis(2-chloroethyl) ether	0.1	ug/L	1.00E-01	6.00E-02	0.023	44-118	50-150	20	n/a
Bis(2-ethylhexyl) phthalate	1.6	ug/L	1.60E+00	4.60E-02	0.241	57-124	50-150	20	n/a
Carbazole	0.1	ug/L	1.00E-01	na	0.018	70-130	50-150	20	n/a
Dibenzofuran	0.1	ug/L	1.00E-01	3.09E+00	0.030	60-115	50-150	20	n/a
Diethyl phthalate	1	ug/L	1.00E+00	9.26E+01	0.074	70-130	50-150	20	n/a
Dimethyl phthalate	1	ug/L	1.00E+00	5.90E+01	0.100	70-130	50-150	20	n/a
Di-n-butyl phthalate	1	ug/L	1.00E+00	8.00E+00	0.075	49-130	50-150	20	n/a
Di-n-octyl phthalate	1	ug/L	1.00E+00	2.31E+00	0.153	45-135	50-150	20	n/a
Hexachlorobenzene	0.1	ug/L	1.00E-01	5.00E-06	0.033	70-130	50-150	20	n/a
Hexachlorobutadiene	0.2	ug/L	2.00E-01	1.00E-02	0.095	70-130	50-150	20	n/a
Hexachlorocyclopentadiene	0.3	ug/L	3.00E-01	1.00E+00	0.074	34-126	50-150	20	n/a
Hexachloroethane	0.1	ug/L	1.00E-01	2.00E-02	0.020	54-94	50-150	20	n/a
Isophorone	0.1	ug/L	1.00E-01	1.10E+02	0.013	67-114	50-150	20	n/a
Nitrobenzene	0.1	ug/L	1.00E-01	1.00E+02	0.042	65-103	50-150	20	n/a
N-Nitrosodimethylamine	0.1	ug/L	1.00E-01	3.40E-01	0.010	11-36	50-150	20	n/a
N-Nitroso-di-n-propylamine	0.1	ug/L	1.00E-01	5.80E-02	0.012	70-130	50-150	20	n/a
N-Nitrosodiphenylamine	0.1	ug/L	1.00E-01	5.54E-01	0.016	70-130	50-150	20	n/a
Pentachlorophenol	0.5	ug/L	5.00E-01	2.00E-03	0.235	28-130	50-150	20	n/a
Phenol	1	ug/L	1.00E+00	1.01E+02	0.044	10-27	50-150	20	n/a
Phenol-d6	n/a	ug/L	n/a	na	--	n/a	n/a	n/a	11-65
Terphenyl-d14	n/a	ug/L	n/a	na	--	n/a	n/a	n/a	50-150
2,4,6-Tribromophenol	n/a	ug/L	n/a	na	--	n/a	n/a	n/a	10-140
2-Fluorobiphenyl	n/a	ug/L	n/a	na	--	n/a	n/a	n/a	44-108
2-Fluorophenol	n/a	ug/L	n/a	na	--	n/a	n/a	n/a	11-65
Nitrobenzene-d5	n/a	ug/L	n/a	na	--	n/a	n/a	n/a	50-150
Polycyclic Aromatic Hydrocarbons (PAHs) (low level) by 8270E (ug/L) (Friedman & Bruya)									
Naphthalene	0.1	ug/L	1.00E-01	1.40E+00	0.005	66-94	50-150	20	n/a
Acenaphthene	0.01	ug/L	1.00E-02	5.34E+00	0.005	70-130	50-150	20	n/a
Acenaphthylene	0.01	ug/L	1.00E-02	na	0.004	70-130	50-150	20	n/a
Anthracene	0.01	ug/L	1.00E-02	2.15E+00	0.003	70-130	50-150	20	n/a
Benz(a)anthracene	0.01	ug/L	1.00E-02	1.60E-04	0.003	70-130	50-150	20	n/a
Benzo(a)pyrene	0.01	ug/L	1.00E-02	1.60E-05	0.002	70-130	50-150	20	n/a
Benzo(b)fluoranthene	0.01	ug/L	1.00E-02	1.60E-04	0.004	62-130	50-150	20	n/a
Benzo(g,h,i)perylene	0.02	ug/L	2.00E-02	na	0.005	70-130	50-150	20	n/a
Benzo(k)fluoranthene	0.01	ug/L	1.00E-02	1.60E-03	0.003	70-130	50-150	20	n/a
Chrysene	0.01	ug/L	1.00E-02	1.60E-02	0.003	70-130	50-150	20	n/a
Dibenz(a,h)anthracene	0.01	ug/L	1.00E-02	1.60E-05	0.004	70-130	50-150	20	n/a
Fluoranthene	0.01	ug/L	1.00E-02	1.82E+00	0.005	70-130	50-150	20	n/a
Fluorene	0.01	ug/L	1.00E-02	3.67E+00	0.003	70-130	50-150	20	n/a
Indeno(1,2,3-cd)pyrene	0.01	ug/L	1.00E-02	1.60E-04	0.005	70-130	50-150	20	n/a
Phenanthrene	0.01	ug/L	1.00E-02	na	0.006	70-130	50-150	20	n/a
Pyrene	0.01	ug/L	1.00E-02	2.01E+00	0.005	70-130	50-150	20	n/a
Total cPAH TEQ			1.51E-02	9.69E-03					
Organochlorine Pesticides (low level) by 8081 (ug/L) (Friedman & Bruya)									
4,4'-DDD	0.00125	ug/L	1.25E-03	7.90E-06	0.00047	31-161	50-150	20	n/a
4,4'-DDE	0.00125	ug/L	1.25E-03	8.80E-07	0.00040	48-114	50-150	20	n/a
4,4'-DDT	0.00125	ug/L	1.25E-03	1.20E-06	0.00045	50-121	50-150	20	n/a
Aldrin	0.000625	ug/L	6.25E-04	4.10E-08	0.00028	43-98	50-150	20	n/a
alpha-BHC	0.000625	ug/L	6.25E-04	4.80E-05	0.00027	41-101	50-150	20	n/a
beta-BHC	0.000625	ug/L	6.25E-04	1.40E-03	0.00034	49-104	50-150	20	n/a
cis-Chlordane	0.000625	ug/L	6.25E-04	1.03E-04	0.00038	47-106	50-150	20	n/a
delta-BHC	0.000625	ug/L	6.25E-04	na	0.00018	45-108	50-150	20	n/a
Dieldrin	0.00125	ug/L	1.25E-03	1.20E-06	0.00038	54-115	50-150	20	n/a
Endosulfan I	0.000625	ug/L	6.25E-04	8.70E-03	0.00034	10-140	50-150	20	n/a
Endosulfan II	0.00125	ug/L	1.25E-03	8.70E-03	0.00040	10-144	50-150	20	n/a
Endosulfan Sulfate	0.00125	ug/L	1.25E-03	1.00E+01	0.00048	58-110	50-150	20	n/a
Endrin	0.00125	ug/L	1.25E-03	2.00E-03	0.00029	39-136	50-150	20	n/a
Endrin Aldehyde	0.00125	ug/L	1.25E-03	3.50E-02	0.00048	47-113	50-150	20	n/a
Endrin Ketone	0.00125	ug/L	1.25E-03	na	0.00048	57-120	50-150	20	n/a
gamma-BHC (Lindane)	0.000625	ug/L	6.25E-04	1.26E-01	0.00034	43-105	50-150	20	n/a

