

Duwamish Waterway Park Initial Investigation

Final Data Summary Report Duwamish Waterway Park, Seattle

Prepared for



Toxics Cleanup Program
Northwest Regional Office
Washington State Department of Ecology
Shoreline, Washington

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Acronyms and Abbreviations

bgs	below ground surface
cPAH	carcinogenic polycyclic aromatic hydrocarbon
DRO	diesel range organics
DWP	Duwamish Waterway Park
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
ER	equipment rinse
GC/MS	gas chromatography / mass spectrometry
HPAH	high molecular weight polycyclic aromatic hydrocarbon
LCS/LCSD	laboratory control sample / laboratory control sample duplicate
LDW	Lower Duwamish Waterway
LPAH	low molecular weight polycyclic aromatic hydrocarbon
mg/kg	milligrams per kilogram
MS/MSD	matrix spike / matrix spike duplicate
MTCA	Model Toxics Control Act
ND	non-detect
NWTPH	Northwest Total Petroleum Hydrocarbons
ORO	heavy oil range organics
PAH	polycyclic aromatic hydrocarbon
PCB	polychlorinated biphenyl
PCUL	preliminary cleanup level
QA	quality assurance
QAPP	Quality Assurance Project Plan
QC	quality control
RPD	relative percent difference
SAP	Sampling and Analysis Plan
SB	soil boring
SL	soil (PCUL criteria)
SVOC	semivolatile organic compound
SW	surface water
TEE	terrestrial ecological evaluation
TEQ	toxicity equivalent
TOC	total organic carbon
TPH	total petroleum hydrocarbons
ug/kg	micrograms per kilogram
ug/L	micrograms per liter
WAC	Washington Administrative Code

1.0 Introduction

This report was prepared by Leidos on behalf of the Washington State Department of Ecology (Ecology), in support of ongoing investigations along the Lower Duwamish Waterway (LDW) area of Seattle. This report presents the results of an environmental investigation to sample soil on a small portion of the Duwamish Waterway Park near the shore of the LDW. The investigation was performed according to the *Sampling and Analysis Plan with Inadvertent Discovery Plan for Site Reconnaissance Investigation* (Leidos 2021). This SAP document also included a site-specific Quality Assurance Project Plan (QAPP). The evaluation and conclusions regarding soil contamination at this site are included in Section 3.3 below.

Duwamish Waterway Park (DWP) is an important recreational resource to the South Park Community in Seattle. DWP is located at 10th Avenue S and S Elm Grove Street (Figure 1). The Seattle Parks and Recreation Department investigated soil contamination at the portion of the DWP located on Seattle City land in 2014 to 2019. Surface soil samples collected in 2014 contained concentrations of arsenic that exceeded the Washington State Model Toxics Control Act (MTCA, Ecology 2013b) Method A cleanup level based on unrestricted (residential) land use. Deeper soil samples were collected in 2019, with concentrations of arsenic and lead exceeding the Method A cleanup level. Other contaminants beyond these two chemicals may also be present in soil. The Parks and Recreation Department did not sample the entirety of the City-owned property or the commercial waterway land controlled by the Port of Seattle. As a result, it was not known if contamination extends toward the Lower Duwamish Waterway (LDW) onto this Port-controlled property.

The Washington State Department of Ecology (Ecology) has contracted Leidos to perform an initial environmental investigation on the portion of the park that is controlled by the Port of Seattle, which is in the northeastern area of the park (see Figure 1). This investigation completes a reconnaissance investigation of the site, including sampling and analyzing soil for a wide range of potential contaminants, to evaluate possible exposure pathways to human and ecological receptors.

The primary purpose of this sampling and analysis effort is to collect soil samples from several locations within the commercial waterway land (Port of Seattle “sliver”) and analyze these samples for polychlorinated biphenyls (PCBs), semivolatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), and metals. Sample analytical results may be used for the following purposes:

- Determine if PCBs, SVOCs, TPH, and metals in soil are present at levels of concern in soils at the park adjacent to the LDW bank.
- Evaluate the pathways where soil contaminants at the park could affect human or ecological receptors via direct contact, erosion of soil to LDW sediment, and leaching of soil to groundwater that could discharge to the LDW.

A summary of the terrestrial ecological evaluation is included in Appendix A.

2.0 Field Activities

2.1 Field Schedule

Investigation field activities included sampling of shallow soil for analysis, description of soil samples, collection of an equipment rinse sample for analysis, decontamination, and measurement of field boring locations. All field activities took place on April 29, 2021.

2.2 Soil Sampling

The SAP (Leidos 2021) directed the sampling of up to six borings by hand auger techniques, at depths up to 4 feet below ground surface (bgs). Samples were to be collected in the following approximate depth ranges at each boring: 0-1, 1-2, 2-3, and 3-4 feet bgs.

During the actual sampling, all six borings were capable of being augered and sampled for soil. However, due to refusal on rocks and debris in the soil, the final depths of the six borings ranged from 2 to 3.5 feet bgs. Table 1 presents information on the soil borings and the samples collected. The six soil boring locations are presented in Figure 2. The first three borings (DWP-SB-1, DWP-SB-2, and DWP-SB-3) were located adjacent to three sides of a concrete slab that supports a park bench, situated a few feet away from the slab. The last three borings (DWP-SB-4, DWP-SB-5, and DWP-SB-6) were located in a row approximately parallel to the parcel boundary, situated a few feet from the boundary. The boundary location was identified via a GIS map using a satellite photo, and confirmed in the field by a representative of the Seattle Parks and Recreation Department. At the time of sampling, a construction silt fence separated these first three and last three borings.

The procedure for soil sampling was performed according to the SAP, including the following steps at each boring:

- The surface grass and attached roots at the boring location were removed with a shovel and set aside.
- Hand augering proceeded in one-foot increments, and the soil lithologic description was recorded for each sampling interval (Table 1).
- Soil was homogenized within each increment in an aluminum foil-lined stainless steel bowl using a stainless steel spoon.
- Homogenized soil for each increment was placed into laboratory-supplied jars, which were then placed into an iced cooler chest.
- Hand augering continued at each boring until solid refusal was encountered after multiple attempts to get through the rocks/debris.
- Decontamination of sampling equipment took place before any sampling began and then following collection of each sample.
- Remaining soil was returned to the borehole, compacted, and the grass divot was replaced onto the surface.

Between each sample, all soil sampling equipment (hand auger, spoons, and bowls) were decontaminated using a three-part wash/rinse process consisting of a Liquinox™ scrub wash, a tap water rinse, and a deionized/distilled water rinse.

One soil field duplicate sample was collected at location DWP-SB-1 (at 0-1 feet bgs). Including the field duplicate, a total of 21 soil samples were collected and submitted for analysis. One equipment rinse sample (ER-1) was collected on the hand auger, by pouring laboratory reagent-grade water through the decontaminated auger and collecting the drainage into sample jars.

All soil encountered during this investigation consisted of firm, dense fill material. The soil contained fragments of anthropogenic debris, including brick, glass, asphalt, tile, and a rusted metallic object. The water table was not encountered in any boring, and soil samples were described as damp to very moist.

2.3 Sample Handling

The samples in the ice cooler chest were returned to the Leidos Bothell office warehouse following sample collection on April 29, 2021 and placed in the sample refrigerator until the day of pickup by the laboratory. The samples in the cooler, with chain-of-custody form, were picked up by a laboratory courier on May 4th and delivered to the analytical laboratory. The laboratory utilized for this project was Eurofins Frontier Global Sciences (formerly TestAmerica), located in Fife, Washington.

3.0 Analytical Results

3.1 Laboratory Analyses

All soil samples for this project were analyzed for the following laboratory analyses by Eurofins:

- Polychlorinated Biphenyl (PCB) Aroclors by EPA Method 8082A (low-level)
- Semivolatile Organic Compounds (SVOCs) by EPA Method 8270E (low-level)
- Total Petroleum Hydrocarbons (TPH) for diesel-range organics and heavy oils by Ecology Method NWTPH-Dx
- Metals by EPA Methods 6020B (low-level) and 7471A
- Total Organic Carbon (TOC) by Method SW 9060A
- Percent Moisture by Method SM 2540G

The one equipment rinse sample was analyzed for the following laboratory analyses by Eurofins:

- PCB Aroclors by EPA Method 8082A
- SVOCs by EPA Method 8270E (low-level)
- TPH for diesel-range organics and heavy oils by Ecology Method NWTPH-Dx
- Metals by EPA Methods 6020B (low-level) and 7470A

3.2 Data Validation

A comprehensive quality assurance/quality control (QA/QC) program was followed by Leidos for the DWP Initial Investigation to ensure that analytical results and any decisions based on these results are representative of the environmental conditions.

All samples were submitted to Eurofins Frontier Global Sciences in one sample delivery group. The laboratory provided Leidos with a Level IV deliverable package, with three revisions, suitable for Leidos to validate the analytical results. The analytical data generated during the investigation, including all soil and equipment rinse samples, underwent data verification and validation according to EPA Stage 2B validation (EPA 2009). Guidance from the QAPP (Leidos 2021) and EPA's National Functional Guidelines for data review (EPA 2004, 2008) were applied during the data validation process. The project data validation summary report is provided in Appendix B. The analytical laboratory data report is provided in Appendix C.

The following data validation qualifiers were applied to the analytical results, as dictated by laboratory QC outliers:

- **U** – Non-detect. Indicates the analyte was analyzed for, but not detected above the level of the associated value. These results are qualitatively acceptable.
- **J** – Estimated. The analyte was detected and identified. The numerical value is the approximate concentration of the analyte in the sample. These results are qualitatively acceptable but considered as estimates.

- **UJ** – Estimated non-detect. Indicates the analyte was analyzed for, but not detected above the associated value. However, the reported value is an estimate. These results are qualitatively acceptable but considered as estimates.
- **R** – Rejected. The data are unusable, and the presence or absence of the analyte cannot be verified.

Validation adjustments to sample result qualifiers are individually listed in Appendix B. For the samples collected during the Duwamish Waterway Park Initial Investigation, 99.8 percent of the analytical data were considered usable. The overall quality of the data meets or exceeds the established project objectives. Only two sample results were rejected. Benzoic acid was rejected in samples DWP-SB-3-0 and DWP-SB-4-2 due to matrix spike / matrix spike duplicate (MS/MSD) recoveries less than 10 percent. In all the project samples, benzoic acid was never detected.

The laboratory also noted a temperature blank anomaly during sample receipt, as discussed in Appendix B.

3.3 Soil Sample Results

3.3.1 Comparison to Preliminary Cleanup Levels

This section provides a summary and discussion of validated analytical results and comparison with MTCA cleanup level criteria for soil samples collected at the site. Cleanup levels and metals background values are taken from Ecology’s LDW Preliminary Cleanup Level (PCUL) workbook, which is updated periodically (Ecology 2021). The PCUL workbook includes criteria from all pertinent regulations, including MTCA (Ecology 2013b) and the Sediment Management Standards (Ecology 2013a).

In consultation with Ecology, four PCUL soil criteria in addition to natural background metals concentrations were utilized for this evaluation. PCULs were selected based on the exposure pathways and receptors that have been identified for this site. These PCULs include the following criteria, using the SL (soil) designations in the workbook (Ecology 2021):

- Method B direct contact, human health, unrestricted land use (SL-1)
- Protection of surface water via groundwater from soil leaching, vadose zone (SL-3)
- Protection of sediment via erosion of soil (SL-8)
- Simplified terrestrial ecological evaluation (TEE), unrestricted land use (SL-9, modified, see Appendix A)
- Natural background for metals in soil, Puget Sound region (SL-10)

The first four bulleted PCULs above are used as direct comparison criteria in this report. The fifth bulleted item (natural background) is applied across the other four criteria, such that none of these metals PCUL values can be lower than the background concentration. If any PCUL values are lower than background, the PCUL value is elevated to the corresponding background concentration.

A summary data table of soil sample maximum concentrations and their exceedances of PCULs for each of the six borings is included in Table 2. A detailed listing of all individual soil sample

results, along with comparison to PCULs, is included in Table 3. The analytical data for the equipment rinse sample data is included in Table 4.

In Tables 2 and 3, the PCULs are arranged in order of approximate prioritization of criteria based on current site exposure concerns. On the left is the highest priority PCUL, SL-1, direct contact by humans within surface soil and shallow soil. This is followed by concerns for terrestrial ecological receptors exposure to soil (SL-9, modified for simplified TEE). This is followed by protection of LDW sediment due to erosion of upland soil near the shore (SL-8). And lastly, on the right, is vadose zone soil leaching to groundwater and discharging to LDW surface water (SL-3).

The evaluation in these tables indicates that a total of 20 chemicals (hazardous substances) have concentrations that exceed one or more of these PCULs in soil samples at the site, including exceedances for both detected and non-detected concentrations. Table 2 includes only these 20 chemicals, and it lists the maximum concentration from each soil boring for the chemicals that exceed PCULs in that boring. This table specifies which of the four PCULs show exceedances in each boring. As expected, the most number of exceedances are for SL-3, leaching of soil to surface water, because this pathway generally has the most conservative (lowest) PCUL values.

Table 3 presents all the analytical data for all samples and all chemicals, and thus the highlighted colored exceedances are only shown for one PCUL per individual analytical result (for simplicity in this large table). Consequently, the above exposure prioritization of PCUL exceedances is applied, as explained in the table footnote. This means that if an analytical result is highlighted/colored as an exceedance (such as SL-1 in red), other PCULs may also be exceeded but only SL-1 is indicated due to the higher priority.

Figure 3 presents soil sample results for detected concentrations that exceed three PCULs. These include the three higher prioritized PCULs: human direct contact (SL-1), terrestrial ecological exposure (SL-9), and protection of sediment via soil erosion (SL-8). The fourth PCUL, leaching to groundwater and surface water (SL-3), is not utilized in this figure due to the large number of exceedances and lower prioritization for this pathway.

3.3.2 Evaluation of Soil Contamination

Arsenic was the only chemical with high enough concentrations that it exceeded all four PCUL values in a single sample. This situation was identified in each of the three samples collected in boring DWP-SB-4, with arsenic concentrations ranging from 25 to 300 mg/kg. Consequently, arsenic showed significantly elevated PCUL exceedance factors (multiples of the PCUL value), as discussed below. Soil samples from boring DWP-SB-4 contained the most number of exceedances and highest concentrations of chemicals in this investigation. The following is a summary for each boring of the highest detected concentrations of chemicals in this investigation (see Tables 2 and 3, and Figure 3):

- DWP-SB-1 did not include the highest concentrations for any chemical.
- DWP-SB-2 concentrations were highest for silver.
- DWP-SB-3 concentrations were highest for copper and pentachlorophenol.
- DWP-SB-4 concentrations were highest for total PCBs, antimony, arsenic, lead, zinc, and bis(2-ethylhexyl) phthalate.

- DWP-SB-5 concentrations were highest for selenium, butyl benzyl phthalate, diethyl phthalate, and dimethyl phthalate (note that phthalates and other chemicals are of potential concern for erosion of surface soils to LDW sediment).
- DWP-SB-6 concentrations were highest for mercury and for total carcinogenic polycyclic aromatic hydrocarbons – toxicity equivalent (total cPAH TEQ).

Because a high priority exposure concern for this site is human direct contact with shallow soils, the following summary focuses on the 0 to 1 foot bgs interval. Two borings show exceedances of PCUL SL-1 in this shallow soil interval, as listed in the table below with the concentrations and the PCUL exceedance factors.

Sample ID (0-1 foot bgs)	Chemical	Concentration (mg/kg)	SL-1 Exceedance Factor
DWP-SB-4-0	Antimony	180	5.6
	Arsenic	300	41
	Lead	340	1.4
	Total cPAH	0.31	1.6
DWP-SB-5-0	Arsenic	13	1.8

A secondary priority is the exposure of terrestrial ecological receptors to shallow soils. All six borings show exceedances of PCUL SL-9 (simplified TEE) in the in the 0 to 1 foot bgs interval, as listed in the table below.

Sample ID (0-1 foot bgs)	Chemical	Concentration (mg/kg)	SL-9 Exceedance Factor
DWP-SB-1-0 and duplicate	Copper	160	1.6
	Selenium	3.1	3.9
DWP-SB-2-0	Copper	140	1.4
	Selenium	3.1	3.9
DWP-SB-3-0	Copper	770	7.7
	Selenium	2.0	2.5
DWP-SB-4-0	Arsenic	300	15
	Copper	230	2.3
	Lead	340	1.5
	Selenium	2.1	2.6
	Zinc	1,100	4.1
DWP-SB-5-0	Selenium	1.9	2.4
DWP-SB-6-0	Selenium	2.3	2.9

In summary, a number of PCUL exceedances for chemicals, particularly metals, were identified at the Duwamish Waterway Park site. The highest concentrations and greatest PCUL exceedances of concern in this investigation are found in boring DWP-SB-4, with next highest concern levels found in DWP-SB-5. These two borings are located in the western portion of the investigation area, close to the Seattle city parcel line. Consequently, some contamination exposure risks from this park are present for human and ecological receptors.

4.0 References

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TABLES

Table 1. DWP Sample Collection Information

Sample Location	Location Coordinates	Soil Sample ID	Soil Sample Depth (feet bgs)	4/29/2021 Sample Collection Time	Soil Sample Lithology (all soil consists of fill material)
DWP-SB-1	N 197384 E 1273372	DWP-SB-1-0	0 - 1	9:30 AM	0-1 feet: Medium dark brown SILT with some rock/gravel and brick, glass, asphalt fragments; firm, moist.
		DWP-SB-1-0-D	0 - 1	9:32 AM	0-1 feet: Field duplicate, same as above.
		DWP-SB-1-1	1 - 2	9:45 AM	1-2 feet: Alternating light to medium brown SILT and SAND with some rock/gravel, brick; firm/dense, moist. Refusal on debris/rock at 2.0 feet.
DWP-SB-2	N 197387 E 1273363	DWP-SB-2-0	0 - 1	10:14 AM	0-1 feet: Medium dark brown SILT with rock/gravel and brick fragments; firm, moist.
		DWP-SB-2-1	1 - 2	10:25 AM	1-1.5 feet: Same as above. 1.5-2 feet: Light gray gravelly SAND; dense, damp.
		DWP-SB-2-2	2 - 3	10:35 AM	2-2.25 feet: Same as above (1.5-2 feet). 2.25-2.5 feet: Medium brown very fine to medium SAND with minor rock/gravel; dense, moist.
		DWP-SB-2-3	3 - 3.5	11:05 AM	2.5-3 feet: Medium brown silt-sand mixture, typically silty very fine to medium SAND; dense, very moist. 3-3.5 feet: Light gray gravelly fine to coarse SAND; dense, moist. Refusal on rock/gravel and soil sloughing into hole at 3.5 feet.
DWP-SB-3	N 197375 E 1273376	DWP-SB-3-0	0 - 1	11:25 AM	0-1 feet: Medium dark brown SILT with some rock/gravel (up to 3 inches); firm, moist.
		DWP-SB-3-1	1 - 2	11:45 AM	1-1.9 feet: Same as above with common rocks (up to 2.5 inches). 1.9-2 feet: Light brown fine to coarse SAND and minor fine gravel; dense, damp.
		DWP-SB-3-2	2 - 2.5	12:20 AM	2-2.5 feet: Medium brown sandy SILT with some rock/gravel (up to 3 inches), and a 2-inch rusted metal object; very dense, moist. Refusal on rock/gravel at 2.5 feet.
DWP-SB-4	N 197383 E 1273351	DWP-SB-4-0	0 - 1	1:35 PM	0-1 feet: Medium dark brown SILT with some rock/gravel (up to 2.5 inches); firm, moist.
		DWP-SB-4-1	1 - 2	1:45 PM	1-1.5 feet: Same as above. 1.5-2 feet: Medium brown SILT with very minor rock/gravel and brick fragments, and a light gray fine to medium sand layer at 1.5-1.6 feet; firm, moist.
		DWP-SB-4-2	2 - 2.5	2:00 PM	2-2.5 feet: Medium dark brown SILT with minor very fine to fine SAND and common rock/gravel (up to 3 inches) and minor red tile fragments; firm, moist. Refusal on large rock/gravel at 2.5 feet.
DWP-SB-5	N 197371 E 1273361	DWP-SB-5-0	0 - 1	2:15 PM	0-1 feet: Medium brown SILT with minor rock/gravel and some brick fragments; firm, moist.
		DWP-SB-5-1	1 - 2	2:30 PM	1-2 feet: Same as above.
		DWP-SB-5-2	2 - 3	2:50 PM	2-2.2 feet: Light gray fine-gravelly fine to coarse SAND; dense, damp. 2.2-3 feet: Medium dark brown SILT with some very fine SAND (no gravel); firm, moist.
		DWP-SB-5-3	3 - 3.5	3:00 PM	3-3.5 feet: Medium brown very fine-sandy SILT with some rock/gravel; firm, moist. Refusal on rock/gravel at 3.5 feet.
DWP-SB-6	N 197363 E 1273371	DWP-SB-6-0	0 - 1	3:15 PM	0-1 feet: Medium dark brown SILT with some rock/gravel (up to 3 inches), and minor brick fragments; firm, moist.
		DWP-SB-6-1	1 - 2	3:30 PM	1-1.75 feet: Same as above. 1.75-1.9 feet: Light brown fine-gravelly fine to coarse SAND; dense, damp.
		DWP-SB-6-2	2 - 3	3:40 PM	1.9-2 feet: Medium dark brown SILT with some rock/gravel and minor very fine SAND; firm, moist. 2-3 feet: Medium dark brown SILT with minor very fine SAND and some rock/gravel; firm, moist.
		DWP-SB-6-3	3 - 3.5	3:45 PM	3-3.5 feet: Medium dark very fine-sandy SILT with some rock/gravel (up to 3.5 inches); firm, moist. Refusal on large rock/gravel at 3.5 feet.
ER-1	---	ER-1-042921	--	4:00 PM	Equipment rinse sample on hand auger.

bgs = below ground surface

The potential presence of odor and sheen was evaluated but not identified in any sample.

Soil samples were collected by hand auger, 3.25-inch diameter. The equipment rinse sample was collected as a grab sample rinsed over the hand auger.

Location coordinates are in Washington State Plane, North Zone, NAD83, US Survey feet.