Table C.6. Measurement Quality Objectives for Water Samples

Project No. 190293, South Park Marina, Seattle, Washington

Analyte Name	MRL	Lab Reporting Units	MRL (µg/L)	Most Stringent PCUL for Non-Potable Water (µg/L)	MDL ^(A)	LCS/LCS %R ^(A)	MS/MSD %R ^(A)	RPD (%)	Surrogate %R ^(A)
Heptachlor	0.000625	ug/L	6.25E-04	3.40E-07	0.00031	39-104	50-150	20	n/a
Heptachlor Epoxide	0.000625	ug/L	6.25E-04	2.40E-06	0.00036	52-110	50-150	20	n/a
Methoxychlor	0.00625	ug/L	6.25E-03	2.00E-02	0.00055	51-126	50-150	20	n/a
Organochlorine Pesticides (low level) by 8081 (ug/L) (Friedman & Bruya)									
Toxaphene	0.0625	ug/L	6.25E-02	3.20E-05	0.03310	56-123	50-150	20	n/a
trans-Chlordane	0.000625	ug/L	6.25E-04	1.03E-04	0.00039	39-119	50-150	20	n/a
TCMX	n/a	ug/L	n/a	na	--	n/a	n/a	n/a	20-121
DBC	n/a	ug/L	n/a	na	--	n/a	n/a	n/a	18-174
Polychlorinated biphenyl (PCB) Aroclors (low level) by 8082 (ug/L) (Friedman & Bruya)									
Aroclor 1016	0.0035	ug/L	3.50E-03	na	0.0017	25-111	50-150	20	n/a
Aroclor 1221	0.0035	ug/L	3.50E-03	na	0.0017	--	--	20	n/a
Aroclor 1232	0.0035	ug/L	3.50E-03	na	0.0017	--	--	20	n/a
Aroclor 1242	0.0035	ug/L	3.50E-03	na	0.0017	--	--	20	n/a
Aroclor 1248	0.0035	ug/L	3.50E-03	na	0.0017	--	--	20	n/a
Aroclor 1254	0.0035	ug/L	3.50E-03	na	0.0017	--	--	20	n/a
Aroclor 1260	0.0035	ug/L	3.50E-03	na	0.0013	23-123	50-150	20	n/a
Aroclor 1262	0.0035	ug/L	3.50E-03	na	0.0013	--	--	20	n/a
Aroclor 1268	0.0035	ug/L	3.50E-03	na	0.0013	--	--	20	n/a
TCMX	n/a	ug/L	n/a	na	--	n/a	n/a	n/a	24-127
Total PCB Aroclors			3.15E-02	7.00E-06					
Chlorinated Dioxin/Furans by 1613B (ug/L) (Vista Analytical)									
2,3,7,8-TCDF	5.00	pg/L	5.00E-06	na	1.78	70-130	-	30	-
2,3,7,8-TCDD	5.00	pg/L	5.00E-06	na	1.78	70-130	-	30	-
1,2,3,7,8-PeCDF	25.00	pg/L	2.50E-05	na	5.01	70-130	-	30	-
2,3,4,7,8-PeCDF	25.00	pg/L	2.50E-05	na	4.99	70-130	-	30	-
1,2,3,7,8-PeCDD	25.00	pg/L	2.50E-05	na	5.63	70-130	-	30	-
1,2,3,4,7,8-HxCDF	25.00	pg/L	2.50E-05	na	6.87	70-130	-	30	-
1,2,3,6,7,8-HxCDF	25.00	pg/L	2.50E-05	na	6.31	70-130	-	30	-
2,3,4,6,7,8-HxCDF	25.00	pg/L	2.50E-05	na	5.8	70-130	-	30	-
1,2,3,7,8,9-HxCDF	25.00	pg/L	2.50E-05	na	5.33	70-130	-	30	-
1,2,3,4,7,8-HxCDD	25.00	pg/L	2.50E-05	na	4.18	70-130	-	30	-
1,2,3,6,7,8-HxCDD	25.00	pg/L	2.50E-05	na	3.51	70-130	-	30	-
1,2,3,7,8,9-HxCDD	25.00	pg/L	2.50E-05	na	4.46	70-130	-	30	-
1,2,3,4,6,7,8-HpCDF	25.00	pg/L	2.50E-05	na	5.96	70-130	-	30	-
1,2,3,4,7,8,9-HpCDF	25.00	pg/L	2.50E-05	na	5.34	70-130	-	30	-
1,2,3,4,6,7,8-HpCDD	25.00	pg/L	2.50E-05	na	4.84	70-130	-	30	-
OCDF	50.00	pg/L	5.00E-05	na	11.3	70-130	-	30	-
OCDD	50.00	pg/L	5.00E-05	na	16.4	70-130	-	30	-
Total chlorinated dioxins			3.78E-05	na					
Total chlorinated furans			1.93E-05	na					
Total dioxin/furan TEQ			5.70E-05	2.76E-08					

Notes:

^(A) – Based on current laboratory control criteria. Some values may vary slightly between instruments and can be subject to change as the laboratory updates the charted values periodically.

%R – percent recovery

LCS/LCSD – laboratory control samples and laboratory control sample duplicate

MDL – method detection limit

MRL – method reporting limit

MS/MSD - Matrix Spike and Matrix Spike Duplicate

na – screening level not available

RPD – relative percent difference

(--) – No value identified

TEQ - total toxic equivalent concentration calculated in accordance with MTCA.

pg/L -- picogram per liter

ug/L – microgram per liter

ug/L -- microgram per liter

Red highlight indicates that the MRL is higher than the most stringent screening level.

Table C.7. Measurement Quality Objectives for Soil Gas Samples

Project No. 190293, South Park Marina, Seattle, Washington

Analyte Name	MRL	Lab Reporting Units	MRL (µg/m ³)	Most Stringent Sub-Slab Soil Gas Screening Level for Commercial Use ^(B) (µg/m ³)	Most Stringent Indoor Air Cleanup Level for Commercial Use ^(B) (µg/m ³)	MDL ^(A)	LCS/LCS %R ^(A)	MS/MSD %R ^(A)	RPD (%)	Surrogate %R ^(A)
Volatile Organic Compounds (VOCs) by EPA Method TO15 (µg/m³) (Friedman & Bruya)										
1,1,1-Trichloroethane	0.55	µg/m ³	5.50E-01	2.00E+01	6.02E-01	0.04	70-130	--	30	n/a
1,1,2,2-Tetrachloroethane	0.14	µg/m ³	1.40E-01	5.39E+00	1.66E-01	0.05	70-130	--	30	n/a
1,1,2-Trichloroethane	0.055	µg/m ³	5.50E-02	2.00E+01	6.02E-01	0.03	70-130	--	30	n/a
1,1-Dichloroethane	0.4	µg/m ³	4.00E-01	2.00E+02	6.02E+00	0.02	70-130	--	30	n/a
1,1-Dichloroethene	0.4	µg/m ³	4.00E-01	2.52E+04	7.69E+02	0.06	70-130	--	30	n/a
1,2,4-Trichlorobenzene	0.74	µg/m ³	7.40E-01	2.52E+02	7.69E+00	0.51	70-130	--	30	n/a
1,2,4-Trimethylbenzene	2.5	µg/m ³	2.50E+00	7.65E+03	2.31E+02	3.61	70-130	--	30	n/a
1,2-Dibromoethane (EDB)	0.077	µg/m³	7.70E-02	5.39E-01	1.60E-02	0.05	70-130	--	30	n/a
1,2-Dichlorobenzene	0.6	µg/m ³	6.00E-01	2.52E+04	7.69E+02	0.12	70-130	--	30	n/a
1,2-Dichloroethane (EDC)	0.04	µg/m ³	4.00E-02	1.23E+01	3.70E-01	0.03	70-130	--	30	n/a
1,2-Dichloropropane	0.23	µg/m ³	2.30E-01	8.86E+01	2.60E+00	0.08	70-130	--	30	n/a
1,3,5-Trimethylbenzene	2.5	µg/m ³	2.50E+00	7.65E+03	2.31E+02	3.82	70-130	--	30	n/a
1,3-Butadiene	0.044	µg/m ³	4.40E-02	na	na	0.02	70-130	--	30	n/a
1,3-Dichlorobenzene	0.6	µg/m ³	6.00E-01	na	na	0.11	70-130	--	30	n/a
1,4-Dichlorobenzene	0.23	µg/m ³	2.30E-01	2.93E+01	8.75E-01	0.13	70-130	--	30	n/a
1,4-Dioxane	0.36	µg/m ³	3.60E-01	6.55E+01	1.93E+00	0.08	70-130	--	30	n/a
2,2,4-Trimethylpentane	4.7	µg/m ³	4.70E+00	na	na	2.68	70-130	--	30	n/a
2-Butanone (MEK)	2.9	µg/m ³	2.90E+00	6.39E+05	1.92E+04	3.08	70-130	--	30	n/a
2-Chlorotoluene	5.2	µg/m ³	5.20E+00	na	na	4.90	70-130	--	30	n/a
2-Hexanone	4.1	µg/m ³	4.10E+00	3.87E+03	1.15E+02	2.20	70-130	--	30	n/a
2-Propanol	8.6	µg/m ³	8.60E+00	na	na	2.02	70-130	--	30	n/a
3-Chloropropene	1.6	µg/m ³	1.60E+00	5.39E+01	1.60E+00	2.46	70-130	--	30	n/a
4-Ethyltoluene	2.5	µg/m ³	2.50E+00	na	na	4.53	70-130	--	30	n/a