Table 2. Summary of DWP Soil Analytical Results and PCUL Exceedances

Chemical	LDW Preliminary Cleanup Levels (mg/kg)					DWP-SB-1				DWP-SB-2				DWP-SB-3				DWP-SB-4				DWP-SB-5				DWP-SB-6													
	SL-1 Direct Contact	SL-9 Simplified TEE	SL-8 Erosion to Sediment	SL-3 Leaching to SW	SL-10 Natural Background	Maximum Concentr. (mg/kg)	PCUL Exceedances				Maximum Concentr. (mg/kg)	PCUL Exceedances				Maximum Concentr. (mg/kg)	PCUL Exceedances				Maximum Concentr. (mg/kg)	PCUL Exceedances				Maximum Concentr. (mg/kg)	PCUL Exceedances												
							SL-1	SL-9	SL-8	SL-3		SL-1	SL-9	SL-8	SL-3		SL-1	SL-9	SL-8	SL-3		SL-1	SL-9	SL-8	SL-3		SL-1	SL-9	SL-8	SL-3		SL-1	SL-9	SL-8	SL-3				
PCB Aroclors																																							
Total PCB Aroclors	1.0E+00	2.0E+00	1.3E-01	4.3E-05	-	0.020			X	0.013 J			X	0.015 J			X		0.023			X	0.017 J			X	0.016 J			X									
Metals																																							
Antimony	3.2E+01	-	9.7E+01	8.1E+01	-																180	X		X	X														
Arsenic	7.3E+00	2.0E+01	7.3E+00	7.3E+00	7.3E+00	13	X		X	X	12	X		X	X						300	X	X	X	X	13	X		X	X									
Copper	3.2E+03	1.0E+02	3.9E+02	3.6E+01	3.6E+01	160		X		X	140		X		X						770 J		X	X	X	310		X		X	150		X		X	98			X
Lead	2.5E+02	2.2E+02	4.5E+02	1.1E+03	2.4E+01																	340	X	X															
Mercury	2.4E+01	9.0E+00	4.1E-01	7.0E-02	7.0E-02	0.098			X	0.087			X	0.10							0.10			X									0.13			X			
Selenium	4.0E+02	8.0E-01	1.2E+03	7.4E+00	-	3.1		X		3.1		X		2.0		X					2.1		X			3.2		X				2.5		X					
Silver	4.0E+02	-	6.1E+00	3.2E-01	-					0.52			X	0.39 J							0.50			X															
Zinc	2.4E+04	2.7E+02	4.1E+02	1.0E+02	8.5E+01	520		X	X	X	120			X	120						1,100		X	X	X	110				X									
PAHs																																							
Total cPAH TEQ (0.5*ND)	1.9E-01	-	9.0E-02	3.1E-04	-	0.074 J			X	0.0059 J			X	0.028 J			X		0.31		X		X	X	0.038 J			X	0.58 J		X		X	X					
Other SVOCs																																							
Benzoic acid	3.2E+05	-	6.5E-01*	-	-	<0.76 U			x	<0.70 U			x	<0.70 U			x		<2.5 U		x		<0.66 U		x		<1.4 U		x										
Benzyl alcohol	8.0E+03	-	5.7E-02*	-	-															<0.10 U		x																	
Bis(2-ethylhexyl) phthalate	7.1E+01	-	1.3E+00	1.0E-01	-	0.17 J			X					0.14 J			X		0.42 J			X	0.16 J			X	0.11 J			X						X			
Butyl benzyl phthalate	5.3E+02	-	6.3E-02	3.6E-03	-	<0.032 U			x	<0.029 U			x	<0.056 U			x		<0.11 U			x	x	0.11			X	X	<0.058 U						x				
Diethyl phthalate	6.4E+04	-	2.0E-01	1.1E+00	-																	0.25			X														
2,4-Dimethylphenol	1.6E+03	-	2.9E-02*	7.9E-01	-	<0.038 U			x	<0.034 U			x	<0.066 U			x		<0.12 U			x	<0.033 U			x	<0.068 U									x			
Dimethyl phthalate	-	-	7.1E-02	2.8E+00	-																	0.39			X														
Hexachlorobenzene	6.3E-01	3.1E+01	2.2E-02*	8.0E-06*	-	<0.0094 U			x	<0.0086 U			x	<0.016 U			x		<0.031 U			x	x	<0.0081 U			x	<0.017 U								x			
Hexachlorobutadiene	1.3E+01	-	1.1E-02*	1.1E-02*	-									<0.016 U			x		<0.031 U			x	x			x	<0.017 U								x	x			
Pentachlorophenol	2.5E+00	1.1E+01	3.6E-01	3.2E-05	-	0.18 J			X	<0.036 U			x	0.35 J			X		<0.13 U			x	0.17 J			X	<0.072 U									x			

Preliminary Cleanup Levels for Soil (PCUL values for metals have been adjusted to be no lower than natural background):

- Method B direct contact, unrestricted land use (SL-1)
- Simplified terrestrial ecological evaluation (TEE), unrestricted land use (SL-9, modified)
- Protect sediment via erosion of soil (SL-8)
- Protect surface water (SW) via groundwater from soil leaching, vadose zone (SL-3)
- Natural background for metals in soil, Puget Sound region (SL-10)

Italicized, colored PCUL values for SL-1, 3, 8, 9 (in left columns) are those values exceeded in one or more sample results (* = all non-detected exceedances).

The chemicals listed in this table are only those with concentrations that exceed at least one PCUL value in at least one sample from the site.

Maximum concentrations are shown for each soil boring where at least one PCUL value is exceeded in samples from that boring (bold exceedances are detected, non-bold are not detected).

For PCUL exceedances in each soil boring, an upper case "X" is for borings with at least one detected exceedance, and a lower case "x" is for borings with only non-detected exceedances.

J = estimated value (between reporting limit and method detection limit)

U = non-detected

Samples were all collected on 4/29/2021. All sample results are validated.

Table 3. Analytical Results for DWP Soil Samples

Chemical (all units in mg/kg)	Most Stringent PCUL	LDW Preliminary Cleanup Levels					DWP-SB-1		
		SL-1 Direct Contact	SL-9 Simplified TEE	SL-8 Erosion to Sediment	SL-3 Leaching to SW	SL-10 Natural Background	DWP-SB-1-0 (0-1 feet bgs)	DWP-SB-1-0-D (0-1 feet bgs)	DWP-SB-1-1 (1-2 feet bgs)
PCB Aroclors									
Aroclor 1016	-	-	-	-	-	-	<0.00086 U	<0.00085 U	<0.00091 U
Aroclor 1221	-	-	-	-	-	-	<0.00049 U	<0.00048 U	0.0039
Aroclor 1232	-	-	-	-	-	-	<0.00057 U	<0.00056 U	<0.00060 U
Aroclor 1242	-	-	-	-	-	-	<0.00040 U	<0.00040 U	<0.00043 U
Aroclor 1248	-	-	-	-	-	-	<0.00034 U	<0.00033 U	<0.00036 U
Aroclor 1254	-	-	-	-	-	-	<0.00043 U	<0.00042 U	<0.00046 U
Aroclor 1260	-	-	-	-	-	-	0.017	0.020	<0.00091 U
Total PCB Aroclors	4.3E-05	1.0E+00	2.0E+00	1.3E-01	4.3E-05	-	0.017	0.020	0.0039
Metals									
Antimony	3.2E+01	3.2E+01	-	9.7E+01	8.1E+01	-	1.3	1.2	3.7
Arsenic	7.3E+00	7.3E+00	2.0E+01	7.3E+00	7.3E+00	7.3E+00	6.5	6.8	13
Cadmium	1.1E+00	8.0E+01	2.5E+01	5.1E+00	1.1E+00	7.7E-01	0.36	0.31 J	0.61
Chromium	4.8E+01	-	4.8E+01	2.6E+02	-	4.8E+01	31	30	20
Copper	3.6E+01	3.2E+03	1.0E+02	3.9E+02	3.6E+01	3.6E+01	120	160	45
Lead	2.2E+02	2.5E+02	2.2E+02	4.5E+02	1.1E+03	2.4E+01	61	60	74
Mercury	7.0E-02	2.4E+01	9.0E+00	4.1E-01	7.0E-02	7.0E-02	0.098	0.063	0.020 J
Nickel	4.8E+01	1.6E+03	1.0E+02	4.9E+03	4.8E+01	4.8E+01	35	35	21
Selenium	8.0E-01	4.0E+02	8.0E-01	1.2E+03	7.4E+00	-	3.1	2.5	1.6
Silver	3.2E-01	4.0E+02	-	6.1E+00	3.2E-01	-	0.12	0.13	0.14
Zinc	1.0E+02	2.4E+04	2.7E+02	4.1E+02	1.0E+02	8.5E+01	110	110	520
TPH									
Diesel range hydrocarbons	4.6E+02	-	4.6E+02	-	2.0E+03	-	72	57 J	35 J
Oil range hydrocarbons	2.0E+03	-	-	-	2.0E+03	-	570	410	140
PAHs									
Acenaphthene	5.0E-01	4.8E+03	-	5.0E-01	3.1E+00	-	<0.0027 U	<0.0027 U	<0.0029 U
Acenaphthylene	1.3E+00	-	-	1.3E+00	-	-	<0.0029 U	<0.0029 U	<0.0031 U
Anthracene	9.6E-01	2.4E+04	-	9.6E-01	4.7E+01	-	<0.0093 U	<0.0092 U	<0.010 U
Benzo(a)anthracene	-	-	-	-	-	-	0.0092 J	0.037	<0.0069 U
Benzo(a)pyrene	3.0E+01	-	3.0E+01	-	-	-	0.013 J	0.061	<0.0081 U
Benzo(g,h,i)perylene	6.7E-01	-	-	6.7E-01	-	-	<0.010 UJ	0.019 J	<0.011 UJ
Benzofluoranthene	3.2E+00	-	-	3.2E+00	-	-	<0.0081 U	0.064 J	<0.0088 U
Chrysene	-	-	-	-	-	-	0.013 J	0.055	<0.0081 UJ
Dibenz(a,h)anthracene	-	-	-	-	-	-	<0.0070 U	<0.0069 U	<0.0075 U
Dibenzofuran	5.4E-01	8.0E+01	-	5.4E-01	-	-	<0.0034 U	<0.0034 U	<0.0037 U
Fluoranthene	1.7E+00	3.2E+03	-	1.7E+00	5.9E+00	-	0.020 J	0.038	<0.0075 U
Fluorene	5.4E-01	3.2E+03	-	5.4E-01	1.6E+00	-	<0.0029 U	<0.0029 U	<0.0031 U
Indeno(1,2,3-cd)pyrene	-	-	-	-	-	-	0.0087 J	0.022 J	<0.0075 U
1-Methylnaphthalene	3.4E+01	3.4E+01	-	3.9E+01	-	-	0.0058 J	0.0045 J	<0.0031 U
2-Methylnaphthalene	6.7E-01	3.2E+02	-	6.7E-01	-	-	0.0055 J	0.012 J	<0.0055 U
Naphthalene	3.9E-02	1.6E+03	-	2.1E+00	3.9E-02	-	0.0037 J	0.011 J	<0.0031 UJ
Phenanthrene	1.5E+00	-	-	1.5E+00	-	-	0.015 J	0.020 J	<0.0036 U
Pyrene	2.6E+00	2.4E+03	-	2.6E+00	1.1E+01	-	0.016 J	0.053	<0.0081 U
Total LPAHs	5.2E+00	-	-	5.2E+00	-	-	0.019 J	0.031 J	<0.010 U
Total HPAHs	1.2E+01	-	-	1.2E+01	-	-	0.080 J	0.35 J	<0.011 U
Total cPAH TEQ (0.5*ND)	3.1E-04	1.9E-01	-	9.0E-02	3.1E-04	-	0.016 J	0.074 J	<0.0056 U
Other SVOCs									
Benzoic acid	6.5E-01	3.2E+05	-	6.5E-01*	-	-	<0.71 U	<0.70 U	<0.76 U
Benzyl alcohol	5.7E-02	8.0E+03	-	5.7E-02*	-	-	<0.029 U	<0.029 U	<0.031 U
Bis(2-ethylhexyl) phthalate	1.0E-01	7.1E+01	-	1.3E+00	1.0E-01	-	0.11 J	0.078 J	0.17 J
Butyl benzyl phthalate	3.6E-03	5.3E+02	-	6.3E-02	3.6E-03	-	<0.030 U	<0.029 U	<0.032 U
Carbazole	-	-	-	-	-	-	<0.0042 U	<0.0042 U	<0.0046 U
1,2-Dichlorobenzene	3.6E-02	7.2E+03	-	3.6E-02	9.3E+00	-	<0.0029 U	<0.0029 U	<0.0031 U
1,4-Dichlorobenzene	1.1E-01	1.9E+02	-	1.1E-01	9.8E-01	-	<0.0048 U	<0.0048 U	<0.0052 U
Diethyl phthalate	2.0E-01	6.4E+04	-	2.0E-01	1.1E+00	-	<0.013 U	<0.013 U	<0.014 U
2,4-Dimethylphenol	2.9E-02	1.6E+03	-	2.9E-02*	7.9E-01	-	<0.035 U	<0.035 U	<0.038 U
Dimethyl phthalate	7.1E-02	-	-	7.1E-02	2.8E+00	-	<0.0029 U	<0.0029 U	<0.0031 U
Di-n-butyl phthalate	2.8E-01	8.0E+03	2.0E+02	1.4E+00	2.8E-01	-	<0.016 U	<0.016 U	<0.017 U
Di-n-octyl phthalate	6.2E+00	8.0E+02	-	6.2E+00	-	-	<0.0070 U	<0.0069 U	<0.0075 U
Hexachlorobenzene	8.0E-06	6.3E-01	3.1E+01	2.2E-02*	8.0E-06*	-	<0.0087 U	<0.0087 U	<0.0094 U
Hexachlorobutadiene	1.1E-02	1.3E+01	-	1.1E-02*	1.1E-02*	-	<0.0087 U	<0.0087 U	<0.0094 U
2-Methylphenol	6.3E-02	4.0E+03	-	6.3E-02	-	-	<0.0057 U	<0.0057 U	<0.0061 U
3- & 4-Methylphenol	6.7E-01	4.0E+03	-	6.7E-01	-	-	<0.0087 U	<0.0087 U	<0.0094 U
N-Nitrosodiphenylamine	2.1E-02	2.0E+02	-	2.8E-02	2.1E-02	-	<0.0046 U	<0.0046 U	<0.0050 U
Pentachlorophenol	3.2E-05	2.5E+00	1.1E+01	3.6E-01	3.2E-05	-	0.18 J	<0.036 U	<0.039 U
Phenol	4.2E-01	2.4E+04	-	4.2E-01	3.2E+02	-	<0.013 U	<0.013 U	<0.014 U
1,2,4-Trichlorobenzene	3.1E-02	3.4E+01	-	3.1E-02	-	-	<0.0035 U	<0.0035 U	<0.0038 U
Conventionals									
Total Organic Carbon	-	-	-	-	-	-	20,000	14,000	4,000

Table 3. Analytical Results for DWP Soil Samples

Chemical (all units in mg/kg)	Most Stringent PCUL	DWP-SB-2				DWP-SB-3		
		DWP-SB-2-0 (0-1 feet bgs)	DWP-SB-2-1 (1-2 feet bgs)	DWP-SB-2-2 (2-3 feet bgs)	DWP-SB-2-3 (3-3.5 feet bgs)	DWP-SB-3-0 (0-1 feet bgs)	DWP-SB-3-1 (1-2 feet bgs)	DWP-SB-3-2 (2-2.5 feet bgs)
PCB Aroclors								
Aroclor 1016	-	<0.00080 U	<0.00083 U	<0.00083 U	<0.00080 U	<0.00082 U	<0.0078 U	<0.0083 U
Aroclor 1221	-	<0.00046 U	<0.00047 U	<0.00047 U	<0.00045 U	<0.00046 U	<0.0044 U	<0.0047 U
Aroclor 1232	-	<0.00053 U	<0.00055 U	<0.00055 U	<0.00053 U	<0.00054 U	<0.0052 U	<0.0055 U
Aroclor 1242	-	<0.00038 U	<0.00039 U	<0.00039 U	<0.00038 U	<0.00039 U	<0.0037 U	<0.0039 U
Aroclor 1248	-	<0.00032 U	<0.00032 U	<0.00033 U	<0.00031 U	<0.00032 U	<0.0031 U	<0.0033 U
Aroclor 1254	-	<0.00040 U	<0.00041 U	<0.00042 U	<0.00040 U	<0.00041 U	<0.0039 U	<0.0042 U
Aroclor 1260	-	0.013 J	0.010	<0.00083 U	0.0030	0.011 J	0.014 J	0.015 J
Total PCB Aroclors	4.3E-05	0.013 J	0.010	<0.00083 U	0.0030	0.011 J	0.014 J	0.015 J
Metals								
Antimony	3.2E+01	1.4	3.4	2.8	1.8	5.0 J	1.5	2.1
Arsenic	7.3E+00	6.1	12	9.8	6.7	6.8	6.6	7.0
Cadmium	1.1E+00	0.46	0.32	0.15 J	0.14 J	<0.038 U	0.32 J	0.32
Chromium	4.8E+01	32	33	24	23	24 J	25	26
Copper	3.6E+01	140	73	25	31	770 J	75	37
Lead	2.2E+02	67	39	19	17	100 J	50	54
Mercury	7.0E-02	0.087	0.034	0.011 J	0.018 J	0.10	0.087	0.084 J
Nickel	4.8E+01	35	27	21	20	30	27	21
Selenium	8.0E-01	3.1	2.3	1.2	1.4	2.0	2.0	1.4
Silver	3.2E-01	0.13	0.52	0.059 J	0.038 J	0.39 J	0.095	0.064 J
Zinc	1.0E+02	120	75	51	43	120 J	76	120
TPH								
Diesel range hydrocarbons	4.6E+02	63	50 J	27 J	33 J	65	26 J	24 J
Oil range hydrocarbons	2.0E+03	400	260	93	110	470 J	210	160
PAHs								
Acenaphthene	5.0E-01	<0.0025 U	<0.0026 U	<0.0026 U	<0.0025 U	<0.0050 U	<0.0026 U	<0.0027 U
Acenaphthylene	1.3E+00	<0.0027 U	<0.0029 U	<0.0028 U	<0.0027 U	<0.0055 U	<0.0028 U	<0.0029 U
Anthracene	9.6E-01	<0.0087 U	<0.0092 U	<0.0090 U	<0.0085 U	<0.018 U	<0.009 U	<0.0092 U
Benzo(a)anthracene	-	0.0077 J	<0.0063 U	<0.0062 U	<0.0059 U	<0.012 U	0.016 J	0.0075 J
Benzo(a)pyrene	3.0E+01	<0.0070 U	<0.0074 U	<0.0073 U	<0.0069 U	0.014 J	0.023 J	0.014 J
Benzo(g,h,i)perylene	6.7E-01	<0.0097 UJ	<0.010 UJ	<0.010 U	<0.0096 UJ	<0.020 UJ	<0.010 UJ	<0.010 UJ
Benzo(a)fluoranthene	3.2E+00	<0.0076 U	<0.0080 U	<0.0079 U	<0.0075 U	0.089 J	0.018 J	0.015 J
Chrysene	-	0.011 J	<0.0074 UJ	<0.0073 UJ	<0.0069 UJ	0.018 J	0.018 J	0.011 J
Dibenz(a,h)anthracene	-	<0.0065 U	<0.0069 U	<0.0067 U	<0.0064 U	<0.013 UJ	<0.0068 U	<0.0069 U
Dibenzofuran	5.4E-01	<0.0032 U	<0.0034 U	<0.0033 U	<0.0031 U	<0.0065 U	0.0066 J	<0.0034 U
Fluoranthene	1.7E+00	0.013 J	<0.0069 U	<0.0067 U	<0.0064 U	0.025 J	0.031	0.014 J
Fluorene	5.4E-01	<0.0027 U	<0.0029 U	<0.0028 U	<0.0027 U	<0.0055 U	<0.0028 U	<0.0029 U
Indeno(1,2,3-cd)pyrene	-	0.0078 J	<0.0069 U	<0.0067 U	<0.0064 U	<0.013 UJ	0.011 J	0.010 J
1-Methylnaphthalene	3.4E+01	<0.0027 U	<0.0029 U	<0.0028 U	<0.0027 U	<0.0055 U	0.0097 J	0.0070 J
2-Methylnaphthalene	6.7E-01	<0.0048 U	<0.0050 U	<0.0049 U	<0.0047 U	<0.0097 U	0.0089 J	0.0085 J
Naphthalene	3.9E-02	<0.0027 UJ	<0.0029 UJ	<0.0028 UJ	<0.0027 UJ	<0.0055 UJ	0.0044 J	0.0084 J
Phenanthrene	1.5E+00	0.012 J	0.0073 J	<0.0033 U	<0.0031 U	0.020 J	0.025 J	0.0096 J
Pyrene	2.6E+00	0.013 J	<0.0074 U	<0.0073 U	<0.0069 U	0.023 J	0.031 J	0.014 J
Total LPAHs	5.2E+00	0.012 J	0.0073 J	<0.0090 U	<0.0085 U	0.020 J	0.029 J	0.018 J
Total HPAHs	1.2E+01	0.053 J	<0.010 U	<0.010 U	<0.0096 U	0.17 J	0.15 J	0.086 J
Total cPAH TEQ (0.5*ND)	3.1E-04	0.0059 J	<0.0051 U	<0.0051 U	<0.0048 U	0.025 J	0.028 J	0.018 J
Other SVOCs								
Benzoic acid	6.5E-01	<0.66 U	<0.70 U	<0.69 U	<0.65 U	<1.3 R	<0.69 U	<0.70 U
Benzyl alcohol	5.7E-02	<0.027 U	<0.029 U	<0.028 U	<0.027 U	<0.055 U	<0.028 U	<0.029 U
Bis(2-ethylhexyl) phthalate	1.0E-01	0.053 J	<0.041 U	<0.040 U	<0.038 U	0.14 J	0.059 J	0.041 J
Butyl benzyl phthalate	3.6E-03	<0.028 U	<0.029 U	<0.029 U	<0.027 U	<0.056 U	<0.029 U	<0.029 U
Carbazole	-	<0.0040 U	<0.0042 U	<0.0041 U	<0.0039 U	<0.0080 U	<0.0041 U	<0.0042 U
1,2-Dichlorobenzene	3.6E-02	<0.0027 U	<0.0029 U	<0.0028 U	<0.0027 U	<0.0055 U	<0.0028 U	<0.0029 U
1,4-Dichlorobenzene	1.1E-01	<0.0045 U	<0.0047 U	<0.0047 U	<0.0044 U	<0.0091 U	<0.0047 U	<0.0048 U
Diethyl phthalate	2.0E-01	<0.012 U	<0.013 U	<0.012 U	<0.012 U	<0.024 U	<0.012 U	<0.013 U
2,4-Dimethylphenol	2.9E-02	<0.032 U	<0.034 U	<0.034 U	<0.032 U	<0.066 U	<0.034 U	<0.035 U
Dimethyl phthalate	7.1E-02	<0.0027 U	<0.0029 U	<0.0028 U	<0.0027 U	0.0098 J	0.013 J	<0.0029 U
Di-n-butyl phthalate	2.8E-01	<0.015 U	<0.015 U	<0.015 U	<0.014 U	<0.030 U	<0.015 U	<0.016 U
Di-n-octyl phthalate	6.2E+00	<0.0065 U	<0.0069 U	<0.0067 U	<0.0064 U	<0.013 U	<0.0068 U	<0.0069 U
Hexachlorobenzene	8.0E-06	<0.0081 U	<0.0086 U	<0.0084 U	<0.0080 U	<0.016 U	<0.0084 U	<0.0087 U
Hexachlorobutadiene	1.1E-02	<0.0081 U	<0.0086 U	<0.0084 U	<0.0080 U	<0.016 U	<0.0084 U	<0.0087 U
2-Methylphenol	6.3E-02	<0.0053 U	<0.0056 U	<0.0055 U	<0.0052 U	<0.011 U	<0.0055 U	<0.0057 U
3- & 4-Methylphenol	6.7E-01	<0.0081 U	<0.0086 U	<0.0084 U	<0.0080 U	<0.016 U	<0.0084 U	<0.0087 U
N-Nitrosodiphenylamine	2.1E-02	<0.0043 U	<0.0046 U	<0.0045 U	<0.0043 U	<0.0088 U	<0.0045 U	<0.0046 U
Pentachlorophenol	3.2E-05	<0.034 U	<0.036 U	<0.035 U	<0.034 U	0.35 J	0.18 J	<0.036 U
Phenol	4.2E-01	<0.012 U	<0.013 U	<0.013 U	<0.012 U	<0.025 U	<0.013 U	<0.013 U
1,2,4-Trichlorobenzene	3.1E-02	<0.0032 U	<0.0034 U	<0.0034 U	<0.0032 U	<0.0066 U	<0.0034 U	<0.0035 U
Conventionals								
Total Organic Carbon	-	10,000	5,500	2,900	6,900	20,000	14,000	6,000