4-Methyl-2-pentanone	4.1	µg/m ³	4.10E+00	3.87E+05	1.15E+04	2.25	70-130	--	30	n/a
Acetone	4.8	µg/m ³	4.80E+00	3.95E+06	1.19E+05	1.85	70-130	--	30	n/a
Acrolein	0.11	µg/m³	1.10E-01	2.52E+00	7.69E-02	0.05	70-130	--	30	n/a
Benzene	0.32	µg/m ³	3.20E-01	4.24E+01	1.23E+00	0.03	70-130	--	30	n/a
Benzyl chloride	0.052	µg/m ³	5.20E-02	6.55E+00	1.96E-01	0.03	70-130	--	30	n/a
Bromodichloromethane	0.067	µg/m ³	6.70E-02	8.86E+00	2.60E-01	0.04	70-130	--	30	n/a
Bromoform	2.1	µg/m ³	2.10E+00	2.93E+02	8.75E+00	0.51	70-130	--	30	n/a
Bromomethane	2.3	µg/m ³	2.30E+00	6.39E+02	1.92E+01	3.82	70-130	--	30	n/a
Butane	4.8	µg/m ³	4.80E+00	na	na	2.14	70-130	--	30	n/a
Carbon disulfide	6.2	µg/m ³	6.20E+00	9.25E+04	2.69E+03	3.62	70-130	--	30	n/a
Carbon tetrachloride	0.31	µg/m ³	3.10E-01	5.39E+01	1.60E+00	0.07	70-130	--	30	n/a
CFC-113	0.77	µg/m ³	7.70E-01	na	na	0.30	70-130	--	30	n/a
Chlorobenzene	0.46	µg/m ³	4.60E-01	6.39E+03	1.92E+02	0.12	70-130	--	30	n/a
Chloroethane	2.6	µg/m ³	2.60E+00	1.26E+06	3.84E+04	0.08	70-130	--	30	n/a
Chloroform	0.049	µg/m ³	4.90E-02	1.39E+01	4.18E-01	0.04	70-130	--	30	n/a
Chloromethane	3.7	µg/m ³	3.70E+00	1.18E+04	3.46E+02	0.06	70-130	--	30	n/a
cis-1,2-Dichloroethene	0.4	µg/m ³	4.00E-01	na	na	0.04	70-130	--	30	n/a
cis-1,3-Dichloropropene	0.45	µg/m ³	4.50E-01	na	na	0.20	70-130	--	30	n/a
Cyclohexane	6.9	µg/m ³	6.90E+00	7.65E+05	2.31E+04	3.11	70-130	--	30	n/a
Dibromochloromethane	0.085	µg/m ³	8.50E-02	na	na	0.05	70-130	--	30	n/a
Dichlorodifluoromethane	0.49	µg/m ³	4.90E-01	1.26E+04	3.84E+02	0.28	70-130	--	30	n/a
Ethanol	7.5	µg/m ³	7.50E+00	na	na	4.23	70-130	--	30	n/a
Ethyl acetate	7.2	µg/m ³	7.20E+00	9.25E+03	2.69E+02	3.23	70-130	--	30	n/a
Ethylbenzene	0.43	µg/m ³	4.30E-01	1.26E+05	3.84E+03	0.13	70-130	--	30	n/a
F-114	0.7	µg/m ³	7.00E-01	na	na	0.17	70-130	--	30	n/a
Gasoline Range Organics	--	µg/m ³	--	na	na	29.66	70-130	--	30	n/a
Heptane	4.1	µg/m ³	4.10E+00	5.13E+04	1.54E+03	2.09	70-130	--	30	n/a
Hexachlorobutadiene	0.21	µg/m ³	2.10E-01	1.46E+01	4.38E-01	0.11	70-130	--	30	n/a
Hexane	3.5	µg/m ³	3.50E+00	9.25E+04	2.69E+03	3.33	70-130	--	30	n/a
Isopropylbenzene	2.5	µg/m ³	2.50E+00	5.13E+04	1.54E+03	5.26	70-130	--	30	n/a
m,p-Xylene	0.87	µg/m ³	8.70E-01	na	na	0.26	70-130	--	30	n/a
Methyl Methacrylate	4.1	µg/m ³	4.10E+00	9.25E+04	2.69E+03	2.55	70-130	--	30	n/a
Methyl t-butyl ether	1.8	µg/m ³	1.80E+00	1.23E+03	3.70E+01	3.73	70-130	--	30	n/a
Methylene chloride	35	µg/m ³	3.50E+01	8.47E+03	2.53E+02	3.18	70-130	--	30	n/a
Naphthalene	0.26	µg/m ³	2.60E-01	9.63E+00	2.83E-01	0.03	70-130	--	30	n/a
Nonane	5.2	µg/m ³	5.20E+00	na	na	3.62	70-130	--	30	n/a
o-Xylene	0.43	µg/m ³	4.30E-01	na	na	0.15	70-130	--	30	n/a
Pentane	3	µg/m ³	3.00E+00	na	na	3.20	70-130	--	30	n/a
Propene	1.2	µg/m ³	1.20E+00	na	na	0.43	70-130	--	30	n/a
Propylbenzene	2.5	µg/m ³	2.50E+00	1.26E+05	3.84E+03	4.31	70-130	--	30	n/a
Styrene	0.85	µg/m ³	8.50E-01	1.26E+05	3.84E+03	0.15	70-130	--	30	n/a
t-Butyl alcohol (TBA)	12	µg/m ³	1.20E+01	na	na	3.27	70-130	--	30	n/a

Table C.7. Measurement Quality Objectives for Soil Gas Samples

Project No. 190293, South Park Marina, Seattle, Washington

Analyte Name	MRL	Lab Reporting Units	MRL (µg/m3)	Most Stringent Sub-Slab Soil Gas Screening Level for Commercial Use ^(B) (µg/m3)	Most Stringent Indoor Air Cleanup Level for Commercial Use ^(B) (µg/m3)	MDL ^(A)	LCS/LCS %R ^(A)	MS/MSD %R ^(A)	RPD (%)	Surrogate %R ^(A)
Volatile Organic Compounds (VOCs) by EPA Method TO15 (µg/m³) (Friedman & Bruya)										
Tetrachloroethene	6.8	µg/m ³	6.80E+00	1.23E+03	3.70E+01	0.14	70-130	--	30	n/a
Tetrahydrofuran	0.59	µg/m ³	5.90E-01	2.52E+05	7.69E+03	0.16	70-130	--	30	n/a
Toluene	19	µg/m ³	1.90E+01	6.39E+05	1.92E+04	0.08	70-130	--	30	n/a
trans-1,2-Dichloroethene	0.4	µg/m ³	4.00E-01	5.13E+03	1.54E+02	0.03	70-130	--	30	n/a
trans-1,3-Dichloropropene	0.45	µg/m ³	4.50E-01	na	na	0.06	70-130	--	30	n/a
Trichloroethene	0.11	µg/m ³	1.10E-01	4.24E+01	1.29E+00	0.05	70-130	--	30	n/a
Trichlorofluoromethane	2.2	µg/m ³	2.20E+00	9.25E+04	2.69E+03	0.20	70-130	--	30	n/a
Vinyl acetate	7	µg/m ³	7.00E+00	2.52E+04	7.69E+02	3.56	70-130	--	30	n/a
Vinyl Bromide	0.44	µg/m ³	4.40E-01	2.16E+01	6.42E-01	0.10	70-130	--	30	n/a
Vinyl chloride	0.26	µg/m ³	2.60E-01	3.66E+01	1.09E+00	0.02	70-130	--	30	n/a
4-Bromofluorobenzene	n/a	µg/m ³	n/a	na	na	n/a	n/a	--	30	70-130
Aliphatic and Aromatic Hydrocarbons (APH) by MA-APH Method (µg/m³) (Friedman & Bruya)										
EC5-8 Aliphatics	75	µg/m ³	7.50E+01	na	na	n/a	70-130	--	30	70-130
EC9-12 Aliphatics	25	µg/m ³	2.50E+01	na	na	n/a	70-130	--	30	70-130
EC8-10 Aromatics	25	µg/m ³	2.50E+01	na	na	n/a	70-130	--	30	70-130
Total Petroleum Hydrocarbons ⁽¹⁾		µg/m ³	1.25E+02	1.50E+03	1.18E+03					
4-Bromofluorobenzene	n/a	µg/m ³	n/a		na	n/a	n/a	--	n/a	70-130

Notes:

^(A) – Based on current laboratory control criteria. Some values may vary slightly between instruments and can be subject to change as the laboratory updates the charted values periodically.

^(B) – The MTCA Method B subslab soil gas screening levels and indoor air cleanup levels have been adjusted to a commercial exposure scenario. For non-carcinogenic compounds, the average body weight was adjusted from 16 kg to 70 kg, and the breathing rate was adjusted from 10 m³/day to 20 m³/day. For both non-carcinogens and carcinogens, the exposure frequency was adjusted to from 1.0 to 0.26 (representing 45 hours per week for 50 weeks per year) in accordance with Ecology guidance (2022).

%R – percent recovery

LCS/LCSD – laboratory control samples and laboratory control sample duplicate

MDL – method detection limit

MRL – method reporting limit

MS/MSD - Matrix Spike and Matrix Spike Duplicate

na – screening level not available

RPD – relative percent difference

µg/m3 -- microgram per cubic meter

Red highlight indicates that the MRL is higher than the most stringent indoor air cleanup level.

Table C.8. QC Parameters Associated with Precision, Accuracy, Representativeness, Comparability, Completeness, and Sensitivity (PARCCS)

Project No. 190293, South Park Marina, Seattle, Washington

Data Quality Indicators	QC Parameters
Precision	RPD values of:
	(1) Blank Spikes
	(2) MS/MSD
	(3) Field Duplicates
Accuracy/Bias	Percent Recovery (%R) or Relative Percent Difference (%RPD) values of:
	(1) Initial Calibration and Calibration Verification
	(2) Blank Spikes
	(3) MS
	(4) Surrogate Spikes
	Results of:
	(1) Instrument and Calibration Blank
	(2) Method (Preparation) Blank
	(3) Trip Blank
	(4) Equipment Rinsate Blank (if appropriate)
Representativeness	Results of All Blanks
	Sample Integrity (Chain-of-Custody and Sample Receipt Forms)
	Holding Times
Comparability	Sample-specific Reporting Limits
	Sample Collection Methods
	Laboratory Analytical Methods
Completeness	Data Qualifiers
	Laboratory Deliverables
	Requested/Reported Valid Results
Sensitivity	MDLs and MRLs

Notes:

MDL – method detection limit

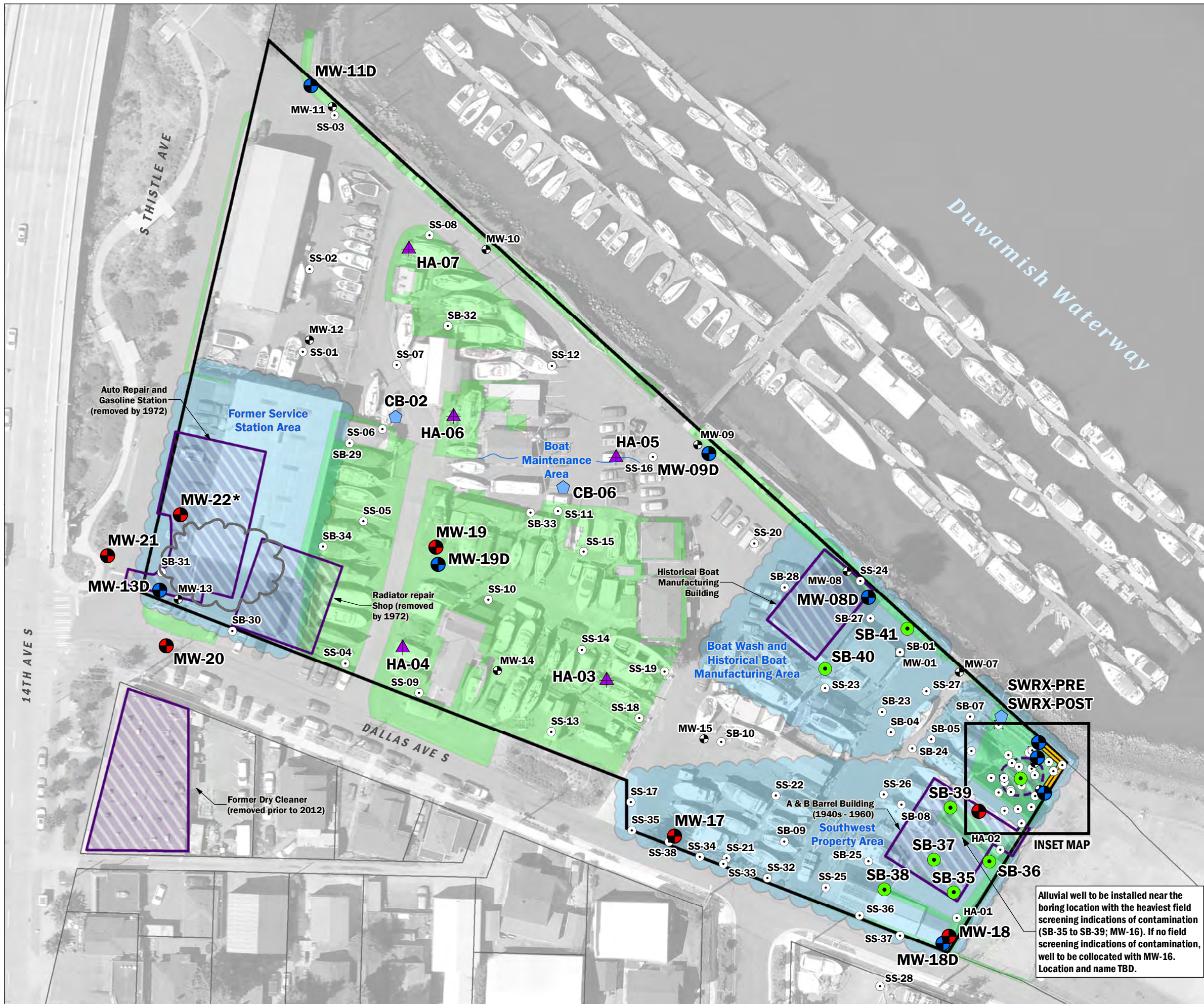
MRL – method reporting limit

MS/MSD – matrix spike/matrix spike duplicate

QC - quality control

APPENDIX C

Figures



Proposed Phase 2 Exploration

- Hand Auger
- Alluvial Unit Well
- Fill Unit Well
- Soil Boring
- Stormwater and CB Solids Sampling Locations
- Soil Gas Samples

Historical Explorations

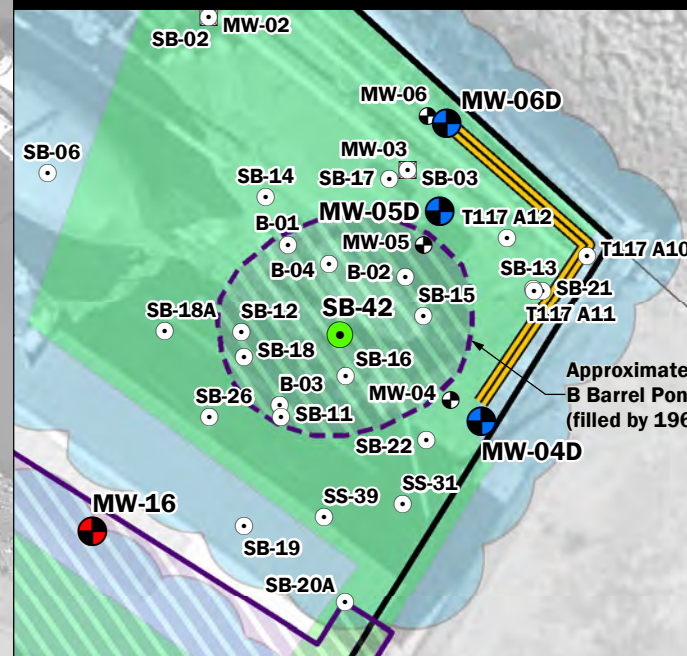
- Soil Boring; Soil; Hand Auger Boring; Surface Soil
- Fill Unit Monitoring Well
- Alluvium Unit Monitoring Well (SAIC 2007; decommissioned)

Site Features

- Site Boundary
- Area of Investigation
- Pervious Surface (gravel)
- Historical Site Feature
- Sheet Pile Wall
- King County Tax Parcel

Notes:
 - Site features are approximate.
 *If field observations indicate that this boring is impacted, a well will not be installed at this location. Rather, a step-out boring will be placed further downgradient, as discussed in Section 7, and the step-out boring will be completed as a Fill unit well.