Table 3. Analytical Results for DWP Soil Samples

Chemical (all units in mg/kg)	Most Stringent PCUL	DWP-SB-4			DWP-SB-5			
		DWP-SB-4-0 (0-1 feet bgs)	DWP-SB-4-1 (1-2 feet bgs)	DWP-SB-4-2 (2-2.5 feet bgs)	DWP-SB-5-0 (0-1 feet bgs)	DWP-SB-5-1 (1-2 feet bgs)	DWP-SB-5-2 (2-3 feet bgs)	DWP-SB-5-3 (3-3.5 feet bgs)
PCB Aroclors								
Aroclor 1016	-	<0.0075 U	<0.0078 U	<0.0076 U	<0.008 U	<0.0078 U	<0.0078 U	<0.0076 U
Aroclor 1221	-	<0.0043 U	<0.0044 U	<0.0043 U	<0.0046 U	<0.0044 U	<0.0044 U	<0.0043 U
Aroclor 1232	-	<0.0050 U	<0.0051 U	<0.0051 U	<0.0053 U	<0.0052 U	<0.0052 U	<0.005 U
Aroclor 1242	-	<0.0036 U	<0.0037 U	<0.0036 U	<0.0038 U	<0.0037 U	<0.0037 U	<0.0036 U
Aroclor 1248	-	<0.0030 U	<0.0030 U	<0.0030 U	<0.0031 U	<0.0031 U	<0.0031 U	<0.0030 U
Aroclor 1254	-	<0.0038 U	<0.0039 U	<0.0038 U	<0.0040 U	<0.0039 U	<0.0039 U	<0.0038 U
Aroclor 1260	-	0.023	0.012 J	<0.0076 U	0.017 J	0.014 J	<0.0078 U	<0.0076 U
Total PCB Aroclors	4.3E-05	0.023	0.012 J	<0.0076 U	0.017 J	0.014 J	<0.0078 U	<0.0076 U
Metals								
Antimony	3.2E+01	180	26	14	6.5	3.6	1.6	2.8
Arsenic	7.3E+00	300	39	25	13	7.1	6.2	7.2
Cadmium	1.1E+00	0.70	0.12 J	0.20 J	0.31 J	0.27 J	0.22 J	0.14 J
Chromium	4.8E+01	47	20	18	25	25	16	21
Copper	3.6E+01	230	310	37	82	150	23	26
Lead	2.2E+02	340	100	51	53	48	31	19
Mercury	7.0E-02	0.10	0.051	0.050	0.063	0.065	0.056	0.048
Nickel	4.8E+01	29	22	17	27	28	12	19
Selenium	8.0E-01	2.1	1.8	1.6	1.9	3.2	1.7	1.7
Silver	3.2E-01	0.50	0.23	0.078 J	0.17	0.12	0.056 J	0.046 J
Zinc	1.0E+02	1,100	190	120	110	95	55	68
TPH								
Diesel range hydrocarbons	4.6E+02	33 J	18 J	16 J	59	67	37 J	<13 U
Oil range hydrocarbons	2.0E+03	310	120	72	550	490	220	38 J
PAHs								
Acenaphthene	5.0E-01	<0.0094 U	<0.0096 U	<0.005 U	<0.0025 U	<0.0024 U	<0.0025 U	<0.0025 U
Acenaphthylene	1.3E+00	<0.010 U	<0.010 U	<0.0054 U	<0.0027 U	<0.0026 U	<0.0027 U	<0.0027 U
Anthracene	9.6E-01	<0.033 U	<0.033 U	<0.017 U	<0.0087 U	<0.0084 U	<0.0086 U	<0.0087 U
Benzo(a)anthracene	-	0.16	<0.023 U	0.016 J	0.016 J	0.018 J	<0.0059 U	<0.0060 U
Benzo(a)pyrene	3.0E+01	0.24	<0.027 U	0.015 J	0.021 J	0.016 J	<0.0070 U	<0.0071 U
Benzo(g,h,i)perylene	6.7E-01	0.094 J	<0.037 UJ	<0.019 UJ	<0.0098 U	<0.0094 U	<0.0097 U	<0.0098 U
Benzo(a)fluoranthene	3.2E+00	0.38	<0.029 U	<0.015 U	0.14	0.15	<0.0075 U	<0.0076 U
Chrysene	-	0.23	<0.027 UJ	0.014 J	0.025 J	0.025 J	<0.0070 UJ	<0.0071 UJ
Dibenz(a,h)anthracene	-	<0.025 U	<0.025 U	<0.013 UJ	<0.0065 U	<0.0063 U	<0.0065 U	<0.0065 U
Dibenzofuran	5.4E-01	<0.012 U	<0.012 U	<0.0064 U	<0.0032 U	<0.0031 U	<0.0032 U	<0.0032 U
Fluoranthene	1.7E+00	0.33	0.048 J	0.032 J	0.033	0.039	0.010 J	0.012 J
Fluorene	5.4E-01	<0.010 U	<0.010 U	<0.0054 U	<0.0027 U	<0.0026 U	<0.0027 U	<0.0027 U
Indeno(1,2,3-cd)pyrene	-	0.10	<0.025 U	<0.013 UJ	0.013 J	0.0071 J	<0.0065 U	<0.0065 U
1-Methylnaphthalene	3.4E+01	0.021 J	<0.010 U	<0.0054 U	<0.0027 U	<0.0026 U	<0.0027 U	0.0040 J
2-Methylnaphthalene	6.7E-01	0.029 J	<0.018 U	<0.0095 U	0.0049 J	<0.0046 U	<0.0047 U	<0.0048 U
Naphthalene	3.9E-02	0.016 J	<0.010 UJ	<0.0054 UJ	0.0058 J	<0.0026 UJ	<0.0027 UJ	<0.0027 UJ
Phenanthrene	1.5E+00	0.19	0.031 J	0.019 J	0.021 J	0.032	0.013 J	0.024 J
Pyrene	2.6E+00	0.33	0.050 J	0.032 J	0.030 J	0.034	0.011 J	0.0083 J
Total LPAHs	5.2E+00	0.21 J	0.031 J	0.019 J	0.027 J	0.032	0.013 J	0.024 J
Total HPAHs	1.2E+01	1.9 J	0.098 J	0.11 J	0.28 J	0.29 J	0.021 J	0.020 J
Total cPAH TEQ (0.5*ND)	3.1E-04	0.31	<0.019 U	0.019 J	0.038 J	0.034 J	<0.0049 U	<0.0049 U
Other SVOCs								
Benzoic acid	6.5E-01	<2.5 U	<2.5 U	<1.3 R	<0.66 U	<0.64 U	<0.66 U	<0.66 U
Benzyl alcohol	5.7E-02	<0.10 U	<0.10 U	<0.054 U	<0.027 U	<0.026 U	<0.027 U	<0.027 U
Bis(2-ethylhexyl) phthalate	1.0E-01	0.42 J	<0.15 U	<0.076 U	0.16 J	0.058 J	<0.038 U	<0.039 U
Butyl benzyl phthalate	3.6E-03	<0.10 U	<0.11 U	<0.055 U	0.11	<0.027 U	<0.027 U	<0.028 U
Carbazole	-	<0.015 U	<0.015 U	<0.0079 U	<0.0040 U	<0.0038 U	<0.0039 U	<0.0040 U
1,2-Dichlorobenzene	3.6E-02	<0.010 U	<0.010 U	<0.0054 U	<0.0027 U	<0.0026 U	<0.0027 U	<0.0027 U
1,4-Dichlorobenzene	1.1E-01	<0.017 U	<0.017 U	<0.0089 U	<0.0045 U	<0.0044 U	<0.0045 U	<0.0045 U
Diethyl phthalate	2.0E-01	<0.045 U	<0.046 U	<0.024 U	0.25	<0.012 U	<0.012 U	<0.012 U
2,4-Dimethylphenol	2.9E-02	<0.12 U	<0.12 U	<0.065 U	<0.033 U	<0.031 U	<0.032 U	<0.033 U
Dimethyl phthalate	7.1E-02	<0.010 U	<0.010 U	0.013 J	0.39	<0.0026 U	<0.0027 U	<0.0027 U
Di-n-butyl phthalate	2.8E-01	<0.055 U	<0.056 U	<0.029 U	0.017 J	<0.014 U	<0.015 U	<0.015 U
Di-n-octyl phthalate	6.2E+00	<0.025 U	<0.025 U	<0.013 U	0.16	<0.0063 U	<0.0065 U	<0.0065 U
Hexachlorobenzene	8.0E-06	<0.031 U	<0.031 U	<0.016 U	<0.0081 U	<0.0079 U	<0.0081 U	<0.0081 U
Hexachlorobutadiene	1.1E-02	<0.031 U	<0.031 U	<0.016 U	<0.0081 U	<0.0079 U	<0.0081 U	<0.0081 U
2-Methylphenol	6.3E-02	<0.020 U	<0.020 U	<0.011 U	<0.0053 U	<0.0051 U	<0.0053 U	<0.0053 U
3- & 4-Methylphenol	6.7E-01	<0.031 U	<0.031 U	<0.016 U	<0.0081 U	<0.0079 U	<0.0081 U	<0.0081 U
N-Nitrosodiphenylamine	2.1E-02	<0.016 U	<0.017 U	<0.0086 U	<0.0043 U	<0.0042 U	<0.0043 U	<0.0043 U
Pentachlorophenol	3.2E-05	<0.13 U	<0.13 U	<0.068 UJ	0.17 J	<0.033 U	<0.034 U	<0.034 U
Phenol	4.2E-01	<0.047 U	<0.048 U	<0.025 U	<0.012 U	<0.012 U	<0.012 U	<0.012 U
1,2,4-Trichlorobenzene	3.1E-02	<0.012 U	<0.012 U	<0.0065 U	<0.0033 U	<0.0031 U	<0.0032 U	<0.0033 U
Conventionals								
Total Organic Carbon	-	14,000	9,200	5,000	20,000	8,900	2,300	2,400

Table 3. Analytical Results for DWP Soil Samples

Chemical (all units in mg/kg)	Most Stringent PCUL	DWP-SB-6			
		DWP-SB-6-0 (0-1 feet bgs)	DWP-SB-6-1 (1-2 feet bgs)	DWP-SB-6-2 (2-3 feet bgs)	DWP-SB-6-3 (3-3.5 feet bgs)
PCB Aroclors					
Aroclor 1016	-	<0.008 U	<0.0085 U	<0.0080 U	<0.0083 U
Aroclor 1221	-	<0.0046 U	<0.0048 U	<0.0046 U	<0.0047 U
Aroclor 1232	-	<0.0053 U	<0.0056 U	<0.0053 U	<0.0055 U
Aroclor 1242	-	<0.0038 U	<0.0040 U	<0.0038 U	<0.0039 U
Aroclor 1248	-	<0.0031 U	<0.0033 U	<0.0032 U	<0.0032 U
Aroclor 1254	-	<0.0040 U	<0.0043 U	<0.0040 U	<0.0041 U
Aroclor 1260	-	0.016 J	0.015 J	<0.0080 U	<0.0083 U
Total PCB Aroclors	4.3E-05	0.016 J	0.015 J	<0.0080 U	<0.0083 U
Metals					
Antimony	3.2E+01	1.7	1.3	1.2	1.5
Arsenic	7.3E+00	7.0	6.1	5.4	5.6
Cadmium	1.1E+00	0.34 J	0.41	0.23 J	0.20 J
Chromium	4.8E+01	21	23	18	22
Copper	3.6E+01	84	98	26	31
Lead	2.2E+02	64	55	38	54
Mercury	7.0E-02	0.13	0.096	0.045	0.034
Nickel	4.8E+01	23	24	14	18
Selenium	8.0E-01	2.3	2.5	1.7	1.7
Silver	3.2E-01	0.16	0.12	0.057 J	0.051 J
Zinc	1.0E+02	100	82	68	76
TPH					
Diesel range hydrocarbons	4.6E+02	33 J	25 J	<14 U	16 J
Oil range hydrocarbons	2.0E+03	250 J	130 J	59 J	110
PAHs					
Acenaphthene	5.0E-01	<0.0052 U	<0.0052 U	<0.0026 U	0.0090 J
Acenaphthylene	1.3E+00	<0.0057 U	<0.0056 U	<0.0028 U	<0.0054 U
Anthracene	9.6E-01	<0.018 U	<0.018 U	<0.0091 U	0.032 J
Benzo(a)anthracene	-	0.014 J	<0.012 U	0.036	0.26
Benzo(a)pyrene	3.0E+01	0.015 J	0.017 J	0.045	0.46
Benzo(g,h,i)perylene	6.7E-01	<0.020 U	<0.020 U	0.012 J	0.11
Benzofluoranthene	3.2E+00	<0.016 U	<0.016 U	0.076 J	0.77
Chrysene	-	0.015 J	<0.015 UJ	0.038	0.33
Dibenz(a,h)anthracene	-	<0.014 U	<0.014 U	<0.0068 U	0.022 J
Dibenzofuran	5.4E-01	<0.0067 U	<0.0066 U	<0.0034 U	<0.0064 U
Fluoranthene	1.7E+00	0.033 J	0.027 J	0.078	0.37
Fluorene	5.4E-01	<0.0057 U	<0.0056 U	0.0040 J	0.0070 J
Indeno(1,2,3-cd)pyrene	-	<0.014 U	<0.014 U	0.015 J	0.090
1-Methylnaphthalene	3.4E+01	<0.0057 U	<0.0056 U	<0.0028 U	<0.0054 U
2-Methylnaphthalene	6.7E-01	<0.010 U	<0.0099 U	<0.0050 U	<0.0096 U
Naphthalene	3.9E-02	<0.0057 UJ	<0.0056 UJ	0.0033 J	0.018 J
Phenanthrene	1.5E+00	0.026 J	0.025 J	0.062	0.18
Pyrene	2.6E+00	0.032 J	0.030 J	0.073	0.50
Total LPAHs	5.2E+00	0.026 J	0.025 J	0.069 J	0.25 J
Total HPAHs	1.2E+01	0.11 J	0.074 J	0.37 J	2.9 J
Total cPAH TEQ (0.5*ND)	3.1E-04	0.019 J	0.020 J	0.058 J	0.58 J
Other SVOCs					
Benzoic acid	6.5E-01	<1.4 U	<1.4 U	<0.70 U	<1.3 U
Benzyl alcohol	5.7E-02	<0.057 U	<0.056 U	<0.028 U	<0.054 U
Bis(2-ethylhexyl) phthalate	1.0E-01	0.11 J	<0.080 U	<0.040 U	<0.077 U
Butyl benzyl phthalate	3.6E-03	<0.058 U	<0.057 U	<0.029 U	<0.056 U
Carbazole	-	<0.0083 U	<0.0082 U	<0.0042 U	<0.0080 U
1,2-Dichlorobenzene	3.6E-02	<0.0057 U	<0.0056 U	<0.0028 U	<0.0054 U
1,4-Dichlorobenzene	1.1E-01	<0.0094 U	<0.0093 U	<0.0047 U	<0.0090 U
Diethyl phthalate	2.0E-01	<0.025 U	<0.025 U	<0.013 U	<0.024 U
2,4-Dimethylphenol	2.9E-02	<0.068 U	<0.068 U	<0.034 U	<0.065 U
Dimethyl phthalate	7.1E-02	<0.0057 U	<0.0056 U	<0.0028 U	<0.0054 U
Di-n-butyl phthalate	2.8E-01	<0.031 U	<0.030 U	<0.015 U	<0.029 U
Di-n-octyl phthalate	6.2E+00	<0.014 U	<0.014 U	<0.0068 U	<0.013 U
Hexachlorobenzene	8.0E-06	<0.017 U	<0.017 U	<0.0085 U	<0.016 U
Hexachlorobutadiene	1.1E-02	<0.017 U	<0.017 U	<0.0085 U	<0.016 U
2-Methylphenol	6.3E-02	<0.011 U	<0.011 U	<0.0056 U	<0.011 U
3- & 4-Methylphenol	6.7E-01	<0.017 U	<0.017 U	<0.0085 U	<0.016 U
N-Nitrosodiphenylamine	2.1E-02	<0.0091 U	<0.0090 U	<0.0046 U	<0.0087 U
Pentachlorophenol	3.2E-05	<0.072 U	<0.071 U	<0.036 U	<0.069 U
Phenol	4.2E-01	<0.026 U	<0.026 U	<0.013 U	<0.025 U
1,2,4-Trichlorobenzene	3.1E-02	<0.0068 U	<0.0068 U	<0.0034 U	<0.0065 U
Conventionals					
Total Organic Carbon	-	15,000	13,000	4,400	4,200

Preliminary Cleanup Levels for Soil (PCUL values for metals have been adjusted as needed for natural background):

- **Method B direct contact, unrestricted land use (SL-1)**
- **Simplified terrestrial ecological evaluation (TEE), unrestricted land use (SL-9, modified)**
- **Protect sediment via erosion of soil (SL-8)**
- **Protect surface water (SW) via groundwater from soil leaching, vadose zone (SL-3)**
- Natural background for metals in soil, Puget Sound region (SL-10)

Italicized, colored PCUL values for SL-1, 9, 8, 3 columns are those values exceeded in one or more sample results (* = all non-detected).

Green highlighted concentrations are greater than the most stringent PCUL value (bold exceedances = detected, non-bold = non-detected) For PCUL exceedances of sample results: the **SL-1 PCUL (red)** is prioritized first and all exceedances are colored; if SL-1 is not exceeded, then any **SL-9 (brown)** exceedances are colored; if both SL-1 and SL-9 are not exceeded, then any **SL-8 (purple)** exceedances are colored; lastly, if SL-1 and SL-9 and SL-8 are not exceeded, then any **SL-3 (blue)** exceedances are colored.

ft bgs = feet below ground surface (sample depth range)

J = estimated value (between reporting limit and method detection limit)

U = non-detected

R = rejected result (two sample results for benzoic acid were deemed unusable)

Samples were all collected on 4/29/2021. All sample results are validated.

Table 4. Analytical Results for DWP Equipment Rinse Sample

Chemical (all units in ug/L)	ER-1-042921
PCB Aroclors	
Aroclor 1016	<0.063 UJ
Aroclor 1221	<0.078 UJ
Aroclor 1232	<0.065 UJ
Aroclor 1242	<0.061 UJ
Aroclor 1248	<0.054 UJ
Aroclor 1254	<0.078 UJ
Aroclor 1260	<0.063 UJ
Total PCB Aroclors	<0.078 UJ
Metals	
Antimony	<0.13 U
Arsenic	<0.20 U
Cadmium	<0.037 U
Chromium	0.27 J
Copper	<0.60 U
Lead	0.060 J
Mercury	0.41
Nickel	<0.13 U
Selenium	<2.1 U
Silver	<0.025 U
Zinc	1.0 J
TPH	
Diesel range hydrocarbons	<73 U
Oil range hydrocarbons	200 J
PAHs	
Acenaphthene	<0.048 U
Acenaphthylene	<0.058 U
Anthracene	<0.048 U
Benzo(a)anthracene	<0.048 U
Benzo(a)pyrene	<0.039 U
Benzo(g,h,i)perylene	<0.039 U
Benzo(a)fluoranthene	<0.048 U
Chrysene	<0.039 UJ
Dibenz(a,h)anthracene	<0.068 U
Dibenzofuran	<0.097 U
Fluoranthene	<0.058 U
Fluorene	<0.048 U
Indeno(1,2,3-cd)pyrene	<0.13 U
1-Methylnaphthalene	<0.048 U
2-Methylnaphthalene	<0.058 U
Naphthalene	<0.15 UJ
Phenanthrene	<0.12 U
Pyrene	<0.039 U
Total LPAHs	<0.15 U
Total HPAHs	<0.13 U
Total cPAH TEQ	<0.034 U
Other SVOCs	
Benzoic acid	<1.3 U
Benzyl alcohol	<0.17 UJ
Bis(2-ethylhexyl) phthalate	<0.72 U
Butyl benzyl phthalate	<0.26 U
Carbazole	<0.097 U
1,2-Dichlorobenzene	<0.048 U
1,4-Dichlorobenzene	<0.039 U
Diethyl phthalate	<0.15 U
2,4-Dimethylphenol	<0.15 U
Dimethyl phthalate	<0.058 U
Di-n-butyl phthalate	<0.18 U
Di-n-octyl phthalate	<0.13 U
Hexachlorobenzene	<0.039 U
Hexachlorobutadiene	<0.058 U
2-Methylphenol	<0.048 U
3- & 4-Methylphenol	<0.097 U
N-Nitrosodiphenylamine	<0.068 U
Pentachlorophenol	<0.49 U
Phenol	<0.35 U
1,2,4-Trichlorobenzene	<0.087 U

Notes:

U = non-detect

J = estimated value

Sample was collected on 4/29/2021.

Sample results are validated.

FIGURES

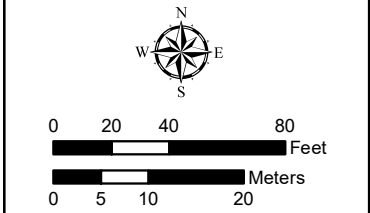


LEGEND:

- Duwamish Waterway Park
- King County Parcel

NOTES:





1. Background Source: 2009 Puget Sound 30cm Color Imagery; WA State Geoservices on public-imagery.des.wa.gov.



**FIGURE 1
DUWAMISH WATERWAY PARK
SITE MAP**

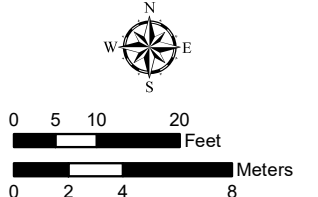


LEGEND:

-  Soil Boring
-  Park Bench
-  Duwamish Waterway Park
-  King County Parcel

NOTES:

- Background Source: Google Earth (Imagery Date: 8/2020).

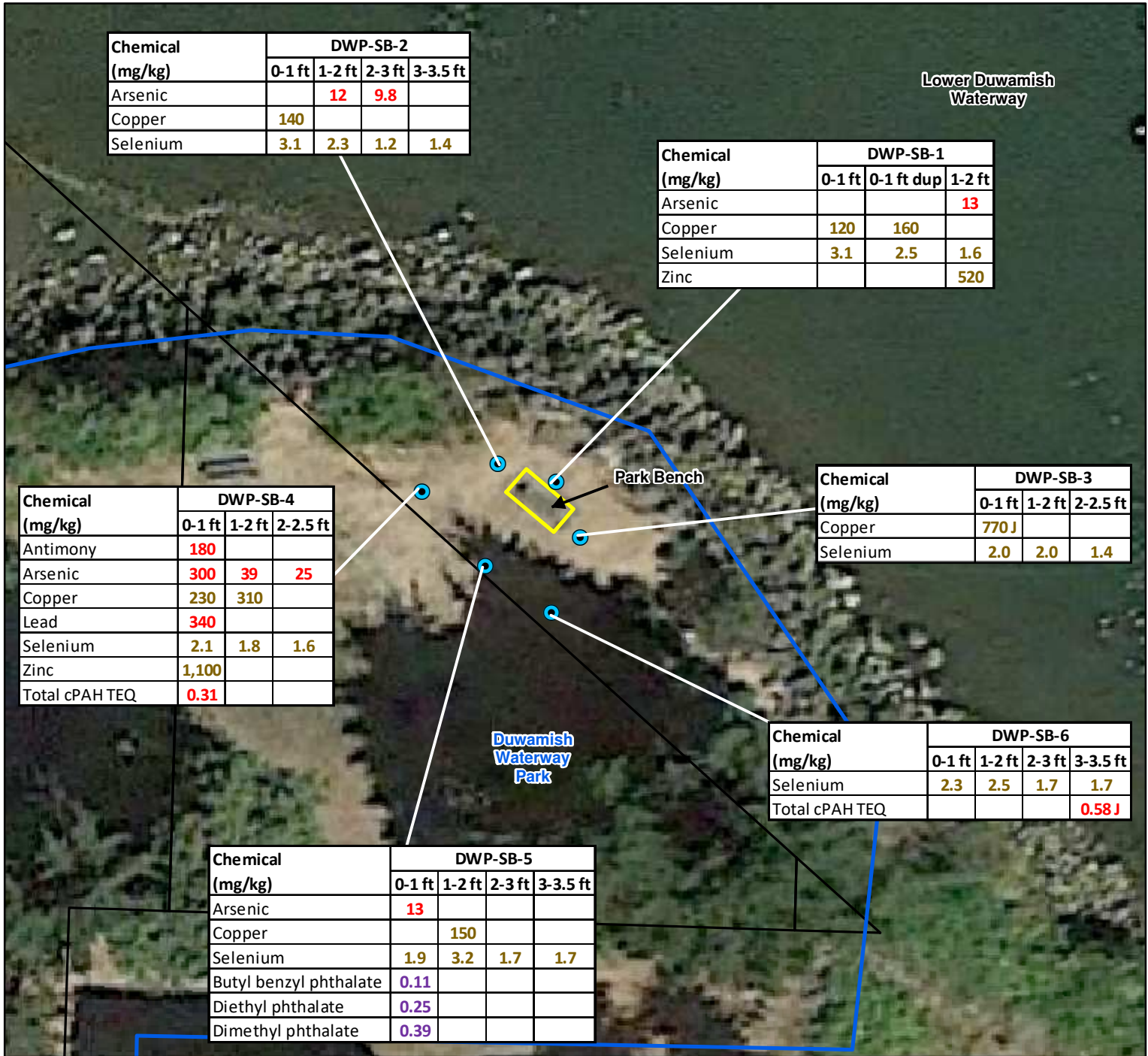


0 5 10 20 Feet
0 2 4 8 Meters




leidos

**FIGURE 2
DUWAMISH WATERWAY PARK
SAMPLE LOCATIONS**



LEGEND:

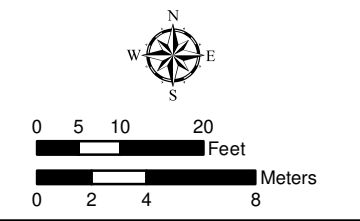
- Soil Boring
- Park Bench
- Duwamish Waterway Park
- King County Parcel

NOTES:

Only detected exceedances of three PCUL soil criteria are presented, and all samples are included. Prioritization of PCUL Exceedances:

- (1) Soil Direct Contact (SL-1)
- (2) Simplified Terrestrial Ecological Evaluation (SL-9)
- (3) Erosion of Soil to Sediment (SL-8)

*Background Source: Google Earth (Imagery Date: 8/2020).



**FIGURE 3
ANALYTICAL DATA
EXCEEDANCES IN SOIL**

Appendix A

Terrestrial Ecological Evaluation

APPENDIX A
TERRESTRIAL ECOLOGICAL EVALUATION
DUWAMISH WATERWAY PARK INITIAL INVESTIGATION

The following evaluation was performed to determine the applicability of a terrestrial ecological evaluation (TEE) to this site, based on the process and definitions in MTCA (WAC 173-340-7490). The site is located in an area that currently does and likely will continue to attract some terrestrial wildlife receptors to a certain degree. This site does not qualify for a TEE exclusion via WAC 173-340-7491(1). The criteria in WAC 173-340-7491(2), which would require a site-specific TEE, do not apply to this site. To evaluate if a simplified TEE is required, the two exposure analysis components of WAC 173-340-7492(a) are utilized. For the first component, the contamination at the site does exceed 350 square feet, and thus the simplified TEE cannot be ended on this basis. For the second component, the procedure in MTCA Table 749-1 is applied, as detailed below:

- (1) The area of continuous (connected) undeveloped terrestrial land on the site or within 500 feet of any area of the site = approximately 1.8 acres (score = 8).
- (2) Industrial or commercial property = No (score = 1)
- (3) Habitat quality of the site = Low (score = 3)
- (4) Undeveloped land likely to attract wildlife = No, not to a significant degree (score = 2)
- (5) Are there certain soil contaminants present, including PCB mixtures and pentachlorophenol = Yes (score = 1)
- (6) Add numbers above for items 2 through 5 = total of 7.
If this score (of 7) is greater than the score for item 1 (which is 8), then the simplified TEE may be ended. Therefore, the simplified TEE must be conducted.

As a result of this evaluation, the priority contaminant concentrations for the simplified TEE in MTCA Table 749-2, for unrestricted land use, are applied in this report. Note that LDW preliminary cleanup level (PCUL) SL-9 refers to the site-specific TEE, and SL-9-modified is for the simplified TEE (Ecology 2021).

Appendix B

Data Validation Report

APPENDIX B
DATA VALIDATION REPORT
DUWAMISH WATERWAY PARK INITIAL INVESTIGATION

Introduction

A comprehensive quality assurance/quality control (QA/QC) program was followed by Leidos during the Duwamish Waterway Park Initial Investigation to ensure that analytical results and the decisions based on these results are representative of the environmental conditions.

Laboratory Quality Control Assessment

The analytical data generated during the investigation underwent data verification and validation according to EPA Stage 2B validation (EPA 2009). Guidance from the SAP/QAPP (Leidos 2021) and EPA's National Functional Guidelines for Organic Data Review (EPA 2008) and EPA's National Functional Guidelines for Inorganic Data Review (EPA 2004) were used during the data validation process, as described in the Section 3.2.4 of the SAP/QAPP. All samples were submitted to Eurofins Frontier Global Sciences (TestAmerica), Fife, Washington, and results were submitted in one sample delivery group.

Data Validation Summary

The following summary provides the information necessary to determine data usability for project decision-making. The data were verified and validated and the qualifiers described below were applied to data as appropriate. Results that were qualified as non-detect (U) or estimated (J or UJ) for various reasons during the validation process encountered minor analytical problems, but are considered fully usable for decision-making. Results that were rejected (R) were not used.

The following data validation qualifiers were applied to the results as dictated by laboratory QC outliers:

- *U* – Non-detect. Indicates the analyte was analyzed for, but not detected above the level of the associated value. These results are qualitatively acceptable.
- *J* – Estimated. The analyte was detected and identified. The numerical value is the approximate concentration of the analyte in the sample. These results are qualitatively acceptable but considered as estimates.
- *UJ* – Estimated non-detect. Indicates the analyte was analyzed for, but not detected above the associated value. However, the reported value is an estimate. These results are qualitatively acceptable but considered as estimates.
- *R* – Rejected. The data are unusable, and the presence or absence of the analyte cannot be verified.

The methods used for analysis of the samples collected during the DWP investigation are included in Table A, below.

Table A. Analytical Methods

Analytical Name	Analytical Method
PCB Aroclors	EPA 8082A (low-level for soil)
Semivolatile Organic Compounds	EPA 8270E (low-level)
Total Petroleum Hydrocarbons (DRO/ORO)	NWTPH-Dx (diesel/heavy oil)
Metals (Ag, As, Cd, Cr, Cu, Pb, Ni, Sb, Se, Zn)	SW 6020B (low-level)
Metals (Hg)	SW 7470A/7471A
Total Organic Carbon	SW 9060A
Percent Moisture	SM 2540G

Table B (on page 4-5) provides a summary of data that were qualified as a result of the validation and indicates the validation qualifiers, reason codes, and potential bias applied to the data. Reason code definitions are provided in Table C (page 6). The following items (as applicable) were examined during the data verification and validation process:

- Sample custody and sample receipt, integrity, and preservation
- Sample handling and preparation
- Sample holding times
- Sample dilutions
- Laboratory method blanks and initial/continuing calibration blanks
- Equipment rinse sample
- Instrument performance checks
- Initial and continuing calibrations
- Matrix spikes and matrix spike duplicates (MS/MSDs)
- laboratory control samples / laboratory control sample duplicates (LCS and/or LCSDs)
- Laboratory duplicates
- Serial dilutions
- Interference check samples
- Post-digestion spikes
- Surrogate recovery
- Internal standards

General Data Package Comments

The laboratory submitted all required deliverables, which involved three revisions to the analytical data report (Appendix C). The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative, with a few minor exceptions.

All samples were received by the laboratory courier and the laboratory in good condition, properly preserved, and on ice. Upon receipt at the laboratory, the single cooler was checked in and initially noted as being without ice and at a temperature of 11.2°C. The laboratory later acknowledged in their narrative and in discussion that ice was actually included in the cooler; however, they maintained that the measured temperature was high.

Leidos believes that this anomalous temperature is erroneous based on the following history of sample storage and shipment. The samples in the ice cooler chest were returned to the Leidos

warehouse refrigerator on the evening of April 29, 2021. Samples and temperature blanks were placed in this dedicated sample refrigerator, which is consistently maintained at between 33°F and 40°F (0.6°C and 4.4°C).

The samples were then removed from this refrigerator on May 4, 2021, and placed immediately into a shipment cooler with two temperature blanks, a large bag of freezer ice, and the chain-of-custody form. The temperature blanks were placed adjacent to the samples, in direct contact with the ice. The sealed cooler was then picked up by a Eurofins laboratory courier about one hour after sample packaging, at 12 pm, and was delivered to the laboratory that afternoon.

This refrigerator is used frequently to store samples (only the DWP samples were in the refrigerator on these days), and this equipment and process has never resulted in a recorded laboratory temperature that is anywhere near this high (11.2°C), even for cases with delayed two-day shipment. Thus, given the history and timing of storage and delivery, Leidos believes that this anomalous recorded temperature is in error.

General Data Validation Comments

The results of the data validation process demonstrate that the overall quality of the data is acceptable to identify and quantify the contaminants listed in the SAP/QAPP (Leidos 2021) with the exception of two rejected results for benzoic acid. Benzoic acid was rejected in samples DWP-SB-3-0 and DWP-SB-4-2 due to MS/MSD recoveries less than 10 percent. GC/MS analysis has demonstrated that benzoic acid is one of the difficult, poor performing semivolatile compounds, and corrective action/reanalysis was not required.

Through data verification, validation, and review, the analytical data have been qualified as appropriate. Data are considered usable if they are not qualified or are qualified as estimated. For the samples collected during the Duwamish Waterway Park Initial Investigation, 99.8 percent of the data were considered usable. The overall quality of the data meets or exceeds the established project objectives. All data validation qualifiers and their associated reason codes are presented below.

Data Usability

Overall, data produced for this investigation demonstrate that it can withstand scientific scrutiny, are appropriate for its intended purpose, are technically defensible, and are of known and acceptable sensitivity, precision, and accuracy with the exception of the benzoic acid results discussed above. Data integrity has been documented through proper implementation of QA and QC measures. The environmental information presented has an established confidence that allows utilization for the project objectives and provides data for future needs.

Table B. Data Qualified During the Validation Process

Sample_ID	Analytical Parameter	Result	Result Units	Analytical Method	Data Validation Qualifier	Data Validation Reason Code
DWP-SB-1-0	Benzo(g,h,i)perylene	10	ug/kg	SW8270E	UJ	P02 L
DWP-SB-1-0	Pentachlorophenol	180	ug/kg	SW8270E	J	C05 H
DWP-SB-1-0-D	Benzo(g,h,i)perylene	19	ug/kg	SW8270E	J	P02 L
DWP-SB-1-1	Benzo(g,h,i)perylene	11	ug/kg	SW8270E	UJ	P02 L
DWP-SB-1-1	Chrysene	8.1	ug/kg	SW8270E	UJ	C14
DWP-SB-1-1	Naphthalene	3.1	ug/kg	SW8270E	UJ	C14
DWP-SB-2-0	Benzo(g,h,i)perylene	9.7	ug/kg	SW8270E	UJ	P02 L
DWP-SB-2-0	Naphthalene	2.7	ug/kg	SW8270E	UJ	C14
DWP-SB-2-0	PCB Aroclor 1260	13	ug/kg	SW8082A	J	M08
DWP-SB-2-1	Benzo(g,h,i)perylene	10	ug/kg	SW8270E	UJ	P02 L
DWP-SB-2-1	Chrysene	7.4	ug/kg	SW8270E	UJ	C14
DWP-SB-2-1	Naphthalene	2.9	ug/kg	SW8270E	UJ	C14
DWP-SB-2-2	Chrysene	7.3	ug/kg	SW8270E	UJ	C14
DWP-SB-2-2	Naphthalene	2.8	ug/kg	SW8270E	UJ	C14
DWP-SB-2-3	Benzo(g,h,i)perylene	9.6	ug/kg	SW8270E	UJ	P02 L
DWP-SB-2-3	Chrysene	6.9	ug/kg	SW8270E	UJ	C14
DWP-SB-2-3	Naphthalene	2.7	ug/kg	SW8270E	UJ	C14
DWP-SB-3-0	Benzo(g,h,i)perylene	20	ug/kg	SW8270E	UJ	H02 L, P02 L
DWP-SB-3-0	Benzoic Acid	1,300	ug/kg	SW8270E	R	H03
DWP-SB-3-0	Dibenzo(a,h)anthracene	13	ug/kg	SW8270E	UJ	H02 L
DWP-SB-3-0	Indeno(1,2,3-cd)pyrene	13	ug/kg	SW8270E	UJ	H02 L
DWP-SB-3-0	Naphthalene	5.5	ug/kg	SW8270E	UJ	C14
DWP-SB-3-0	PCB Aroclor 1260	11	ug/kg	SW8082A	J	H02 L, H04, M08
DWP-SB-3-0	Motor Oil	470	mg/kg	NWTPH-DX	J	H02 L
DWP-SB-3-0	Antimony	5.0	mg/kg	SW6020B	J	H02 L, J01
DWP-SB-3-0	Chromium	24	mg/kg	SW6020B	J	E07
DWP-SB-3-0	Copper	770	mg/kg	SW6020B	J	J01, E07
DWP-SB-3-0	Lead	100	mg/kg	SW6020B	J	H03 L, E07, J01
DWP-SB-3-0	Silver	0.39	mg/kg	SW6020B	J	J01
DWP-SB-3-0	Zinc	120	mg/kg	SW6020B	J	H02 L
DWP-SB-3-1	Benzo(g,h,i)perylene	10	ug/kg	SW8270E	UJ	P02 L
DWP-SB-3-2	Benzo(g,h,i)perylene	10	ug/kg	SW8270E	UJ	P02 L
DWP-SB-3-2	Mercury	0.084	mg/kg	SW7471A	J	H01, J01
DWP-SB-4-0	Benzo(g,h,i)perylene	94	ug/kg	SW8270E	J	P02 L
DWP-SB-4-1	Benzo(g,h,i)perylene	37	ug/kg	SW8270E	UJ	P02 L
DWP-SB-4-1	Chrysene	27	ug/kg	SW8270E	UJ	C14
DWP-SB-4-1	Naphthalene	10	ug/kg	SW8270E	UJ	C14

Sample_ID	Analytical Parameter	Result	Result Units	Analytical Method	Data Validation Qualifier	Data Validation Reason Code
DWP-SB-4-2	Benz(a)anthracene	16	ug/kg	SW8270E	J	H04
DWP-SB-4-2	Benzo(a)pyrene	15	ug/kg	SW8270E	J	H01 H, H04
DWP-SB-4-2	Benzo(g,h,i)perylene	19	ug/kg	SW8270E	UJ	H02, H04
DWP-SB-4-2	Benzoic Acid	1,300	ug/kg	SW8270E	R	H03
DWP-SB-4-2	Chrysene	14	ug/kg	SW8270E	J	H01 H
DWP-SB-4-2	Dibenzo(a,h)anthracene	13	ug/kg	SW8270E	UJ	H02 L
DWP-SB-4-2	Fluoranthene	32	ug/kg	SW8270E	J	H01 H, H04
DWP-SB-4-2	Indeno(1,2,3-cd)pyrene	13	ug/kg	SW8270E	UJ	H02 L, H04
DWP-SB-4-2	Naphthalene	5.4	ug/kg	SW8270E	UJ	C14
DWP-SB-4-2	Pentachlorophenol	68	ug/kg	SW8270E	UJ	H12 H
DWP-SB-4-2	Pyrene	32	ug/kg	SW8270E	J	H01 H
DWP-SB-5-0	PCB Aroclor 1260	17	ug/kg	SW8082A	J	M08
DWP-SB-5-1	Naphthalene	2.6	ug/kg	SW8270E	UJ	C14
DWP-SB-5-2	Chrysene	7.0	ug/kg	SW8270E	UJ	C14
DWP-SB-5-2	Naphthalene	2.7	ug/kg	SW8270E	UJ	C14
DWP-SB-5-3	Chrysene	7.1	ug/kg	SW8270E	UJ	C14
DWP-SB-5-3	Naphthalene	2.7	ug/kg	SW8270E	UJ	C14
DWP-SB-5-3	Motor Oil	38	mg/kg	NWTPH-DX	J	P08
DWP-SB-6-0	Naphthalene	5.7	ug/kg	SW8270E	UJ	C14
DWP-SB-6-0	#2 Diesel	33	mg/kg	NWTPH-DX	J	P08
DWP-SB-6-0	Motor Oil	250	mg/kg	NWTPH-DX	J	P08
DWP-SB-6-1	Chrysene	15	ug/kg	SW8270E	UJ	C14
DWP-SB-6-1	Naphthalene	5.6	ug/kg	SW8270E	UJ	C14
DWP-SB-6-1	#2 Diesel	25	mg/kg	NWTPH-DX	J	P08
DWP-SB-6-1	Motor Oil	130	mg/kg	NWTPH-DX	J	P08
DWP-SB-6-2	Motor Oil	59	mg/kg	NWTPH-DX	J	P08
DWP-SB-6-3	#2 Diesel	16	mg/kg	NWTPH-DX	J	P08
ER-1-042921	Benzyl Alcohol	0.17	ug/L	SW8270E	UJ	C05 L
ER-1-042921	Naphthalene	0.15	ug/L	SW8270E	UJ	C14
ER-1-042921	Chrysene	0.039	ug/L	SW8270E	UJ	C14
ER-1-042921	PCB Aroclor 1016	0.063	ug/L	SW8082A	UJ	A01
ER-1-042921	PCB Aroclor 1221	0.078	ug/L	SW8082A	UJ	A01
ER-1-042921	PCB Aroclor 1232	0.065	ug/L	SW8082A	UJ	A01
ER-1-042921	PCB Aroclor 1242	0.061	ug/L	SW8082A	UJ	A01
ER-1-042921	PCB Aroclor 1248	0.054	ug/L	SW8082A	UJ	A01
ER-1-042921	PCB Aroclor 1254	0.078	ug/L	SW8082A	UJ	A01
ER-1-042921	PCB Aroclor 1260	0.063	ug/L	SW8082A	UJ	A01

Table C. Data Validation Codes

Data Validation Reason Codes	Definition
A01	Extraction holding times were exceeded.
C05	Continuing calibration % difference was not within acceptance criteria.
C14	Professional judgment was used to qualify the data. Readback error exceeded criteria.
E07	Serial dilution criteria were not met.
H01	MS/MSD recovery was above the upper control limit.
H02	MS/MSD recovery was below the lower control limit.
H03	MS/MSD recovery was <10%.
H04	MS/MSD pairs exceed the RPD limit.
H12	Professional judgment was used. Grossly high MS and/or MSD recovery associated with a non-detect result.
J01	Duplicate RPD was outside the control limit
M08	The RPD between the two GC columns was >40%.
P02	LCS recovery was below lower control limit.
P08	Professional judgment was used to qualify the data.
Data Validation Bias Codes	Definition
H	Bias in the sample result is believed to be high.
L	Bias in the sample result is believed to be low.

Appendix C

Analytical Laboratory Data Report

ANALYTICAL REPORT

Job Number: 580-102849-1

Job Description: Duwamish Waterway Park

For:

Leidos, Inc.

18912 North Creek Parkway, Suite 101

Bothell, WA 98011

Attention: Thomas E Dube



Approved for release.
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Project Manager I
7/21/2021 11:33 AM

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Revision: 3

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Definitions/Glossary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

GC Semi VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*1	LCS/LCSD RPD exceeds control limits.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
S1-	Surrogate recovery exceeds control limits, low biased.
S1+	Surrogate recovery exceeds control limits, high biased.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
B	Compound was found in the blank and sample.
F1	MS and/or MSD recovery exceeds control limits.
F2	MS/MSD RPD exceeds control limits
F3	Duplicate RPD exceeds the control limit
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent

Definitions/Glossary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

CASE NARRATIVE
Client: Leidos, Inc.
Project: Duwamish Waterway Park
Report Number: 580-102849-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) resulting from a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are an unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes within the calibration range of the instrument or that reduces the interferences thereby enabling the quantification of target analytes.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This report has been revised to include missing SVOC CCV data.

RECEIPT

The samples were received on 05/04/2021; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 11.2 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

POLYCHLORINATED BIPHENYLS (PCBS)

Samples DWP-SB-1-0 (580-102849-1), DWP-SB-1-0-D (580-102849-2), DWP-SB-1-1 (580-102849-3), DWP-SB-2-0 (580-102849-4), DWP-SB-2-1 (580-102849-5), DWP-SB-2-2 (580-102849-6), DWP-SB-2-3 (580-102849-7), DWP-SB-3-0 (580-102849-8), DWP-SB-3-1 (580-102849-9), DWP-SB-3-2 (580-102849-10), DWP-SB-4-0 (580-102849-11), DWP-SB-4-1 (580-102849-12), DWP-SB-4-2 (580-102849-13), DWP-SB-5-0 (580-102849-14), DWP-SB-5-1 (580-102849-15), DWP-SB-5-2 (580-102849-16), DWP-SB-5-3 (580-102849-17), DWP-SB-6-0 (580-102849-18), DWP-SB-6-1 (580-102849-19), DWP-SB-6-2 (580-102849-20) and DWP-SB-6-3 (580-102849-21) were analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082. The samples were prepared on 05/05/2021 and 05/12/2021 and analyzed on 05/06/2021, 05/07/2021 and 05/18/2021.

The following samples required a TBA clean-up to reduce matrix interferences caused by sulfur: DWP-SB-1-0 (580-102849-1), DWP-SB-1-0-D (580-102849-2), DWP-SB-1-1 (580-102849-3), DWP-SB-2-0 (580-102849-4), DWP-SB-2-1 (580-102849-5), DWP-SB-2-2 (580-102849-6), DWP-SB-2-3 (580-102849-7), DWP-SB-3-0 (580-102849-8), DWP-SB-3-0 (580-102849-8[MS]), DWP-SB-3-0 (580-102849-8[MSD]), (LCS 580-356391/2-A), (MB 580-356391/1-A), DWP-SB-3-1 (580-102849-9), DWP-SB-3-2 (580-102849-10), DWP-SB-4-0 (580-102849-11), DWP-SB-4-1 (580-102849-12), DWP-SB-4-2 (580-102849-13), DWP-SB-5-0 (580-102849-14), DWP-SB-5-1 (580-102849-15), DWP-SB-5-2 (580-102849-16), DWP-SB-5-3 (580-102849-17), DWP-SB-6-0 (580-102849-18), DWP-SB-6-1 (580-102849-19), DWP-SB-6-2 (580-102849-20), DWP-SB-6-3 (580-102849-21), (LCS 580-355875/2-A) and (MB 580-355875/1-A).

Surrogate recovery for the following sample was outside the upper control limit: (CCB 580-356093/8). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

The surrogate recovery for the blank associated with analytical batch 580-356024 was outside the upper control limits. This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

The continuing calibration verification (CCV) associated with batch 580-356024 recovered high and outside the control limits for PCB-1221 and PCB-1242 on one column. Results are confirmed on both columns and reported from the passing column. The associated samples are: (CCV 580-356024/7) and (CCV 580-356024/8).

The continuing calibration verification (CCV) associated with batch 580-356024 recovered above the upper control limit for PCB-1254. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 580-356024/8).

The continuing calibration verification (CCV) associated with batch 580-356024 recovered outside acceptance criteria for %D for surrogate DCB Decachlorobiphenyl on the confirmation column only. Since the %Rec is within the acceptance criteria for the surrogate in the CCV and associated samples, the data have been reported.