INSET MAP



Alluvial well to be installed near the boring location with the heaviest field screening indications of contamination (SB-35 to SB-39; MW-16). If no field screening indications of contamination, well to be collocated with MW-16. Location and name TBD.

Proposed Explorations - Phase 2
 RIWP Addendum
 South Park Marina
 8604 Dallas Avenue South
 Seattle, WA

Aspect CONSULTING	AUG-2022	BY: AY / TDR	FIGURE NO. C.1
	PROJECT NO. 190293	REVISED BY: NLK	

S:\Data\1\Projects_8\Seattle\190293\Delivered\RIWP_2021\Facilities\Map\Map_171_Proposed Phase 2 Exploration Map.mxd | Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet | Date Saved: 8/22/2022 | User: mcohen | Print Date: 8/22/2022

APPENDIX C

Attachments

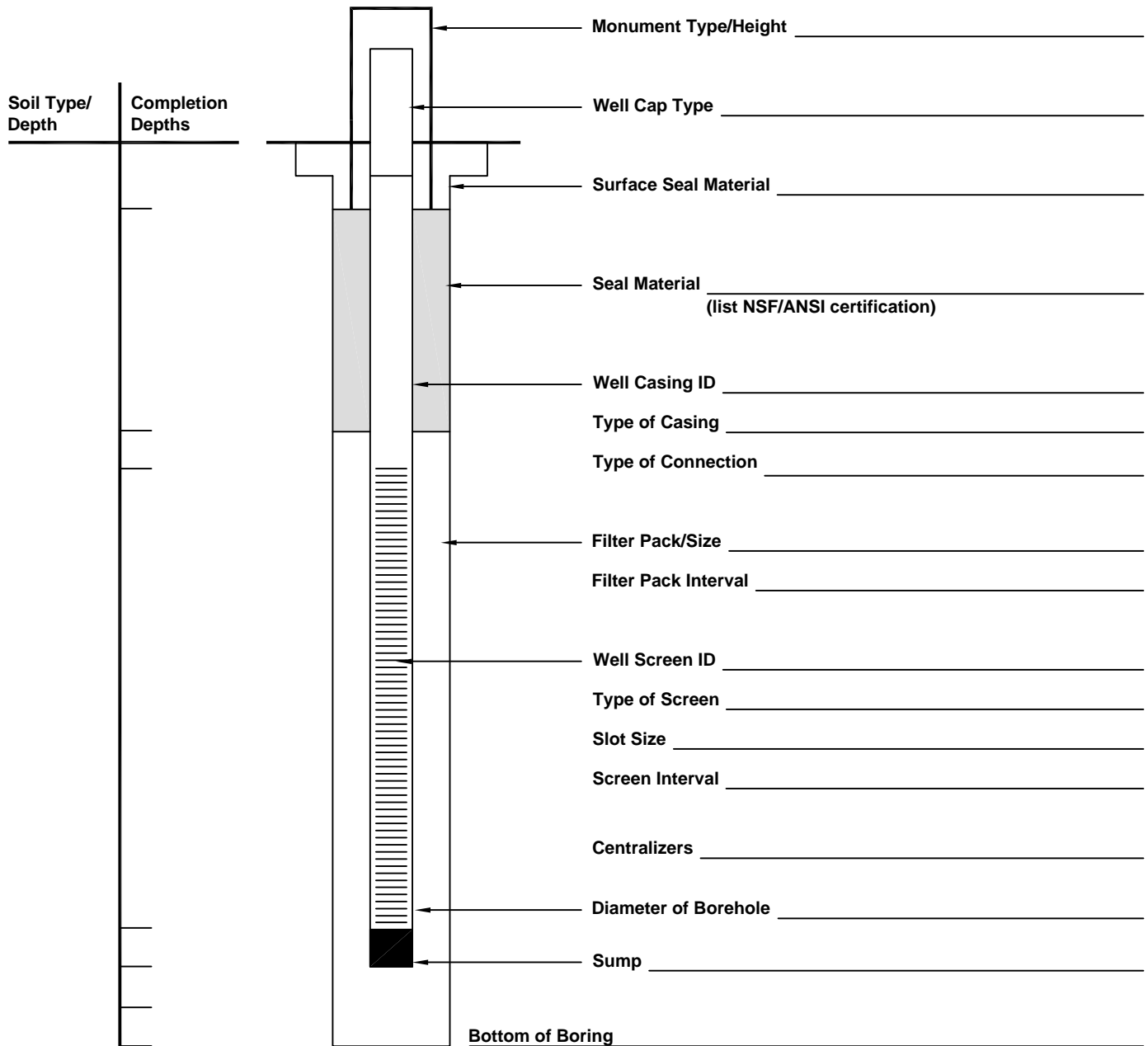
BORING LOG

LOCATION OF BORING				PROJECT NO.				BORING NO.																																											
				PROJECT NAME																																															
SKETCH OF LOCATION 				DRILLING METHOD:				LOGGED BY:																																											
				DRILLER:				SAMPLING METHOD:																																											
				HAMMER WEIGHT/SAMPLER DIAMETER				OBSERVATION WELL INSTALL YES ____ NO ____				START		FINISH																																					
				WATER LEVEL								TIME		TIME																																					
				TIME								DATE		DATE																																					
				DATE								DATE		DATE																																					
				DATUM				GRADE ELEV.				CASING DEPTH																																							
				FIELDSCREENING				SAMPLE NO.				SURFACE CONDITION																																							
				ENV. SAMPLE TIME		PID (ppm)		SHEEN		SAMPLE TYPE		SAMPLE DEPTH		INCHES DRIVEN INCHES RECY'D		DEPTH IN FEET PENETRATION RESISTANCE USCS SUMMARY DESCRIPTION: Density, moisture, color, minor, MAJOR CONSTITUENT. NON-SOIL SUBSTANCES: Odor, staining, sheen, scrap, slag, etc. DRILL ACTION																																			
												1																																							
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As-Built Well Completion Diagram