The continuing calibration verification (CCV) associated with 580-356799 recovered high and outside the control limits for DCB Decachlorobiphenyl on one column. Results are confirmed on both columns and reported from the passing column. The associated sample is: (CCVIS 580-356799/3).

The %RPD between the primary and confirmation column exceeded 40% for PCB-1260 for the following samples: DWP-SB-2-0 (580-102849-4) and DWP-SB-3-0 (580-102849-8). The lower values has been reported and qualified in accordance with the laboratory's SOP.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples DWP-SB-1-0 (580-102849-1), DWP-SB-1-0-D (580-102849-2), DWP-SB-1-1 (580-102849-3), DWP-SB-2-0 (580-102849-4), DWP-SB-2-1 (580-102849-5), DWP-SB-2-2 (580-102849-6), DWP-SB-2-3 (580-102849-7), DWP-SB-3-0 (580-102849-8), DWP-SB-3-1 (580-102849-9), DWP-SB-3-2 (580-102849-10), DWP-SB-4-0 (580-102849-11), DWP-SB-4-1 (580-102849-12), DWP-SB-4-2 (580-102849-13), DWP-SB-5-0 (580-102849-14), DWP-SB-5-1 (580-102849-15), DWP-SB-5-2 (580-102849-16), DWP-SB-5-3 (580-102849-17), DWP-SB-6-0 (580-102849-18), DWP-SB-6-1 (580-102849-19), DWP-SB-6-2 (580-102849-20) and DWP-SB-6-3 (580-102849-21) were analyzed for semivolatile organic compounds (GC-MS) in accordance with 8270E. The samples were prepared on 05/12/2021 and analyzed on 05/13/2021 and 05/14/2021.

Samples DWP-SB-1-0 (580-102849-1)[5X], DWP-SB-1-0-D (580-102849-2)[5X], DWP-SB-1-1 (580-102849-3)[5X], DWP-SB-2-0 (580-102849-4)[5X], DWP-SB-2-1 (580-102849-5)[5X], DWP-SB-2-2 (580-102849-6)[5X], DWP-SB-2-3 (580-102849-7)[5X], DWP-SB-3-0 (580-102849-8)[10X], DWP-SB-3-1 (580-102849-9)[5X], DWP-SB-3-2 (580-102849-10)[5X], DWP-SB-4-0 (580-102849-11)[20X], DWP-SB-4-1 (580-102849-12)[20X], DWP-SB-4-2 (580-102849-13)[10X], DWP-SB-5-0 (580-102849-14)[5X], DWP-SB-5-1 (580-102849-15)[5X], DWP-SB-5-2 (580-102849-16)[5X], DWP-SB-5-3 (580-102849-17)[5X], DWP-SB-6-0 (580-102849-18)[10X], DWP-SB-6-1 (580-102849-19)[10X], DWP-SB-6-2 (580-102849-20)[5X] and DWP-SB-6-3 (580-102849-21)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Surrogate recoveries for the following samples were outside control limits: DWP-SB-3-0 (580-102849-8), DWP-SB-4-0 (580-102849-11), DWP-SB-4-1 (580-102849-12), DWP-SB-5-3 (580-102849-17), DWP-SB-6-1 (580-102849-19) and DWP-SB-6-2 (580-102849-20). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

The CCV for preparation batch 580-355848 and analytical batch 580-355915 recovered outside control limits for the following analyte(s): Benzyl alcohol. Benzyl alcohol has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

The continuing calibration verification (CCV) associated with batch 580-356466 recovered above the upper control limit for Pentachlorophenol and 4,6-Dinitro-2-methylphenol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: DWP-SB-2-0 (580-102849-4), DWP-SB-2-1 (580-102849-5), DWP-SB-2-3 (580-102849-7) and (CCVIS 580-356466/3).

The laboratory control sample and laboratory control sample duplicate, LCS 580-356370/2-A and LCSD 580-356370/3-A respectively, recovered below lower control for Benzo[g,h,i]perylene. These samples were re-analyzed for this compound only, and results from both sets have been reported. The following samples are associated with these QC: DWP-SB-1-0 (580-102849-1), DWP-SB-1-0-D (580-102849-2), DWP-SB-1-1 (580-102849-3), DWP-SB-2-0 (580-102849-4), DWP-SB-2-1 (580-102849-5), DWP-SB-2-3 (580-102849-7), (LCS 580-356370/2-A) and (LCSD 580-356370/3-A)

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 580-356370 and 580-356379 and analytical batch 580-356541 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample, laboratory control duplicate (LCS/LCSD) recoveries were within acceptance limits.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 580-355848, so a LCS and LCSD were used instead.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample ER-1-042921 (580-102849-22) was analyzed for semivolatile organic compounds (GC-MS) in accordance with 8270E. The samples were prepared on 05/05/2021 and analyzed on 05/06/2021.

The surrogate recovery for the blank associated with preparation batch 580-355848 and analytical batch 580-355915 was outside the upper control limits. This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 580-355853, so a LCS and LCSD were used instead.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POLYCHLORINATED BIPHENYLS (PCBS)

Sample ER-1-042921 (580-102849-22) was analyzed for polychlorinated biphenyls (PCBs) in accordance with EPA SW-846 Method 8082A. The samples were prepared on 05/05/2021 and analyzed on 05/08/2021.

The surrogate recovery for the blank associated with analytical batch 580-356354 was outside the upper control limits.

Surrogate recovery for the following samples was outside control limits: ER-1-042921 (580-102849-22). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

The following sample was re-prepared outside of preparation holding time due to failing LCSD in the original preparation batch. ER-1-042921 (580-102849-22).

Surrogate recovery for the following sample was outside the upper control limit: (CCB 580-356184/9). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

The required volume of spiking solution was inadvertently not added to the laboratory control sample duplicate (LCSD) associated with preparation batch 580-355853 and analytical batch 580-356184. Percent recoveries are based on the amount spiked.

The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-355853 and analytical batch 580-356184 recovered outside control limits for the following analytes: PCB-1016.

The laboratory control sample duplicate (LCSD) associated with 580-356184 recovered high and outside the control limits for PCB-1016 on one column. Results are confirmed on both columns and reported from the passing column. The associated sample is: (LCSD 580-355853/5-A).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL AND EXTENDED RANGE ORGANICS

Samples DWP-SB-1-0 (580-102849-1), DWP-SB-1-0-D (580-102849-2), DWP-SB-1-1 (580-102849-3), DWP-SB-2-0 (580-102849-4), DWP-SB-2-1 (580-102849-5), DWP-SB-2-2 (580-102849-6), DWP-SB-2-3 (580-102849-7), DWP-SB-3-0 (580-102849-8), DWP-SB-3-1 (580-102849-9), DWP-SB-3-2 (580-102849-10), DWP-SB-4-0 (580-102849-11), DWP-SB-4-1 (580-102849-12), DWP-SB-4-2 (580-102849-13), DWP-SB-5-0 (580-102849-14), DWP-SB-5-1 (580-102849-15), DWP-SB-5-2 (580-102849-16), DWP-SB-5-3 (580-102849-17), DWP-SB-6-0 (580-102849-18), DWP-SB-6-1 (580-102849-19), DWP-SB-6-2 (580-102849-20) and DWP-SB-6-3 (580-102849-21) were analyzed for diesel and extended range organics in accordance with Method NWTPH-Dx. The samples were prepared on 05/05/2021 and 05/12/2021 and analyzed on 05/12/2021 and 05/14/2021.

The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 580-355879 and analytical batch 580-356321 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 580-356426 and analytical batch 580-356563 recovered outside control limits for the following analytes: #2 Diesel (C10-C24) and Motor Oil (>C24-C36).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DIESEL AND MOTOR OIL RANGE ORGANICS

Sample ER-1-042921 (580-102849-22) was analyzed for diesel and motor oil range organics in accordance with Method NWTPH-Dx. The samples were prepared on 05/06/2021 and analyzed on 05/10/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICPMS)

Samples DWP-SB-1-0 (580-102849-1), DWP-SB-1-0-D (580-102849-2), DWP-SB-1-1 (580-102849-3), DWP-SB-2-0 (580-102849-4), DWP-SB-2-1 (580-102849-5), DWP-SB-2-2 (580-102849-6), DWP-SB-2-3 (580-102849-7), DWP-SB-3-0 (580-102849-8), DWP-SB-3-1 (580-102849-9), DWP-SB-3-2 (580-102849-10), DWP-SB-4-0 (580-102849-11), DWP-SB-4-1 (580-102849-12), DWP-SB-4-2 (580-102849-13), DWP-SB-5-0 (580-102849-14), DWP-SB-5-1 (580-102849-15), DWP-SB-5-2 (580-102849-16), DWP-SB-5-3 (580-102849-17), DWP-SB-6-0 (580-102849-18), DWP-SB-6-1 (580-102849-19), DWP-SB-6-2 (580-102849-20) and DWP-SB-6-3 (580-102849-21) were analyzed for Metals (ICPMS) in accordance with 6020A_LL. The samples were prepared on 05/06/2021 and 05/08/2021 and analyzed on 05/07/2021 and 05/10/2021.

Lead failed the recovery criteria low for the MS of sample 320-72880-1 in batch 580-356264.

Antimony and Lead failed the recovery criteria low for the MSD of sample 320-72880-1 in batch 580-356264. Chromium, Nickel and Zinc failed the recovery criteria high.

Antimony, Copper, Lead and Zinc failed the recovery criteria low for the MS of sample DWP-SB-3-0MS (580-102849-8) in batch

580-356151.

Copper, Lead and Zinc failed the recovery criteria low for the MSD of sample DWP-SB-3-0MSD (580-102849-8) in batch 580-356151.

Cadmium and Lead exceeded the RPD limit for the duplicate of sample 320-72880-1. Antimony, Copper, Lead and Silver exceeded the RPD limit for the duplicate of sample DWP-SB-3-0DU (580-102849-8).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICPMS)

Sample ER-1-042921 (580-102849-22) was analyzed for Metals (ICPMS) in accordance with 6020A_LL. The samples were prepared on 05/05/2021 and analyzed on 05/06/2021.

Lead, Nickel and Zinc were detected in method blank MB 580-355883/15-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Sample ER-1-042921 (580-102849-22) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 05/05/2021.

Mercury was detected in method blank MB 580-355850/20-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY

Samples DWP-SB-1-0 (580-102849-1), DWP-SB-1-0-D (580-102849-2), DWP-SB-1-1 (580-102849-3), DWP-SB-2-0 (580-102849-4), DWP-SB-2-1 (580-102849-5), DWP-SB-2-2 (580-102849-6), DWP-SB-2-3 (580-102849-7), DWP-SB-3-0 (580-102849-8), DWP-SB-3-1 (580-102849-9), DWP-SB-3-2 (580-102849-10), DWP-SB-4-0 (580-102849-11), DWP-SB-4-1 (580-102849-12), DWP-SB-4-2 (580-102849-13), DWP-SB-5-0 (580-102849-14), DWP-SB-5-1 (580-102849-15), DWP-SB-5-2 (580-102849-16), DWP-SB-5-3 (580-102849-17), DWP-SB-6-0 (580-102849-18), DWP-SB-6-1 (580-102849-19), DWP-SB-6-2 (580-102849-20) and DWP-SB-6-3 (580-102849-21) were analyzed for total mercury in accordance with EPA SW-846 Method 7471A. The samples were prepared and analyzed on 05/12/2021 and 05/14/2021.

Mercury failed the recovery criteria high for the MSD of sample DWP-SB-3-2MSD (580-102849-10) in batch 580-356707. Mercury exceeded the RPD limit.

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL ORGANIC CARBON

Samples DWP-SB-1-0 (580-102849-1), DWP-SB-1-0-D (580-102849-2), DWP-SB-1-1 (580-102849-3), DWP-SB-2-0 (580-102849-4), DWP-SB-2-1 (580-102849-5), DWP-SB-2-2 (580-102849-6), DWP-SB-2-3 (580-102849-7), DWP-SB-3-0 (580-102849-8), DWP-SB-3-1 (580-102849-9), DWP-SB-3-2 (580-102849-10), DWP-SB-4-0 (580-102849-11), DWP-SB-4-1 (580-102849-12), DWP-SB-4-2 (580-102849-13), DWP-SB-5-0 (580-102849-14), DWP-SB-5-1 (580-102849-15), DWP-SB-5-2 (580-102849-16), DWP-SB-5-3 (580-102849-17), DWP-SB-6-0 (580-102849-18), DWP-SB-6-1 (580-102849-19), DWP-SB-6-2 (580-102849-20) and DWP-SB-6-3 (580-102849-21) were analyzed for Total Organic Carbon in accordance with EPA SW-846 Method 9060A. The samples were analyzed on 05/11/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS

Samples DWP-SB-1-0 (580-102849-1), DWP-SB-1-0-D (580-102849-2), DWP-SB-1-1 (580-102849-3), DWP-SB-2-0 (580-102849-4), DWP-SB-2-1 (580-102849-5), DWP-SB-2-2 (580-102849-6), DWP-SB-2-3 (580-102849-7), DWP-SB-3-0 (580-102849-8), DWP-SB-3-1 (580-102849-9), DWP-SB-3-2 (580-102849-10), DWP-SB-4-0 (580-102849-11), DWP-SB-4-1 (580-102849-12), DWP-SB-4-2 (580-102849-13), DWP-SB-5-0 (580-102849-14), DWP-SB-5-1 (580-102849-15), DWP-SB-5-2 (580-102849-16), DWP-SB-5-3 (580-102849-17), DWP-SB-6-0 (580-102849-18), DWP-SB-6-1 (580-102849-19), DWP-SB-6-2 (580-102849-20) and DWP-SB-6-3 (580-102849-21) were analyzed for percent solids in accordance with ASTM D2216. The samples were analyzed on 05/12/2021 and 05/13/2021.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-1-0

Lab Sample ID: 580-102849-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	9.2	J	23	6.4	ug/Kg	5	☼	8270E	Total/NA
Benzo[a]pyrene	13	J	35	7.5	ug/Kg	5	☼	8270E	Total/NA
Bis(2-ethylhexyl) phthalate	110	J	350	41	ug/Kg	5	☼	8270E	Total/NA
Chrysene	13	J	35	7.5	ug/Kg	5	☼	8270E	Total/NA
Fluoranthene	20	J	23	7.0	ug/Kg	5	☼	8270E	Total/NA
Indeno[1,2,3-cd]pyrene	8.7	J	23	7.0	ug/Kg	5	☼	8270E	Total/NA
1-Methylnaphthalene	5.8	J	17	2.9	ug/Kg	5	☼	8270E	Total/NA
2-Methylnaphthalene	5.5	J	29	5.1	ug/Kg	5	☼	8270E	Total/NA
Naphthalene	3.7	J	15	2.9	ug/Kg	5	☼	8270E	Total/NA
Pentachlorophenol	180	J	230	37	ug/Kg	5	☼	8270E	Total/NA
Phenanthrene	15	J	35	3.4	ug/Kg	5	☼	8270E	Total/NA
Pyrene	16	J	35	7.5	ug/Kg	5	☼	8270E	Total/NA
PCB-1260	17		2.3	0.86	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	17		2.3	0.86	ug/Kg	1	☼	8082A	Total/NA
#2 Diesel (C10-C24)	72		57	14	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	570		57	20	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	1.3		0.26	0.030	mg/Kg	5	☼	6020B	Total/NA
Arsenic	6.5		0.22	0.043	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.36		0.35	0.033	mg/Kg	5	☼	6020B	Total/NA
Chromium	31		0.43	0.027	mg/Kg	5	☼	6020B	Total/NA
Copper	120		0.43	0.096	mg/Kg	5	☼	6020B	Total/NA
Lead	61		0.22	0.021	mg/Kg	5	☼	6020B	Total/NA
Nickel	35		0.22	0.084	mg/Kg	5	☼	6020B	Total/NA
Selenium	3.1		0.48	0.12	mg/Kg	5	☼	6020B	Total/NA
Silver	0.12		0.087	0.0087	mg/Kg	5	☼	6020B	Total/NA
Zinc	110		2.2	0.70	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.098		0.029	0.0087	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	20000		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-1-0-D

Lab Sample ID: 580-102849-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	37		23	6.4	ug/Kg	5	☼	8270E	Total/NA
Benzo[a]pyrene	61		35	7.5	ug/Kg	5	☼	8270E	Total/NA
Benzo[fluoranthene	64	J	87	8.1	ug/Kg	5	☼	8270E	Total/NA
Benzo[g,h,i]perylene	19	J *	35	10	ug/Kg	5	☼	8270E	Total/NA
Bis(2-ethylhexyl) phthalate	78	J	350	41	ug/Kg	5	☼	8270E	Total/NA
Chrysene	55		35	7.5	ug/Kg	5	☼	8270E	Total/NA
Fluoranthene	38		23	6.9	ug/Kg	5	☼	8270E	Total/NA
Indeno[1,2,3-cd]pyrene	22	J	23	6.9	ug/Kg	5	☼	8270E	Total/NA
1-Methylnaphthalene	4.5	J	17	2.9	ug/Kg	5	☼	8270E	Total/NA
2-Methylnaphthalene	12	J	29	5.1	ug/Kg	5	☼	8270E	Total/NA
Naphthalene	11	J	14	2.9	ug/Kg	5	☼	8270E	Total/NA
Phenanthrene	20	J	35	3.3	ug/Kg	5	☼	8270E	Total/NA
Pyrene	53		35	7.5	ug/Kg	5	☼	8270E	Total/NA
PCB-1260	20		2.3	0.85	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	20		2.3	0.85	ug/Kg	1	☼	8082A	Total/NA
#2 Diesel (C10-C24)	57	J	61	15	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	410		61	21	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	1.2		0.25	0.029	mg/Kg	5	☼	6020B	Total/NA
Arsenic	6.8		0.21	0.042	mg/Kg	5	☼	6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins FGS, Seattle

Detection Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-1-0-D (Continued)

Lab Sample ID: 580-102849-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.31	J	0.34	0.033	mg/Kg	5	☼	6020B	Total/NA
Chromium	30		0.42	0.027	mg/Kg	5	☼	6020B	Total/NA
Copper	160		0.42	0.093	mg/Kg	5	☼	6020B	Total/NA
Lead	60		0.21	0.020	mg/Kg	5	☼	6020B	Total/NA
Nickel	35		0.21	0.081	mg/Kg	5	☼	6020B	Total/NA
Selenium	2.5		0.46	0.12	mg/Kg	5	☼	6020B	Total/NA
Silver	0.13		0.084	0.0084	mg/Kg	5	☼	6020B	Total/NA
Zinc	110		2.2	0.68	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.063		0.031	0.0094	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	14000		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-1-1

Lab Sample ID: 580-102849-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Bis(2-ethylhexyl) phthalate	170	J	380	44	ug/Kg	5	☼	8270E	Total/NA
PCB-1221	3.9		2.5	0.52	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	3.9		2.5	0.91	ug/Kg	1	☼	8082A	Total/NA
#2 Diesel (C10-C24)	35	J	60	15	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	140		60	21	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	3.7		0.30	0.034	mg/Kg	5	☼	6020B	Total/NA
Arsenic	13		0.25	0.049	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.61		0.39	0.038	mg/Kg	5	☼	6020B	Total/NA
Chromium	20		0.49	0.031	mg/Kg	5	☼	6020B	Total/NA
Copper	45		0.49	0.11	mg/Kg	5	☼	6020B	Total/NA
Lead	74		0.25	0.024	mg/Kg	5	☼	6020B	Total/NA
Nickel	21		0.25	0.095	mg/Kg	5	☼	6020B	Total/NA
Selenium	1.6		0.54	0.14	mg/Kg	5	☼	6020B	Total/NA
Silver	0.14		0.099	0.0099	mg/Kg	5	☼	6020B	Total/NA
Zinc	520		2.5	0.79	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.020	J	0.029	0.0086	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	4000		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-2-0

Lab Sample ID: 580-102849-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	7.7	J	22	6.0	ug/Kg	5	☼	8270E	Total/NA
Bis(2-ethylhexyl) phthalate	53	J	320	38	ug/Kg	5	☼	8270E	Total/NA
Chrysene	11	J	32	7.0	ug/Kg	5	☼	8270E	Total/NA
Fluoranthene	13	J	22	6.5	ug/Kg	5	☼	8270E	Total/NA
Indeno[1,2,3-cd]pyrene	7.8	J	22	6.5	ug/Kg	5	☼	8270E	Total/NA
Phenanthrene	12	J	32	3.1	ug/Kg	5	☼	8270E	Total/NA
Pyrene	13	J	32	7.0	ug/Kg	5	☼	8270E	Total/NA
PCB-1260	13	p	2.2	0.80	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	13	p	2.2	0.80	ug/Kg	1	☼	8082A	Total/NA
#2 Diesel (C10-C24)	63		54	13	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	400		54	19	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	1.4		0.23	0.026	mg/Kg	5	☼	6020B	Total/NA
Arsenic	6.1		0.19	0.038	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.46		0.30	0.029	mg/Kg	5	☼	6020B	Total/NA
Chromium	32		0.38	0.024	mg/Kg	5	☼	6020B	Total/NA
Copper	140		0.38	0.084	mg/Kg	5	☼	6020B	Total/NA
Lead	67		0.19	0.018	mg/Kg	5	☼	6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins FGS, Seattle

Detection Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-2-0 (Continued)

Lab Sample ID: 580-102849-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Nickel	35		0.19	0.073	mg/Kg	5	☼	6020B	Total/NA
Selenium	3.1		0.42	0.11	mg/Kg	5	☼	6020B	Total/NA
Silver	0.13		0.076	0.0076	mg/Kg	5	☼	6020B	Total/NA
Zinc	120		1.9	0.61	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.087		0.033	0.0098	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	10000		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-2-1

Lab Sample ID: 580-102849-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Phenanthrene	7.3	J	34	3.3	ug/Kg	5	☼	8270E	Total/NA
PCB-1260	10		2.2	0.83	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	10		2.2	0.83	ug/Kg	1	☼	8082A	Total/NA
#2 Diesel (C10-C24)	50	J	56	14	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	260		56	20	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	3.4		0.21	0.024	mg/Kg	5	☼	6020B	Total/NA
Arsenic	12		0.18	0.035	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.32		0.28	0.027	mg/Kg	5	☼	6020B	Total/NA
Chromium	33		0.35	0.022	mg/Kg	5	☼	6020B	Total/NA
Copper	73		0.35	0.077	mg/Kg	5	☼	6020B	Total/NA
Lead	39		0.18	0.017	mg/Kg	5	☼	6020B	Total/NA
Nickel	27		0.18	0.068	mg/Kg	5	☼	6020B	Total/NA
Selenium	2.3		0.39	0.10	mg/Kg	5	☼	6020B	Total/NA
Silver	0.52		0.070	0.0070	mg/Kg	5	☼	6020B	Total/NA
Zinc	75		1.8	0.56	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.034		0.030	0.0091	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	5500		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-2-2

Lab Sample ID: 580-102849-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
#2 Diesel (C10-C24)	27	J	56	14	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	93		56	20	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	2.8		0.19	0.022	mg/Kg	5	☼	6020B	Total/NA
Arsenic	9.8		0.16	0.032	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.15	J	0.25	0.024	mg/Kg	5	☼	6020B	Total/NA
Chromium	24		0.32	0.020	mg/Kg	5	☼	6020B	Total/NA
Copper	25		0.32	0.070	mg/Kg	5	☼	6020B	Total/NA
Lead	19		0.16	0.015	mg/Kg	5	☼	6020B	Total/NA
Nickel	21		0.16	0.061	mg/Kg	5	☼	6020B	Total/NA
Selenium	1.2		0.35	0.091	mg/Kg	5	☼	6020B	Total/NA
Silver	0.059	J	0.064	0.0064	mg/Kg	5	☼	6020B	Total/NA
Zinc	51		1.6	0.51	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.011	J	0.023	0.0069	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	2900		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-2-3

Lab Sample ID: 580-102849-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
PCB-1260	3.0		2.2	0.80	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	3.0		2.2	0.80	ug/Kg	1	☼	8082A	Total/NA
#2 Diesel (C10-C24)	33	J	54	13	mg/Kg	1	☼	NWTPH-Dx	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins FGS, Seattle

Detection Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-2-3 (Continued)

Lab Sample ID: 580-102849-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Motor Oil (>C24-C36)	110		54	19	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	1.8		0.17	0.019	mg/Kg	5	☼	6020B	Total/NA
Arsenic	6.7		0.14	0.028	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.14	J	0.23	0.022	mg/Kg	5	☼	6020B	Total/NA
Chromium	23		0.28	0.018	mg/Kg	5	☼	6020B	Total/NA
Copper	31		0.28	0.062	mg/Kg	5	☼	6020B	Total/NA
Lead	17		0.14	0.014	mg/Kg	5	☼	6020B	Total/NA
Nickel	20		0.14	0.054	mg/Kg	5	☼	6020B	Total/NA
Selenium	1.4		0.31	0.081	mg/Kg	5	☼	6020B	Total/NA
Silver	0.038	J	0.056	0.0056	mg/Kg	5	☼	6020B	Total/NA
Zinc	43		1.4	0.45	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.018	J	0.024	0.0072	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	6900		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-3-0

Lab Sample ID: 580-102849-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	14	J	66	14	ug/Kg	10	☼	8270E	Total/NA
Benzofluoranthene	89	J	160	15	ug/Kg	10	☼	8270E	Total/NA
Bis(2-ethylhexyl) phthalate	140	J	660	78	ug/Kg	10	☼	8270E	Total/NA
Chrysene	18	J	66	14	ug/Kg	10	☼	8270E	Total/NA
Dimethyl phthalate	9.8	J	160	5.5	ug/Kg	10	☼	8270E	Total/NA
Fluoranthene	25	J	44	13	ug/Kg	10	☼	8270E	Total/NA
Pentachlorophenol	350	J	440	69	ug/Kg	10	☼	8270E	Total/NA
Phenanthrene	20	J	66	6.4	ug/Kg	10	☼	8270E	Total/NA
Pyrene	23	J	66	14	ug/Kg	10	☼	8270E	Total/NA
PCB-1260	11	F2 F1 p	2.2	0.82	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	11	p	2.2	0.82	ug/Kg	1	☼	8082A	Total/NA
#2 Diesel (C10-C24)	65		55	14	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	470	F1	55	19	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	5.0	F1	0.30	0.033	mg/Kg	5	☼	6020B	Total/NA
Arsenic	6.8		0.25	0.049	mg/Kg	5	☼	6020B	Total/NA
Chromium	24		0.49	0.031	mg/Kg	5	☼	6020B	Total/NA
Copper	770		0.49	0.11	mg/Kg	5	☼	6020B	Total/NA
Lead	100	F1	0.25	0.024	mg/Kg	5	☼	6020B	Total/NA
Nickel	30		0.25	0.095	mg/Kg	5	☼	6020B	Total/NA
Selenium	2.0		0.54	0.14	mg/Kg	5	☼	6020B	Total/NA
Silver	0.39		0.098	0.0098	mg/Kg	5	☼	6020B	Total/NA
Zinc	120	F1	2.5	0.79	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.10		0.032	0.0096	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	20000		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-3-1

Lab Sample ID: 580-102849-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	16	J	23	6.2	ug/Kg	5	☼	8270E	Total/NA
Benzo[a]pyrene	23	J	34	7.3	ug/Kg	5	☼	8270E	Total/NA
Benzofluoranthene	18	J	84	7.9	ug/Kg	5	☼	8270E	Total/NA
Bis(2-ethylhexyl) phthalate	59	J	340	40	ug/Kg	5	☼	8270E	Total/NA
Chrysene	18	J	34	7.3	ug/Kg	5	☼	8270E	Total/NA
Dibenzofuran	6.6	J	84	3.3	ug/Kg	5	☼	8270E	Total/NA
Dimethyl phthalate	13	J	84	2.8	ug/Kg	5	☼	8270E	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins FGS, Seattle

Detection Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-3-1 (Continued)

Lab Sample ID: 580-102849-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	31		23	6.8	ug/Kg	5	☼	8270E	Total/NA
Indeno[1,2,3-cd]pyrene	11	J	23	6.8	ug/Kg	5	☼	8270E	Total/NA
1-Methylnaphthalene	9.7	J	17	2.8	ug/Kg	5	☼	8270E	Total/NA
2-Methylnaphthalene	8.9	J	28	5.0	ug/Kg	5	☼	8270E	Total/NA
Naphthalene	4.4	J	14	2.8	ug/Kg	5	☼	8270E	Total/NA
Pentachlorophenol	180	J	230	35	ug/Kg	5	☼	8270E	Total/NA
Phenanthrene	25	J	34	3.3	ug/Kg	5	☼	8270E	Total/NA
Pyrene	31	J	34	7.3	ug/Kg	5	☼	8270E	Total/NA
PCB-1260	14	J	21	7.8	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	14	J	21	7.8	ug/Kg	1	☼	8082A	Total/NA
#2 Diesel (C10-C24)	26	J	55	13	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	210		55	19	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	1.5		0.26	0.030	mg/Kg	5	☼	6020B	Total/NA
Arsenic	6.6		0.22	0.044	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.32	J	0.35	0.034	mg/Kg	5	☼	6020B	Total/NA
Chromium	25		0.44	0.028	mg/Kg	5	☼	6020B	Total/NA
Copper	75		0.44	0.097	mg/Kg	5	☼	6020B	Total/NA
Lead	50		0.22	0.021	mg/Kg	5	☼	6020B	Total/NA
Nickel	27		0.22	0.085	mg/Kg	5	☼	6020B	Total/NA
Selenium	2.0		0.48	0.13	mg/Kg	5	☼	6020B	Total/NA
Silver	0.095		0.088	0.0088	mg/Kg	5	☼	6020B	Total/NA
Zinc	76		2.2	0.71	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.087		0.033	0.0098	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	14000		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-3-2

Lab Sample ID: 580-102849-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	7.5	J	23	6.4	ug/Kg	5	☼	8270E	Total/NA
Benzo[a]pyrene	14	J	35	7.5	ug/Kg	5	☼	8270E	Total/NA
Benzo[fluoranthene]	15	J	87	8.1	ug/Kg	5	☼	8270E	Total/NA
Bis(2-ethylhexyl) phthalate	41	J	350	41	ug/Kg	5	☼	8270E	Total/NA
Chrysene	11	J	35	7.5	ug/Kg	5	☼	8270E	Total/NA
Fluoranthene	14	J	23	6.9	ug/Kg	5	☼	8270E	Total/NA
Indeno[1,2,3-cd]pyrene	10	J	23	6.9	ug/Kg	5	☼	8270E	Total/NA
1-Methylnaphthalene	7.0	J	17	2.9	ug/Kg	5	☼	8270E	Total/NA
2-Methylnaphthalene	8.5	J	29	5.1	ug/Kg	5	☼	8270E	Total/NA
Naphthalene	8.4	J	14	2.9	ug/Kg	5	☼	8270E	Total/NA
Phenanthrene	9.6	J	35	3.4	ug/Kg	5	☼	8270E	Total/NA
Pyrene	14	J	35	7.5	ug/Kg	5	☼	8270E	Total/NA
PCB-1260	15	J	22	8.3	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	15	J	22	8.3	ug/Kg	1	☼	8082A	Total/NA
#2 Diesel (C10-C24)	24	J	53	13	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	160		53	19	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	2.1		0.24	0.027	mg/Kg	5	☼	6020B	Total/NA
Arsenic	7.0		0.20	0.040	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.32		0.32	0.031	mg/Kg	5	☼	6020B	Total/NA
Chromium	26		0.40	0.025	mg/Kg	5	☼	6020B	Total/NA
Copper	37		0.40	0.088	mg/Kg	5	☼	6020B	Total/NA
Lead	54		0.20	0.019	mg/Kg	5	☼	6020B	Total/NA
Nickel	21		0.20	0.077	mg/Kg	5	☼	6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins FGS, Seattle

Detection Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-3-2 (Continued)

Lab Sample ID: 580-102849-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Selenium	1.4		0.44	0.11	mg/Kg	5	☼	6020B	Total/NA
Silver	0.064	J	0.080	0.0080	mg/Kg	5	☼	6020B	Total/NA
Zinc	120		2.0	0.65	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.084	F1 F2	0.028	0.0083	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	6000		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-4-0

Lab Sample ID: 580-102849-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	160		82	23	ug/Kg	20	☼	8270E	Total/NA
Benzo[a]pyrene	240		120	27	ug/Kg	20	☼	8270E	Total/NA
Benzofluoranthene	380		310	29	ug/Kg	20	☼	8270E	Total/NA
Benzo[g,h,i]perylene	94	J	120	37	ug/Kg	20	☼	8270E	Total/NA
Bis(2-ethylhexyl) phthalate	420	J	1200	150	ug/Kg	20	☼	8270E	Total/NA
Chrysene	230		120	27	ug/Kg	20	☼	8270E	Total/NA
Fluoranthene	330		82	25	ug/Kg	20	☼	8270E	Total/NA
Indeno[1,2,3-cd]pyrene	100		82	25	ug/Kg	20	☼	8270E	Total/NA
1-Methylnaphthalene	21	J	61	10	ug/Kg	20	☼	8270E	Total/NA
2-Methylnaphthalene	29	J	100	18	ug/Kg	20	☼	8270E	Total/NA
Naphthalene	16	J	51	10	ug/Kg	20	☼	8270E	Total/NA
Phenanthrene	190		120	12	ug/Kg	20	☼	8270E	Total/NA
Pyrene	330		120	27	ug/Kg	20	☼	8270E	Total/NA
PCB-1260	23		20	7.5	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	19	J	20	7.5	ug/Kg	1	☼	8082A	Total/NA
#2 Diesel (C10-C24)	33	J	50	12	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	310		50	17	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	180		0.27	0.030	mg/Kg	5	☼	6020B	Total/NA
Arsenic	300		0.22	0.044	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.70		0.36	0.034	mg/Kg	5	☼	6020B	Total/NA
Chromium	47		0.44	0.028	mg/Kg	5	☼	6020B	Total/NA
Copper	230		0.44	0.098	mg/Kg	5	☼	6020B	Total/NA
Lead	340		0.22	0.021	mg/Kg	5	☼	6020B	Total/NA
Nickel	29		0.22	0.086	mg/Kg	5	☼	6020B	Total/NA
Selenium	2.1		0.49	0.13	mg/Kg	5	☼	6020B	Total/NA
Silver	0.50		0.089	0.0089	mg/Kg	5	☼	6020B	Total/NA
Zinc	1100		2.3	0.72	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.10		0.029	0.0088	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	14000		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-4-1

Lab Sample ID: 580-102849-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	48	J	83	25	ug/Kg	20	☼	8270E	Total/NA
Phenanthrene	31	J	120	12	ug/Kg	20	☼	8270E	Total/NA
Pyrene	50	J	120	27	ug/Kg	20	☼	8270E	Total/NA
PCB-1260	12	J	21	7.8	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	8.6	J	21	7.8	ug/Kg	1	☼	8082A	Total/NA
#2 Diesel (C10-C24)	18	J	49	12	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	120		49	17	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	26		0.25	0.028	mg/Kg	5	☼	6020B	Total/NA
Arsenic	39		0.21	0.042	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.12	J	0.33	0.032	mg/Kg	5	☼	6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins FGS, Seattle

Detection Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-4-1 (Continued)

Lab Sample ID: 580-102849-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chromium	20		0.42	0.026	mg/Kg	5	☼	6020B	Total/NA
Copper	310		0.42	0.092	mg/Kg	5	☼	6020B	Total/NA
Lead	100		0.21	0.020	mg/Kg	5	☼	6020B	Total/NA
Nickel	22		0.21	0.081	mg/Kg	5	☼	6020B	Total/NA
Selenium	1.8		0.46	0.12	mg/Kg	5	☼	6020B	Total/NA
Silver	0.23		0.084	0.0084	mg/Kg	5	☼	6020B	Total/NA
Zinc	190		2.1	0.67	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.051		0.028	0.0083	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	9200		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-4-2

Lab Sample ID: 580-102849-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	16	J F2	43	12	ug/Kg	10	☼	8270E	Total/NA
Benzo[a]pyrene	15	J F1	65	14	ug/Kg	10	☼	8270E	Total/NA
Chrysene	14	J F1	65	14	ug/Kg	10	☼	8270E	Total/NA
Dimethyl phthalate	13	J	160	5.4	ug/Kg	10	☼	8270E	Total/NA
Fluoranthene	32	J F2 F1	43	13	ug/Kg	10	☼	8270E	Total/NA
Phenanthrene	19	J	65	6.2	ug/Kg	10	☼	8270E	Total/NA
Pyrene	32	J F1	65	14	ug/Kg	10	☼	8270E	Total/NA
#2 Diesel (C10-C24)	16	J	53	13	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	72		53	18	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	14		0.25	0.028	mg/Kg	5	☼	6020B	Total/NA
Arsenic	25		0.21	0.041	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.20	J	0.33	0.032	mg/Kg	5	☼	6020B	Total/NA
Chromium	18		0.41	0.026	mg/Kg	5	☼	6020B	Total/NA
Copper	37		0.41	0.091	mg/Kg	5	☼	6020B	Total/NA
Lead	51		0.21	0.020	mg/Kg	5	☼	6020B	Total/NA
Nickel	17		0.21	0.080	mg/Kg	5	☼	6020B	Total/NA
Selenium	1.6		0.45	0.12	mg/Kg	5	☼	6020B	Total/NA
Silver	0.078	J	0.083	0.0083	mg/Kg	5	☼	6020B	Total/NA
Zinc	120		2.1	0.67	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.050		0.032	0.0095	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	5000		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-5-0

Lab Sample ID: 580-102849-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	16	J	22	6.0	ug/Kg	5	☼	8270E	Total/NA
Benzo[a]pyrene	21	J	33	7.1	ug/Kg	5	☼	8270E	Total/NA
Benzofluoranthene	140		81	7.6	ug/Kg	5	☼	8270E	Total/NA
Bis(2-ethylhexyl) phthalate	160	J	330	39	ug/Kg	5	☼	8270E	Total/NA
Butyl benzyl phthalate	110		110	28	ug/Kg	5	☼	8270E	Total/NA
Chrysene	25	J	33	7.1	ug/Kg	5	☼	8270E	Total/NA
Diethyl phthalate	250		220	12	ug/Kg	5	☼	8270E	Total/NA
Dimethyl phthalate	390		81	2.7	ug/Kg	5	☼	8270E	Total/NA
Di-n-butyl phthalate	17	J	270	15	ug/Kg	5	☼	8270E	Total/NA
Di-n-octyl phthalate	160		81	6.5	ug/Kg	5	☼	8270E	Total/NA
Fluoranthene	33		22	6.5	ug/Kg	5	☼	8270E	Total/NA
Indeno[1,2,3-cd]pyrene	13	J	22	6.5	ug/Kg	5	☼	8270E	Total/NA
2-Methylnaphthalene	4.9	J	27	4.8	ug/Kg	5	☼	8270E	Total/NA
Naphthalene	5.8	J	14	2.7	ug/Kg	5	☼	8270E	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins FGS, Seattle

Detection Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-5-0 (Continued)

Lab Sample ID: 580-102849-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Pentachlorophenol	170	J	220	34	ug/Kg	5	☼	8270E	Total/NA
Phenanthrene	21	J	33	3.2	ug/Kg	5	☼	8270E	Total/NA
Pyrene	30	J	33	7.1	ug/Kg	5	☼	8270E	Total/NA
PCB-1260	17	J p	22	8.0	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	17	J p	22	8.0	ug/Kg	1	☼	8082A	Total/NA
#2 Diesel (C10-C24)	59		55	14	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	550		55	19	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	6.5		0.25	0.029	mg/Kg	5	☼	6020B	Total/NA
Arsenic	13		0.21	0.042	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.31	J	0.34	0.032	mg/Kg	5	☼	6020B	Total/NA
Chromium	25		0.42	0.026	mg/Kg	5	☼	6020B	Total/NA
Copper	82		0.42	0.093	mg/Kg	5	☼	6020B	Total/NA
Lead	53		0.21	0.020	mg/Kg	5	☼	6020B	Total/NA
Nickel	27		0.21	0.081	mg/Kg	5	☼	6020B	Total/NA
Selenium	1.9		0.46	0.12	mg/Kg	5	☼	6020B	Total/NA
Silver	0.17		0.084	0.0084	mg/Kg	5	☼	6020B	Total/NA
Zinc	110		2.1	0.68	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.063		0.030	0.0089	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	20000		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-5-1

Lab Sample ID: 580-102849-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	18	J	21	5.8	ug/Kg	5	☼	8270E	Total/NA
Benzo[a]pyrene	16	J	31	6.8	ug/Kg	5	☼	8270E	Total/NA
Benzofluoranthene	150		79	7.3	ug/Kg	5	☼	8270E	Total/NA
Bis(2-ethylhexyl) phthalate	58	J	310	37	ug/Kg	5	☼	8270E	Total/NA
Chrysene	25	J	31	6.8	ug/Kg	5	☼	8270E	Total/NA
Fluoranthene	39		21	6.3	ug/Kg	5	☼	8270E	Total/NA
Indeno[1,2,3-cd]pyrene	7.1	J	21	6.3	ug/Kg	5	☼	8270E	Total/NA
Phenanthrene	32		31	3.0	ug/Kg	5	☼	8270E	Total/NA
Pyrene	34		31	6.8	ug/Kg	5	☼	8270E	Total/NA
PCB-1260	14	J	21	7.8	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	12	J	21	7.8	ug/Kg	1	☼	8082A	Total/NA
#2 Diesel (C10-C24)	67		51	13	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	490		51	18	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	3.6		0.27	0.031	mg/Kg	5	☼	6020B	Total/NA
Arsenic	7.1		0.22	0.045	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.27	J	0.36	0.035	mg/Kg	5	☼	6020B	Total/NA
Chromium	25		0.45	0.028	mg/Kg	5	☼	6020B	Total/NA
Copper	150		0.45	0.099	mg/Kg	5	☼	6020B	Total/NA
Lead	48		0.22	0.022	mg/Kg	5	☼	6020B	Total/NA
Nickel	28		0.22	0.087	mg/Kg	5	☼	6020B	Total/NA
Selenium	3.2		0.49	0.13	mg/Kg	5	☼	6020B	Total/NA
Silver	0.12		0.090	0.0090	mg/Kg	5	☼	6020B	Total/NA
Zinc	95		2.3	0.72	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.065		0.027	0.0082	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	8900		2000	97	mg/Kg	1		9060A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins FGS, Seattle

Detection Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-5-2

Lab Sample ID: 580-102849-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	10	J	22	6.5	ug/Kg	5	☼	8270E	Total/NA
Phenanthrene	13	J	32	3.1	ug/Kg	5	☼	8270E	Total/NA
Pyrene	11	J	32	7.0	ug/Kg	5	☼	8270E	Total/NA
#2 Diesel (C10-C24)	37	J	54	13	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	220		54	19	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	1.6		0.28	0.032	mg/Kg	5	☼	6020B	Total/NA
Arsenic	6.2		0.24	0.047	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.22	J	0.38	0.037	mg/Kg	5	☼	6020B	Total/NA
Chromium	16		0.47	0.030	mg/Kg	5	☼	6020B	Total/NA
Copper	23		0.47	0.10	mg/Kg	5	☼	6020B	Total/NA
Lead	31		0.24	0.023	mg/Kg	5	☼	6020B	Total/NA
Nickel	12		0.24	0.092	mg/Kg	5	☼	6020B	Total/NA
Selenium	1.7		0.52	0.14	mg/Kg	5	☼	6020B	Total/NA
Silver	0.056	J	0.095	0.0095	mg/Kg	5	☼	6020B	Total/NA
Zinc	55		2.4	0.76	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.056		0.027	0.0081	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	2300		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-5-3

Lab Sample ID: 580-102849-17

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoranthene	12	J	22	6.5	ug/Kg	5	☼	8270E	Total/NA
1-Methylnaphthalene	4.0	J	16	2.7	ug/Kg	5	☼	8270E	Total/NA
Phenanthrene	24	J	33	3.2	ug/Kg	5	☼	8270E	Total/NA
Pyrene	8.3	J	33	7.1	ug/Kg	5	☼	8270E	Total/NA
Motor Oil (>C24-C36)	38	J *1	53	19	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	2.8		0.25	0.028	mg/Kg	5	☼	6020B	Total/NA
Arsenic	7.2		0.21	0.041	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.14	J	0.33	0.032	mg/Kg	5	☼	6020B	Total/NA
Chromium	21		0.41	0.026	mg/Kg	5	☼	6020B	Total/NA
Copper	26		0.41	0.091	mg/Kg	5	☼	6020B	Total/NA
Lead	19		0.21	0.020	mg/Kg	5	☼	6020B	Total/NA
Nickel	19		0.21	0.080	mg/Kg	5	☼	6020B	Total/NA
Selenium	1.7		0.45	0.12	mg/Kg	5	☼	6020B	Total/NA
Silver	0.046	J	0.082	0.0082	mg/Kg	5	☼	6020B	Total/NA
Zinc	68		2.1	0.66	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.048		0.031	0.0093	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	2400		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-6-0

Lab Sample ID: 580-102849-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	14	J	45	13	ug/Kg	10	☼	8270E	Total/NA
Benzo[a]pyrene	15	J	68	15	ug/Kg	10	☼	8270E	Total/NA
Bis(2-ethylhexyl) phthalate	110	J	680	81	ug/Kg	10	☼	8270E	Total/NA
Chrysene	15	J	68	15	ug/Kg	10	☼	8270E	Total/NA
Fluoranthene	33	J	45	14	ug/Kg	10	☼	8270E	Total/NA
Phenanthrene	26	J	68	6.6	ug/Kg	10	☼	8270E	Total/NA
Pyrene	32	J	68	15	ug/Kg	10	☼	8270E	Total/NA
PCB-1260	16	J	22	8.0	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	16	J	22	8.0	ug/Kg	1	☼	8082A	Total/NA
#2 Diesel (C10-C24)	33	J *1	58	14	mg/Kg	1	☼	NWTPH-Dx	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins FGS, Seattle

Detection Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-6-0 (Continued)

Lab Sample ID: 580-102849-18

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Motor Oil (>C24-C36)	250	*1	58	20	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	1.7		0.31	0.035	mg/Kg	5	☼	6020B	Total/NA
Arsenic	7.0		0.26	0.052	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.34	J	0.41	0.040	mg/Kg	5	☼	6020B	Total/NA
Chromium	21		0.52	0.033	mg/Kg	5	☼	6020B	Total/NA
Copper	84		0.52	0.11	mg/Kg	5	☼	6020B	Total/NA
Lead	64		0.26	0.025	mg/Kg	5	☼	6020B	Total/NA
Nickel	23		0.26	0.10	mg/Kg	5	☼	6020B	Total/NA
Selenium	2.3		0.57	0.15	mg/Kg	5	☼	6020B	Total/NA
Silver	0.16		0.10	0.010	mg/Kg	5	☼	6020B	Total/NA
Zinc	100		2.6	0.83	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.13		0.033	0.0099	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	15000		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-6-1