Project Number:	Boring/Monitoring Well Number:	Sheet:	of:
Project:	Location:		
Elevation:	Drilling Contractor:		
Drilling Method and Equipment Used:	Logged By:		
Water Levels:	Completion Start:	Finish:	

Ecology Well ID _____



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earth+water
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Materials Used:	Screen:
Sand:	Bentonite:
Blank:	Monument:
Concrete:	Other:

APPENDIX D

Report Limitations and Guidelines for Use

REPORT LIMITATIONS AND USE GUIDELINES

Reliance Conditions for Third Parties

This report was prepared for the exclusive use of the Client. No other party may rely on this report or the product of our services without the express written consent of Aspect Consulting, LLC (Aspect). This limitation is to provide our firm with reasonable protection against liability claims by third parties with whom there would otherwise be no contractual conditions or limitations and guidelines governing their use of the report. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and recognized standards of professionals in the same locality and involving similar conditions.

Services for Specific Purposes, Persons and Projects

Aspect has performed the services in general accordance with the scope and limitations of our Agreement. This report has been prepared for the exclusive use of the Client and their authorized third parties, approved in writing by Aspect. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

This report is not, and should not, be construed as a warranty or guarantee regarding the presence or absence of hazardous substances or petroleum products that may affect the subject property. The report is not intended to make any representation concerning title or ownership to the subject property. If real property records were reviewed, they were reviewed for the sole purpose of determining the subject property's historical uses. All findings, conclusions, and recommendations stated in this report are based on the data and information provided to Aspect, current use of the subject property, and observations and conditions that existed on the date and time of the report.

Aspect structures its services to meet the specific needs of our clients. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and subject property. This report should not be applied for any purpose or project except the purpose described in the Agreement.

This Report Is Project-Specific

Aspect considered a number of unique, project-specific factors when establishing the Scope of Work for this project and report. You should not rely on this report if it was:

- Not prepared for you
- Not prepared for the specific purpose identified in the Agreement
- Not prepared for the specific real property assessed
- Completed before important changes occurred concerning the subject property, project or governmental regulatory actions

If changes are made to the project or subject property after the date of this report, Aspect should be retained to assess the impact of the changes with respect to the conclusions contained in the report.

Geoscience Interpretations

The geoscience practices (geotechnical engineering, geology, and environmental science) require interpretation of spatial information that can make them less exact than other engineering and natural science disciplines. It is important to recognize this limitation in evaluating the content of the report. If you are unclear how these "Report Limitations and Use Guidelines" apply to your project or site, you should contact Aspect.

Discipline-Specific Reports Are Not Interchangeable

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually address any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding the subject property.

Environmental Regulations Are Not Static

Some hazardous substances or petroleum products may be present near the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or petroleum products or do not otherwise present potential liability. Changes may occur in the standards for appropriate inquiry or regulatory definitions of hazardous substance and petroleum products; therefore, this report has a limited useful life.

Property Conditions Change Over Time

This report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time (for example, Phase I ESA reports are applicable for 180 days), by events such as a change in property use or occupancy, or by natural events, such as floods, earthquakes, slope failure or groundwater fluctuations. If more than six months have passed since issuance of our report, or if any of the described events may have occurred following the issuance of the report, you should contact Aspect so that we may evaluate whether changed conditions affect the continued reliability or applicability of our conclusions and recommendations.

Phase I ESAs – Uncertainty Remains After Completion

Aspect has performed the services in general accordance with the scope and limitations of our Agreement and the current version of the “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process”, ASTM E1527, and U.S. Environmental Protection Agency (EPA)'s Federal Standard 40 CFR Part 312 "Innocent Landowners, Standards for Conducting All Appropriate Inquiries".

No ESA can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with subject property. Performance of an ESA study is intended to reduce, but not eliminate, uncertainty regarding the potential for environmental conditions affecting the subject property. There is always a potential that areas with contamination that were not identified during this ESA exist at the subject property or in the study area. Further evaluation of such potential would require additional research, subsurface exploration, sampling and/or testing.

Historical Information Provided by Others

Aspect has relied upon information provided by others in our description of historical conditions and in our review of regulatory databases and files. The available data does not provide definitive information with regard to all past uses, operations or incidents affecting the subject property or adjacent properties. Aspect makes no warranties or guarantees regarding the accuracy or completeness of information provided or compiled by others.

Exclusion of Mold, Fungus, Radon, Lead, and HBM

Aspect's services do not include the investigation, detection, prevention or assessment of the presence of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Accordingly, this report does not include any interpretations, recommendations, findings, or conclusions regarding the detection, assessment, prevention or abatement of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Aspect's services also do not include the investigation or assessment of hazardous building materials (HBM) such as asbestos, polychlorinated biphenyls (PCBs) in light ballasts, lead based paint, asbestos-containing building materials, urea-formaldehyde insulation in on-site structures or debris or any other HBMs. Aspect's services do not include an evaluation of radon or lead in drinking water, unless specifically requested.