Lab Sample ID: 580-102849-19

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	17	J	68	15	ug/Kg	10	☼	8270E	Total/NA
Fluoranthene	27	J	45	14	ug/Kg	10	☼	8270E	Total/NA
Phenanthrene	25	J	68	6.5	ug/Kg	10	☼	8270E	Total/NA
Pyrene	30	J	68	15	ug/Kg	10	☼	8270E	Total/NA
PCB-1260	15	J	23	8.5	ug/Kg	1	☼	8082A	Total/NA
Polychlorinated biphenyls, Total	11	J	23	8.5	ug/Kg	1	☼	8082A	Total/NA
#2 Diesel (C10-C24)	25	J *1	57	14	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	130	*1	57	20	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	1.3		0.29	0.033	mg/Kg	5	☼	6020B	Total/NA
Arsenic	6.1		0.24	0.048	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.41		0.38	0.037	mg/Kg	5	☼	6020B	Total/NA
Chromium	23		0.48	0.030	mg/Kg	5	☼	6020B	Total/NA
Copper	98		0.48	0.11	mg/Kg	5	☼	6020B	Total/NA
Lead	55		0.24	0.023	mg/Kg	5	☼	6020B	Total/NA
Nickel	24		0.24	0.092	mg/Kg	5	☼	6020B	Total/NA
Selenium	2.5		0.53	0.14	mg/Kg	5	☼	6020B	Total/NA
Silver	0.12		0.096	0.0096	mg/Kg	5	☼	6020B	Total/NA
Zinc	82		2.4	0.77	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.096		0.032	0.0095	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	13000		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-6-2

Lab Sample ID: 580-102849-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]anthracene	36		23	6.3	ug/Kg	5	☼	8270E	Total/NA
Benzo[a]pyrene	45		34	7.4	ug/Kg	5	☼	8270E	Total/NA
Benzo[fluoranthene]	76	J	85	8.0	ug/Kg	5	☼	8270E	Total/NA
Benzo[g,h,i]perylene	12	J	34	10	ug/Kg	5	☼	8270E	Total/NA
Chrysene	38		34	7.4	ug/Kg	5	☼	8270E	Total/NA
Fluoranthene	78		23	6.8	ug/Kg	5	☼	8270E	Total/NA
Fluorene	4.0	J	14	2.8	ug/Kg	5	☼	8270E	Total/NA
Indeno[1,2,3-cd]pyrene	15	J	23	6.8	ug/Kg	5	☼	8270E	Total/NA
Naphthalene	3.3	J	14	2.8	ug/Kg	5	☼	8270E	Total/NA
Phenanthrene	62		34	3.3	ug/Kg	5	☼	8270E	Total/NA
Pyrene	73		34	7.4	ug/Kg	5	☼	8270E	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins FGS, Seattle

Detection Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-6-2 (Continued)

Lab Sample ID: 580-102849-20

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Motor Oil (>C24-C36)	59	*1	56	20	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	1.2		0.22	0.025	mg/Kg	5	☼	6020B	Total/NA
Arsenic	5.4		0.19	0.037	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.23	J	0.30	0.029	mg/Kg	5	☼	6020B	Total/NA
Chromium	18		0.37	0.023	mg/Kg	5	☼	6020B	Total/NA
Copper	26		0.37	0.082	mg/Kg	5	☼	6020B	Total/NA
Lead	38		0.19	0.018	mg/Kg	5	☼	6020B	Total/NA
Nickel	14		0.19	0.072	mg/Kg	5	☼	6020B	Total/NA
Selenium	1.7		0.41	0.11	mg/Kg	5	☼	6020B	Total/NA
Silver	0.057	J	0.074	0.0074	mg/Kg	5	☼	6020B	Total/NA
Zinc	68		1.9	0.60	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.045		0.029	0.0087	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	4400		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: DWP-SB-6-3

Lab Sample ID: 580-102849-21

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	9.0	J	44	5.0	ug/Kg	10	☼	8270E	Total/NA
Anthracene	32	J	65	17	ug/Kg	10	☼	8270E	Total/NA
Benzo[a]anthracene	260		44	12	ug/Kg	10	☼	8270E	Total/NA
Benzo[a]pyrene	460		65	14	ug/Kg	10	☼	8270E	Total/NA
Benzofluoranthene	770		160	15	ug/Kg	10	☼	8270E	Total/NA
Benzo[g,h,i]perylene	110		65	20	ug/Kg	10	☼	8270E	Total/NA
Chrysene	330		65	14	ug/Kg	10	☼	8270E	Total/NA
Dibenz(a,h)anthracene	22	J	54	13	ug/Kg	10	☼	8270E	Total/NA
Fluoranthene	370		44	13	ug/Kg	10	☼	8270E	Total/NA
Fluorene	7.0	J	27	5.4	ug/Kg	10	☼	8270E	Total/NA
Indeno[1,2,3-cd]pyrene	90		44	13	ug/Kg	10	☼	8270E	Total/NA
Naphthalene	18	J	27	5.4	ug/Kg	10	☼	8270E	Total/NA
Phenanthrene	180		65	6.3	ug/Kg	10	☼	8270E	Total/NA
Pyrene	500		65	14	ug/Kg	10	☼	8270E	Total/NA
#2 Diesel (C10-C24)	16	J *1	56	14	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Motor Oil (>C24-C36)	110	*1	56	20	mg/Kg	1	☼	NWTPH-Dx	Total/NA
Antimony	1.5		0.24	0.027	mg/Kg	5	☼	6020B	Total/NA
Arsenic	5.6		0.20	0.040	mg/Kg	5	☼	6020B	Total/NA
Cadmium	0.20	J	0.32	0.031	mg/Kg	5	☼	6020B	Total/NA
Chromium	22		0.40	0.025	mg/Kg	5	☼	6020B	Total/NA
Copper	31		0.40	0.088	mg/Kg	5	☼	6020B	Total/NA
Lead	54		0.20	0.019	mg/Kg	5	☼	6020B	Total/NA
Nickel	18		0.20	0.077	mg/Kg	5	☼	6020B	Total/NA
Selenium	1.7		0.44	0.11	mg/Kg	5	☼	6020B	Total/NA
Silver	0.051	J	0.080	0.0080	mg/Kg	5	☼	6020B	Total/NA
Zinc	76		2.0	0.64	mg/Kg	5	☼	6020B	Total/NA
Mercury	0.034		0.024	0.0071	mg/Kg	1	☼	7471A	Total/NA
Total Organic Carbon - Average Dup	4200		2000	97	mg/Kg	1		9060A	Total/NA

Client Sample ID: ER-1-042921

Lab Sample ID: 580-102849-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Motor Oil (>C24-C36)	0.20	J	0.39	0.11	mg/L	1		NWTPH-Dx	Total/NA
Chromium	0.00027	J	0.00080	0.00017	mg/L	1		6020B	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins FGS, Seattle

Detection Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: ER-1-042921 (Continued)

Lab Sample ID: 580-102849-22

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.000060	J B	0.00040	0.000040	mg/L	1		6020B	Total Recoverable
Zinc	0.0010	J B	0.0070	0.00093	mg/L	1		6020B	Total Recoverable
Mercury	0.00041	B	0.00030	0.00015	mg/L	1		7470A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-1-0

Lab Sample ID: 580-102849-1

Date Collected: 04/29/21 09:30

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	20000		2000	97	mg/Kg			05/11/21 13:49	1

Client Sample ID: DWP-SB-1-0

Lab Sample ID: 580-102849-1

Date Collected: 04/29/21 09:30

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 86.1

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		23	2.7	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Acenaphthylene	ND		15	2.9	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Anthracene	ND		35	9.3	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Benzo[a]anthracene	9.2	J	23	6.4	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Benzo[a]pyrene	13	J	35	7.5	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Benzo[fluoranthene]	ND		87	8.1	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Benzo[g,h,i]perylene	ND	*	35	10	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Benzoic acid	ND		2300	710	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Benzyl alcohol	ND		580	29	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Bis(2-ethylhexyl) phthalate	110	J	350	41	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Butyl benzyl phthalate	ND		120	30	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Carbazole	ND		87	4.2	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Chrysene	13	J	35	7.5	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Dibenz(a,h)anthracene	ND		29	7.0	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Dibenzofuran	ND		87	3.4	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
1,2-Dichlorobenzene	ND		29	2.9	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
1,4-Dichlorobenzene	ND		29	4.8	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Diethyl phthalate	ND		230	13	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
2,4-Dimethylphenol	ND		120	35	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Dimethyl phthalate	ND		87	2.9	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Di-n-butyl phthalate	ND		290	16	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Di-n-octyl phthalate	ND		87	7.0	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Fluoranthene	20	J	23	7.0	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Fluorene	ND		15	2.9	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Hexachlorobenzene	ND		29	8.7	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Hexachlorobutadiene	ND		29	8.7	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Indeno[1,2,3-cd]pyrene	8.7	J	23	7.0	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
1-Methylnaphthalene	5.8	J	17	2.9	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
2-Methylnaphthalene	5.5	J	29	5.1	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
2-Methylphenol	ND		87	5.7	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
3 & 4 Methylphenol	ND		120	8.7	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Naphthalene	3.7	J	15	2.9	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
N-Nitrosodiphenylamine	ND		35	4.6	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Pentachlorophenol	180	J	230	37	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Phenanthrene	15	J	35	3.4	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Phenol	ND		87	13	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
Pyrene	16	J	35	7.5	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5
1,2,4-Trichlorobenzene	ND		29	3.5	ug/Kg	☼	05/12/21 09:26	05/13/21 23:44	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	77		57 - 120	05/12/21 09:26	05/13/21 23:44	5

Eurofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-1-0

Lab Sample ID: 580-102849-1

Date Collected: 04/29/21 09:30

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 86.1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	66		47 - 119	05/12/21 09:26	05/13/21 23:44	5
Nitrobenzene-d5	63		54 - 120	05/12/21 09:26	05/13/21 23:44	5
Phenol-d5	67		59 - 120	05/12/21 09:26	05/13/21 23:44	5
Terphenyl-d14	118		73 - 125	05/12/21 09:26	05/13/21 23:44	5
2,4,6-Tribromophenol	98		52 - 115	05/12/21 09:26	05/13/21 23:44	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.3	0.86	ug/Kg	☼	05/12/21 11:42	05/18/21 13:06	1
PCB-1221	ND		2.3	0.49	ug/Kg	☼	05/12/21 11:42	05/18/21 13:06	1
PCB-1232	ND		2.3	0.57	ug/Kg	☼	05/12/21 11:42	05/18/21 13:06	1
PCB-1242	ND		2.3	0.40	ug/Kg	☼	05/12/21 11:42	05/18/21 13:06	1
PCB-1248	ND		2.3	0.34	ug/Kg	☼	05/12/21 11:42	05/18/21 13:06	1
PCB-1254	ND		2.3	0.43	ug/Kg	☼	05/12/21 11:42	05/18/21 13:06	1
PCB-1260	17		2.3	0.86	ug/Kg	☼	05/12/21 11:42	05/18/21 13:06	1
Polychlorinated biphenyls, Total	17		2.3	0.86	ug/Kg	☼	05/12/21 11:42	05/18/21 13:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	105		44 - 135	05/12/21 11:42	05/18/21 13:06	1
Tetrachloro-m-xylene	82		48 - 122	05/12/21 11:42	05/18/21 13:06	1

Client Sample ID: DWP-SB-1-0

Lab Sample ID: 580-102849-1

Date Collected: 04/29/21 09:30

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 86.3

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	72		57	14	mg/Kg	☼	05/05/21 15:19	05/12/21 05:27	1
Motor Oil (>C24-C36)	570		57	20	mg/Kg	☼	05/05/21 15:19	05/12/21 05:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	75		50 - 150	05/05/21 15:19	05/12/21 05:27	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.3		0.26	0.030	mg/Kg	☼	05/08/21 09:29	05/10/21 18:39	5
Arsenic	6.5		0.22	0.043	mg/Kg	☼	05/08/21 09:29	05/10/21 18:39	5
Cadmium	0.36		0.35	0.033	mg/Kg	☼	05/08/21 09:29	05/10/21 18:39	5
Chromium	31		0.43	0.027	mg/Kg	☼	05/08/21 09:29	05/10/21 18:39	5
Copper	120		0.43	0.096	mg/Kg	☼	05/08/21 09:29	05/10/21 18:39	5
Lead	61		0.22	0.021	mg/Kg	☼	05/08/21 09:29	05/10/21 18:39	5
Nickel	35		0.22	0.084	mg/Kg	☼	05/08/21 09:29	05/10/21 18:39	5
Selenium	3.1		0.48	0.12	mg/Kg	☼	05/08/21 09:29	05/10/21 18:39	5
Silver	0.12		0.087	0.0087	mg/Kg	☼	05/08/21 09:29	05/10/21 18:39	5
Zinc	110		2.2	0.70	mg/Kg	☼	05/08/21 09:29	05/10/21 18:39	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.098		0.029	0.0087	mg/Kg	☼	05/12/21 14:54	05/12/21 17:21	1

Euofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-1-0-D

Lab Sample ID: 580-102849-2

Date Collected: 04/29/21 09:32

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	14000		2000	97	mg/Kg			05/11/21 13:54	1

Client Sample ID: DWP-SB-1-0-D

Lab Sample ID: 580-102849-2

Date Collected: 04/29/21 09:32

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 79.5

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	57	J	61	15	mg/Kg	☼	05/05/21 15:19	05/12/21 06:27	1
Motor Oil (>C24-C36)	410		61	21	mg/Kg	☼	05/05/21 15:19	05/12/21 06:27	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
<i>o-Terphenyl</i>	78		50 - 150				05/05/21 15:19	05/12/21 06:27	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.2		0.25	0.029	mg/Kg	☼	05/08/21 09:29	05/10/21 18:43	5
Arsenic	6.8		0.21	0.042	mg/Kg	☼	05/08/21 09:29	05/10/21 18:43	5
Cadmium	0.31	J	0.34	0.033	mg/Kg	☼	05/08/21 09:29	05/10/21 18:43	5
Chromium	30		0.42	0.027	mg/Kg	☼	05/08/21 09:29	05/10/21 18:43	5
Copper	160		0.42	0.093	mg/Kg	☼	05/08/21 09:29	05/10/21 18:43	5
Lead	60		0.21	0.020	mg/Kg	☼	05/08/21 09:29	05/10/21 18:43	5
Nickel	35		0.21	0.081	mg/Kg	☼	05/08/21 09:29	05/10/21 18:43	5
Selenium	2.5		0.46	0.12	mg/Kg	☼	05/08/21 09:29	05/10/21 18:43	5
Silver	0.13		0.084	0.0084	mg/Kg	☼	05/08/21 09:29	05/10/21 18:43	5
Zinc	110		2.2	0.68	mg/Kg	☼	05/08/21 09:29	05/10/21 18:43	5

Client Sample ID: DWP-SB-1-0-D

Lab Sample ID: 580-102849-2

Date Collected: 04/29/21 09:32

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 86.3

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		23	2.7	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Acenaphthylene	ND		14	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Anthracene	ND		35	9.2	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Benzo[a]anthracene	37		23	6.4	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Benzo[a]pyrene	61		35	7.5	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Benzofluoranthene	64	J	87	8.1	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Benzo[g,h,i]perylene	19	J*-	35	10	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Benzoic acid	ND		2300	700	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Benzyl alcohol	ND		580	29	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Bis(2-ethylhexyl) phthalate	78	J	350	41	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Butyl benzyl phthalate	ND		120	29	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Carbazole	ND		87	4.2	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Chrysene	55		35	7.5	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Dibenz(a,h)anthracene	ND		29	6.9	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Dibenzofuran	ND		87	3.4	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
1,2-Dichlorobenzene	ND		29	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
1,4-Dichlorobenzene	ND		29	4.8	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5

Eurofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-1-0-D

Lab Sample ID: 580-102849-2

Date Collected: 04/29/21 09:32

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 86.3

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diethyl phthalate	ND		230	13	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
2,4-Dimethylphenol	ND		120	35	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Dimethyl phthalate	ND		87	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Di-n-butyl phthalate	ND		290	16	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Di-n-octyl phthalate	ND		87	6.9	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Fluoranthene	38		23	6.9	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Fluorene	ND		14	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Hexachlorobenzene	ND		29	8.7	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Hexachlorobutadiene	ND		29	8.7	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Indeno[1,2,3-cd]pyrene	22 J		23	6.9	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
1-Methylnaphthalene	4.5 J		17	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
2-Methylnaphthalene	12 J		29	5.1	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
2-Methylphenol	ND		87	5.7	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
3 & 4 Methylphenol	ND		120	8.7	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Naphthalene	11 J		14	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
N-Nitrosodiphenylamine	ND		35	4.6	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Pentachlorophenol	ND		230	36	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Phenanthrene	20 J		35	3.3	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Phenol	ND		87	13	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
Pyrene	53		35	7.5	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5
1,2,4-Trichlorobenzene	ND		29	3.5	ug/Kg	☼	05/12/21 09:26	05/14/21 00:08	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	82		57 - 120	05/12/21 09:26	05/14/21 00:08	5
2-Fluorophenol	68		47 - 119	05/12/21 09:26	05/14/21 00:08	5
Nitrobenzene-d5	67		54 - 120	05/12/21 09:26	05/14/21 00:08	5
Phenol-d5	68		59 - 120	05/12/21 09:26	05/14/21 00:08	5
Terphenyl-d14	119		73 - 125	05/12/21 09:26	05/14/21 00:08	5
2,4,6-Tribromophenol	102		52 - 115	05/12/21 09:26	05/14/21 00:08	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.3	0.85	ug/Kg	☼	05/12/21 11:42	05/18/21 13:24	1
PCB-1221	ND		2.3	0.48	ug/Kg	☼	05/12/21 11:42	05/18/21 13:24	1
PCB-1232	ND		2.3	0.56	ug/Kg	☼	05/12/21 11:42	05/18/21 13:24	1
PCB-1242	ND		2.3	0.40	ug/Kg	☼	05/12/21 11:42	05/18/21 13:24	1
PCB-1248	ND		2.3	0.33	ug/Kg	☼	05/12/21 11:42	05/18/21 13:24	1
PCB-1254	ND		2.3	0.42	ug/Kg	☼	05/12/21 11:42	05/18/21 13:24	1
PCB-1260	20		2.3	0.85	ug/Kg	☼	05/12/21 11:42	05/18/21 13:24	1
Polychlorinated biphenyls, Total	20		2.3	0.85	ug/Kg	☼	05/12/21 11:42	05/18/21 13:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	99		44 - 135	05/12/21 11:42	05/18/21 13:24	1
Tetrachloro-m-xylene	80		48 - 122	05/12/21 11:42	05/18/21 13:24	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.063		0.031	0.0094	mg/Kg	☼	05/12/21 14:54	05/12/21 17:24	1

Eurofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-1-1

Lab Sample ID: 580-102849-3

Date Collected: 04/29/21 09:45

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	4000		2000	97	mg/Kg			05/11/21 13:59	1

Client Sample ID: DWP-SB-1-1

Lab Sample ID: 580-102849-3

Date Collected: 04/29/21 09:45

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 79.5

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		25	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Acenaphthylene	ND		16	3.1	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Anthracene	ND		38	10	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Benzo[a]anthracene	ND		25	6.9	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Benzo[a]pyrene	ND		38	8.1	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Benzo[fluoranthene]	ND		94	8.8	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Benzo[g,h,i]perylene	ND	*	38	11	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Benzoic acid	ND		2500	760	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Benzyl alcohol	ND		630	31	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Bis(2-ethylhexyl) phthalate	170	J	380	44	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Butyl benzyl phthalate	ND		130	32	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Carbazole	ND		94	4.6	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Chrysene	ND		38	8.1	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Dibenz(a,h)anthracene	ND		31	7.5	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Dibenzofuran	ND		94	3.7	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
1,2-Dichlorobenzene	ND		31	3.1	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
1,4-Dichlorobenzene	ND		31	5.2	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Diethyl phthalate	ND		250	14	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
2,4-Dimethylphenol	ND		130	38	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Dimethyl phthalate	ND		94	3.1	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Di-n-butyl phthalate	ND		310	17	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Di-n-octyl phthalate	ND		94	7.5	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Fluoranthene	ND		25	7.5	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Fluorene	ND		16	3.1	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Hexachlorobenzene	ND		31	9.4	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Hexachlorobutadiene	ND		31	9.4	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Indeno[1,2,3-cd]pyrene	ND		25	7.5	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
1-Methylnaphthalene	ND		19	3.1	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
2-Methylnaphthalene	ND		31	5.5	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
2-Methylphenol	ND		94	6.1	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
3 & 4 Methylphenol	ND		130	9.4	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Naphthalene	ND		16	3.1	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
N-Nitrosodiphenylamine	ND		38	5.0	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Pentachlorophenol	ND		250	39	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Phenanthrene	ND		38	3.6	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Phenol	ND		94	14	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
Pyrene	ND		38	8.1	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5
1,2,4-Trichlorobenzene	ND		31	3.8	ug/Kg	☼	05/12/21 09:26	05/14/21 00:31	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	77		57 - 120	05/12/21 09:26	05/14/21 00:31	5

Eurofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-1-1

Lab Sample ID: 580-102849-3

Date Collected: 04/29/21 09:45

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 79.5

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	65		47 - 119	05/12/21 09:26	05/14/21 00:31	5
Nitrobenzene-d5	69		54 - 120	05/12/21 09:26	05/14/21 00:31	5
Phenol-d5	63		59 - 120	05/12/21 09:26	05/14/21 00:31	5
Terphenyl-d14	111		73 - 125	05/12/21 09:26	05/14/21 00:31	5
2,4,6-Tribromophenol	98		52 - 115	05/12/21 09:26	05/14/21 00:31	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.5	0.91	ug/Kg	☼	05/12/21 11:42	05/18/21 13:42	1
PCB-1221	3.9		2.5	0.52	ug/Kg	☼	05/12/21 11:42	05/18/21 13:42	1
PCB-1232	ND		2.5	0.60	ug/Kg	☼	05/12/21 11:42	05/18/21 13:42	1
PCB-1242	ND		2.5	0.43	ug/Kg	☼	05/12/21 11:42	05/18/21 13:42	1
PCB-1248	ND		2.5	0.36	ug/Kg	☼	05/12/21 11:42	05/18/21 13:42	1
PCB-1254	ND		2.5	0.46	ug/Kg	☼	05/12/21 11:42	05/18/21 13:42	1
PCB-1260	ND		2.5	0.91	ug/Kg	☼	05/12/21 11:42	05/18/21 13:42	1
Polychlorinated biphenyls, Total	3.9		2.5	0.91	ug/Kg	☼	05/12/21 11:42	05/18/21 13:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	87		44 - 135	05/12/21 11:42	05/18/21 13:42	1
Tetrachloro-m-xylene	78		48 - 122	05/12/21 11:42	05/18/21 13:42	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	35	J	60	15	mg/Kg	☼	05/05/21 15:19	05/12/21 06:46	1
Motor Oil (>C24-C36)	140		60	21	mg/Kg	☼	05/05/21 15:19	05/12/21 06:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150	05/05/21 15:19	05/12/21 06:46	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.7		0.30	0.034	mg/Kg	☼	05/08/21 09:29	05/10/21 18:47	5
Arsenic	13		0.25	0.049	mg/Kg	☼	05/08/21 09:29	05/10/21 18:47	5
Cadmium	0.61		0.39	0.038	mg/Kg	☼	05/08/21 09:29	05/10/21 18:47	5
Chromium	20		0.49	0.031	mg/Kg	☼	05/08/21 09:29	05/10/21 18:47	5
Copper	45		0.49	0.11	mg/Kg	☼	05/08/21 09:29	05/10/21 18:47	5
Lead	74		0.25	0.024	mg/Kg	☼	05/08/21 09:29	05/10/21 18:47	5
Nickel	21		0.25	0.095	mg/Kg	☼	05/08/21 09:29	05/10/21 18:47	5
Selenium	1.6		0.54	0.14	mg/Kg	☼	05/08/21 09:29	05/10/21 18:47	5
Silver	0.14		0.099	0.0099	mg/Kg	☼	05/08/21 09:29	05/10/21 18:47	5
Zinc	520		2.5	0.79	mg/Kg	☼	05/08/21 09:29	05/10/21 18:47	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.020	J	0.029	0.0086	mg/Kg	☼	05/12/21 14:54	05/12/21 17:26	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-2-0

Lab Sample ID: 580-102849-4

Date Collected: 04/29/21 10:14

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	10000		2000	97	mg/Kg			05/11/21 14:04	1

Client Sample ID: DWP-SB-2-0

Lab Sample ID: 580-102849-4

Date Collected: 04/29/21 10:14

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 91.8

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		22	2.5	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Acenaphthylene	ND		14	2.7	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Anthracene	ND		32	8.7	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Benzo[a]anthracene	7.7	J	22	6.0	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Benzo[a]pyrene	ND		32	7.0	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Benzo[fluoranthene]	ND		81	7.6	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Benzo[g,h,i]perylene	ND	*	32	9.7	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Benzoic acid	ND		2200	660	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Benzyl alcohol	ND		540	27	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Bis(2-ethylhexyl) phthalate	53	J	320	38	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Butyl benzyl phthalate	ND		110	28	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Carbazole	ND		81	4.0	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Chrysene	11	J	32	7.0	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Dibenz(a,h)anthracene	ND		27	6.5	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Dibenzofuran	ND		81	3.2	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
1,2-Dichlorobenzene	ND		27	2.7	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
1,4-Dichlorobenzene	ND		27	4.5	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Diethyl phthalate	ND		220	12	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
2,4-Dimethylphenol	ND		110	32	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Dimethyl phthalate	ND		81	2.7	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Di-n-butyl phthalate	ND		270	15	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Di-n-octyl phthalate	ND		81	6.5	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Fluoranthene	13	J	22	6.5	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Fluorene	ND		14	2.7	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Hexachlorobenzene	ND		27	8.1	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Hexachlorobutadiene	ND		27	8.1	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Indeno[1,2,3-cd]pyrene	7.8	J	22	6.5	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
1-Methylnaphthalene	ND		16	2.7	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
2-Methylnaphthalene	ND		27	4.8	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
2-Methylphenol	ND		81	5.3	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
3 & 4 Methylphenol	ND		110	8.1	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Naphthalene	ND		14	2.7	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
N-Nitrosodiphenylamine	ND		32	4.3	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Pentachlorophenol	ND		220	34	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Phenanthrene	12	J	32	3.1	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Phenol	ND		81	12	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
Pyrene	13	J	32	7.0	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5
1,2,4-Trichlorobenzene	ND		27	3.2	ug/Kg	☼	05/12/21 09:26	05/14/21 00:55	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	89		57 - 120	05/12/21 09:26	05/14/21 00:55	5

Euofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-2-0

Lab Sample ID: 580-102849-4

Date Collected: 04/29/21 10:14

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 91.8

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	75		47 - 119	05/12/21 09:26	05/14/21 00:55	5
Nitrobenzene-d5	73		54 - 120	05/12/21 09:26	05/14/21 00:55	5
Phenol-d5	83		59 - 120	05/12/21 09:26	05/14/21 00:55	5
Terphenyl-d14	114		73 - 125	05/12/21 09:26	05/14/21 00:55	5
2,4,6-Tribromophenol	95		52 - 115	05/12/21 09:26	05/14/21 00:55	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.2	0.80	ug/Kg	☼	05/12/21 11:42	05/18/21 13:59	1
PCB-1221	ND		2.2	0.46	ug/Kg	☼	05/12/21 11:42	05/18/21 13:59	1
PCB-1232	ND		2.2	0.53	ug/Kg	☼	05/12/21 11:42	05/18/21 13:59	1
PCB-1242	ND		2.2	0.38	ug/Kg	☼	05/12/21 11:42	05/18/21 13:59	1
PCB-1248	ND		2.2	0.32	ug/Kg	☼	05/12/21 11:42	05/18/21 13:59	1
PCB-1254	ND		2.2	0.40	ug/Kg	☼	05/12/21 11:42	05/18/21 13:59	1
PCB-1260	13	p	2.2	0.80	ug/Kg	☼	05/12/21 11:42	05/18/21 13:59	1
Polychlorinated biphenyls, Total	13	p	2.2	0.80	ug/Kg	☼	05/12/21 11:42	05/18/21 13:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	106		44 - 135	05/12/21 11:42	05/18/21 13:59	1
Tetrachloro-m-xylene	82		48 - 122	05/12/21 11:42	05/18/21 13:59	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	63		54	13	mg/Kg	☼	05/05/21 15:19	05/12/21 07:06	1
Motor Oil (>C24-C36)	400		54	19	mg/Kg	☼	05/05/21 15:19	05/12/21 07:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	74		50 - 150	05/05/21 15:19	05/12/21 07:06	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.4		0.23	0.026	mg/Kg	☼	05/08/21 09:29	05/10/21 18:51	5
Arsenic	6.1		0.19	0.038	mg/Kg	☼	05/08/21 09:29	05/10/21 18:51	5
Cadmium	0.46		0.30	0.029	mg/Kg	☼	05/08/21 09:29	05/10/21 18:51	5
Chromium	32		0.38	0.024	mg/Kg	☼	05/08/21 09:29	05/10/21 18:51	5
Copper	140		0.38	0.084	mg/Kg	☼	05/08/21 09:29	05/10/21 18:51	5
Lead	67		0.19	0.018	mg/Kg	☼	05/08/21 09:29	05/10/21 18:51	5
Nickel	35		0.19	0.073	mg/Kg	☼	05/08/21 09:29	05/10/21 18:51	5
Selenium	3.1		0.42	0.11	mg/Kg	☼	05/08/21 09:29	05/10/21 18:51	5
Silver	0.13		0.076	0.0076	mg/Kg	☼	05/08/21 09:29	05/10/21 18:51	5
Zinc	120		1.9	0.61	mg/Kg	☼	05/08/21 09:29	05/10/21 18:51	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.087		0.033	0.0098	mg/Kg	☼	05/12/21 14:54	05/12/21 17:29	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-2-1

Lab Sample ID: 580-102849-5

Date Collected: 04/29/21 10:25

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	5500		2000	97	mg/Kg			05/11/21 14:08	1

Client Sample ID: DWP-SB-2-1

Lab Sample ID: 580-102849-5

Date Collected: 04/29/21 10:25

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 87.3

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		23	2.6	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Acenaphthylene	ND		14	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Anthracene	ND		34	9.2	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Benzo[a]anthracene	ND		23	6.3	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Benzo[a]pyrene	ND		34	7.4	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Benzo[fluoranthene]	ND		86	8.0	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Benzo[g,h,i]perylene	ND	*	34	10	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Benzoic acid	ND		2300	700	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Benzyl alcohol	ND		570	29	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Bis(2-ethylhexyl) phthalate	ND		340	41	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Butyl benzyl phthalate	ND		110	29	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Carbazole	ND		86	4.2	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Chrysene	ND		34	7.4	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Dibenz(a,h)anthracene	ND		29	6.9	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Dibenzofuran	ND		86	3.4	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
1,2-Dichlorobenzene	ND		29	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
1,4-Dichlorobenzene	ND		29	4.7	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Diethyl phthalate	ND		230	13	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
2,4-Dimethylphenol	ND		110	34	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Dimethyl phthalate	ND		86	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Di-n-butyl phthalate	ND		290	15	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Di-n-octyl phthalate	ND		86	6.9	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Fluoranthene	ND		23	6.9	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Fluorene	ND		14	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Hexachlorobenzene	ND		29	8.6	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Hexachlorobutadiene	ND		29	8.6	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Indeno[1,2,3-cd]pyrene	ND		23	6.9	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
1-Methylnaphthalene	ND		17	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
2-Methylnaphthalene	ND		29	5.0	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
2-Methylphenol	ND		86	5.6	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
3 & 4 Methylphenol	ND		110	8.6	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Naphthalene	ND		14	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
N-Nitrosodiphenylamine	ND		34	4.6	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Pentachlorophenol	ND		230	36	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Phenanthrene	7.3	J	34	3.3	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Phenol	ND		86	13	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
Pyrene	ND		34	7.4	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5
1,2,4-Trichlorobenzene	ND		29	3.4	ug/Kg	☼	05/12/21 09:26	05/14/21 01:18	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	87		57 - 120	05/12/21 09:26	05/14/21 01:18	5

Eurofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-2-1

Lab Sample ID: 580-102849-5

Date Collected: 04/29/21 10:25

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 87.3

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	66		47 - 119	05/12/21 09:26	05/14/21 01:18	5
Nitrobenzene-d5	67		54 - 120	05/12/21 09:26	05/14/21 01:18	5
Phenol-d5	63		59 - 120	05/12/21 09:26	05/14/21 01:18	5
Terphenyl-d14	113		73 - 125	05/12/21 09:26	05/14/21 01:18	5
2,4,6-Tribromophenol	95		52 - 115	05/12/21 09:26	05/14/21 01:18	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.2	0.83	ug/Kg	☼	05/12/21 11:42	05/18/21 14:17	1
PCB-1221	ND		2.2	0.47	ug/Kg	☼	05/12/21 11:42	05/18/21 14:17	1
PCB-1232	ND		2.2	0.55	ug/Kg	☼	05/12/21 11:42	05/18/21 14:17	1
PCB-1242	ND		2.2	0.39	ug/Kg	☼	05/12/21 11:42	05/18/21 14:17	1
PCB-1248	ND		2.2	0.32	ug/Kg	☼	05/12/21 11:42	05/18/21 14:17	1
PCB-1254	ND		2.2	0.41	ug/Kg	☼	05/12/21 11:42	05/18/21 14:17	1
PCB-1260	10		2.2	0.83	ug/Kg	☼	05/12/21 11:42	05/18/21 14:17	1
Polychlorinated biphenyls, Total	10		2.2	0.83	ug/Kg	☼	05/12/21 11:42	05/18/21 14:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	87		44 - 135	05/12/21 11:42	05/18/21 14:17	1
Tetrachloro-m-xylene	77		48 - 122	05/12/21 11:42	05/18/21 14:17	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	50	J	56	14	mg/Kg	☼	05/05/21 15:19	05/12/21 07:26	1
Motor Oil (>C24-C36)	260		56	20	mg/Kg	☼	05/05/21 15:19	05/12/21 07:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150	05/05/21 15:19	05/12/21 07:26	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.4		0.21	0.024	mg/Kg	☼	05/08/21 09:29	05/10/21 18:55	5
Arsenic	12		0.18	0.035	mg/Kg	☼	05/08/21 09:29	05/10/21 18:55	5
Cadmium	0.32		0.28	0.027	mg/Kg	☼	05/08/21 09:29	05/10/21 18:55	5
Chromium	33		0.35	0.022	mg/Kg	☼	05/08/21 09:29	05/10/21 18:55	5
Copper	73		0.35	0.077	mg/Kg	☼	05/08/21 09:29	05/10/21 18:55	5
Lead	39		0.18	0.017	mg/Kg	☼	05/08/21 09:29	05/10/21 18:55	5
Nickel	27		0.18	0.068	mg/Kg	☼	05/08/21 09:29	05/10/21 18:55	5
Selenium	2.3		0.39	0.10	mg/Kg	☼	05/08/21 09:29	05/10/21 18:55	5
Silver	0.52		0.070	0.0070	mg/Kg	☼	05/08/21 09:29	05/10/21 18:55	5
Zinc	75		1.8	0.56	mg/Kg	☼	05/08/21 09:29	05/10/21 18:55	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.034		0.030	0.0091	mg/Kg	☼	05/12/21 14:54	05/12/21 17:31	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-2-2

Lab Sample ID: 580-102849-6

Date Collected: 04/29/21 10:35

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	2900		2000	97	mg/Kg			05/11/21 14:13	1

Client Sample ID: DWP-SB-2-2

Lab Sample ID: 580-102849-6

Date Collected: 04/29/21 10:35

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 88.4

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		22	2.6	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Acenaphthylene	ND		14	2.8	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Anthracene	ND		34	9.0	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Benzo[a]anthracene	ND		22	6.2	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Benzo[a]pyrene	ND		34	7.3	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Benzo[fluoranthene]	ND		84	7.9	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Benzo[g,h,i]perylene	ND		34	10	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Benzoic acid	ND		2200	690	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Benzyl alcohol	ND		560	28	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Bis(2-ethylhexyl) phthalate	ND		340	40	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Butyl benzyl phthalate	ND		110	29	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Carbazole	ND		84	4.1	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Chrysene	ND		34	7.3	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Dibenz(a,h)anthracene	ND		28	6.7	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Dibenzofuran	ND		84	3.3	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
1,2-Dichlorobenzene	ND		28	2.8	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
1,4-Dichlorobenzene	ND		28	4.7	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Diethyl phthalate	ND		220	12	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
2,4-Dimethylphenol	ND		110	34	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Dimethyl phthalate	ND		84	2.8	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Di-n-butyl phthalate	ND		280	15	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Di-n-octyl phthalate	ND		84	6.7	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Fluoranthene	ND		22	6.7	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Fluorene	ND		14	2.8	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Hexachlorobenzene	ND		28	8.4	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Hexachlorobutadiene	ND		28	8.4	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Indeno[1,2,3-cd]pyrene	ND		22	6.7	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
1-Methylnaphthalene	ND		17	2.8	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
2-Methylnaphthalene	ND		28	4.9	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
2-Methylphenol	ND		84	5.5	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
3 & 4 Methylphenol	ND		110	8.4	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Naphthalene	ND		14	2.8	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
N-Nitrosodiphenylamine	ND		34	4.5	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Pentachlorophenol	ND		220	35	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Phenanthrene	ND		34	3.3	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Phenol	ND		84	13	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
Pyrene	ND		34	7.3	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5
1,2,4-Trichlorobenzene	ND		28	3.4	ug/Kg	☼	05/12/21 09:53	05/14/21 20:11	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	84		57 - 120	05/12/21 09:53	05/14/21 20:11	5

Eurofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-2-2

Lab Sample ID: 580-102849-6

Date Collected: 04/29/21 10:35

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 88.4

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	73		47 - 119	05/12/21 09:53	05/14/21 20:11	5
Nitrobenzene-d5	77		54 - 120	05/12/21 09:53	05/14/21 20:11	5
Phenol-d5	72		59 - 120	05/12/21 09:53	05/14/21 20:11	5
Terphenyl-d14	111		73 - 125	05/12/21 09:53	05/14/21 20:11	5
2,4,6-Tribromophenol	105		52 - 115	05/12/21 09:53	05/14/21 20:11	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.3	0.83	ug/Kg	☼	05/12/21 11:42	05/18/21 14:35	1
PCB-1221	ND		2.3	0.47	ug/Kg	☼	05/12/21 11:42	05/18/21 14:35	1
PCB-1232	ND		2.3	0.55	ug/Kg	☼	05/12/21 11:42	05/18/21 14:35	1
PCB-1242	ND		2.3	0.39	ug/Kg	☼	05/12/21 11:42	05/18/21 14:35	1
PCB-1248	ND		2.3	0.33	ug/Kg	☼	05/12/21 11:42	05/18/21 14:35	1
PCB-1254	ND		2.3	0.42	ug/Kg	☼	05/12/21 11:42	05/18/21 14:35	1
PCB-1260	ND		2.3	0.83	ug/Kg	☼	05/12/21 11:42	05/18/21 14:35	1
Polychlorinated biphenyls, Total	ND		2.3	0.83	ug/Kg	☼	05/12/21 11:42	05/18/21 14:35	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	90		44 - 135	05/12/21 11:42	05/18/21 14:35	1
Tetrachloro-m-xylene	78		48 - 122	05/12/21 11:42	05/18/21 14:35	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	27	J	56	14	mg/Kg	☼	05/05/21 15:19	05/12/21 07:45	1
Motor Oil (>C24-C36)	93		56	20	mg/Kg	☼	05/05/21 15:19	05/12/21 07:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	75		50 - 150	05/05/21 15:19	05/12/21 07:45	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.8		0.19	0.022	mg/Kg	☼	05/08/21 09:29	05/10/21 18:59	5
Arsenic	9.8		0.16	0.032	mg/Kg	☼	05/08/21 09:29	05/10/21 18:59	5
Cadmium	0.15	J	0.25	0.024	mg/Kg	☼	05/08/21 09:29	05/10/21 18:59	5
Chromium	24		0.32	0.020	mg/Kg	☼	05/08/21 09:29	05/10/21 18:59	5
Copper	25		0.32	0.070	mg/Kg	☼	05/08/21 09:29	05/10/21 18:59	5
Lead	19		0.16	0.015	mg/Kg	☼	05/08/21 09:29	05/10/21 18:59	5
Nickel	21		0.16	0.061	mg/Kg	☼	05/08/21 09:29	05/10/21 18:59	5
Selenium	1.2		0.35	0.091	mg/Kg	☼	05/08/21 09:29	05/10/21 18:59	5
Silver	0.059	J	0.064	0.0064	mg/Kg	☼	05/08/21 09:29	05/10/21 18:59	5
Zinc	51		1.6	0.51	mg/Kg	☼	05/08/21 09:29	05/10/21 18:59	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.011	J	0.023	0.0069	mg/Kg	☼	05/12/21 14:54	05/12/21 17:33	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-2-3

Lab Sample ID: 580-102849-7

Date Collected: 04/29/21 11:05

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	6900		2000	97	mg/Kg			05/11/21 14:18	1

Client Sample ID: DWP-SB-2-3

Lab Sample ID: 580-102849-7

Date Collected: 04/29/21 11:05

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 91.2

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		21	2.5	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Acenaphthylene	ND		13	2.7	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Anthracene	ND		32	8.5	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Benzo[a]anthracene	ND		21	5.9	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Benzo[a]pyrene	ND		32	6.9	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Benzo[fluoranthene]	ND		80	7.5	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Benzo[g,h,i]perylene	ND	*	32	9.6	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Benzoic acid	ND		2100	650	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Benzyl alcohol	ND		530	27	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Bis(2-ethylhexyl) phthalate	ND		320	38	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Butyl benzyl phthalate	ND		110	27	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Carbazole	ND		80	3.9	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Chrysene	ND		32	6.9	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Dibenz(a,h)anthracene	ND		27	6.4	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Dibenzofuran	ND		80	3.1	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
1,2-Dichlorobenzene	ND		27	2.7	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
1,4-Dichlorobenzene	ND		27	4.4	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Diethyl phthalate	ND		210	12	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
2,4-Dimethylphenol	ND		110	32	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Dimethyl phthalate	ND		80	2.7	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Di-n-butyl phthalate	ND		270	14	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Di-n-octyl phthalate	ND		80	6.4	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Fluoranthene	ND		21	6.4	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Fluorene	ND		13	2.7	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Hexachlorobenzene	ND		27	8.0	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Hexachlorobutadiene	ND		27	8.0	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Indeno[1,2,3-cd]pyrene	ND		21	6.4	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
1-Methylnaphthalene	ND		16	2.7	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
2-Methylnaphthalene	ND		27	4.7	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
2-Methylphenol	ND		80	5.2	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
3 & 4 Methylphenol	ND		110	8.0	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Naphthalene	ND		13	2.7	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
N-Nitrosodiphenylamine	ND		32	4.3	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Pentachlorophenol	ND		210	34	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Phenanthrene	ND		32	3.1	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Phenol	ND		80	12	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
Pyrene	ND		32	6.9	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5
1,2,4-Trichlorobenzene	ND		27	3.2	ug/Kg	☼	05/12/21 09:26	05/14/21 01:42	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	81		57 - 120	05/12/21 09:26	05/14/21 01:42	5

Eurofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-2-3

Lab Sample ID: 580-102849-7

Date Collected: 04/29/21 11:05

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 91.2

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	64		47 - 119	05/12/21 09:26	05/14/21 01:42	5
Nitrobenzene-d5	63		54 - 120	05/12/21 09:26	05/14/21 01:42	5
Phenol-d5	62		59 - 120	05/12/21 09:26	05/14/21 01:42	5
Terphenyl-d14	117		73 - 125	05/12/21 09:26	05/14/21 01:42	5
2,4,6-Tribromophenol	97		52 - 115	05/12/21 09:26	05/14/21 01:42	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.2	0.80	ug/Kg	☼	05/12/21 11:42	05/18/21 14:53	1
PCB-1221	ND		2.2	0.45	ug/Kg	☼	05/12/21 11:42	05/18/21 14:53	1
PCB-1232	ND		2.2	0.53	ug/Kg	☼	05/12/21 11:42	05/18/21 14:53	1
PCB-1242	ND		2.2	0.38	ug/Kg	☼	05/12/21 11:42	05/18/21 14:53	1
PCB-1248	ND		2.2	0.31	ug/Kg	☼	05/12/21 11:42	05/18/21 14:53	1
PCB-1254	ND		2.2	0.40	ug/Kg	☼	05/12/21 11:42	05/18/21 14:53	1
PCB-1260	3.0		2.2	0.80	ug/Kg	☼	05/12/21 11:42	05/18/21 14:53	1
Polychlorinated biphenyls, Total	3.0		2.2	0.80	ug/Kg	☼	05/12/21 11:42	05/18/21 14:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	85		44 - 135	05/12/21 11:42	05/18/21 14:53	1
Tetrachloro-m-xylene	67		48 - 122	05/12/21 11:42	05/18/21 14:53	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	33	J	54	13	mg/Kg	☼	05/05/21 15:19	05/12/21 08:05	1
Motor Oil (>C24-C36)	110		54	19	mg/Kg	☼	05/05/21 15:19	05/12/21 08:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	75		50 - 150	05/05/21 15:19	05/12/21 08:05	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.8		0.17	0.019	mg/Kg	☼	05/08/21 09:29	05/10/21 19:02	5
Arsenic	6.7		0.14	0.028	mg/Kg	☼	05/08/21 09:29	05/10/21 19:02	5
Cadmium	0.14	J	0.23	0.022	mg/Kg	☼	05/08/21 09:29	05/10/21 19:02	5
Chromium	23		0.28	0.018	mg/Kg	☼	05/08/21 09:29	05/10/21 19:02	5
Copper	31		0.28	0.062	mg/Kg	☼	05/08/21 09:29	05/10/21 19:02	5
Lead	17		0.14	0.014	mg/Kg	☼	05/08/21 09:29	05/10/21 19:02	5
Nickel	20		0.14	0.054	mg/Kg	☼	05/08/21 09:29	05/10/21 19:02	5
Selenium	1.4		0.31	0.081	mg/Kg	☼	05/08/21 09:29	05/10/21 19:02	5
Silver	0.038	J	0.056	0.0056	mg/Kg	☼	05/08/21 09:29	05/10/21 19:02	5
Zinc	43		1.4	0.45	mg/Kg	☼	05/08/21 09:29	05/10/21 19:02	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.018	J	0.024	0.0072	mg/Kg	☼	05/12/21 14:54	05/12/21 17:35	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-3-0

Lab Sample ID: 580-102849-8

Date Collected: 04/29/21 11:25

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	20000		2000	97	mg/Kg			05/11/21 14:28	1

Client Sample ID: DWP-SB-3-0

Lab Sample ID: 580-102849-8

Date Collected: 04/29/21 11:25

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 89.0

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		44	5.0	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Acenaphthylene	ND		27	5.5	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Anthracene	ND		66	18	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Benzo[a]anthracene	ND		44	12	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Benzo[a]pyrene	14	J	66	14	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Benzofluoranthene	89	J	160	15	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Benzo[g,h,i]perylene	ND	F1	66	20	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Benzoic acid	ND		4400	1300	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Benzyl alcohol	ND		1100	55	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Bis(2-ethylhexyl) phthalate	140	J	660	78	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Butyl benzyl phthalate	ND		220	56	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Carbazole	ND		160	8.0	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Chrysene	18	J	66	14	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Dibenz(a,h)anthracene	ND	F1	55	13	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Dibenzofuran	ND		160	6.5	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
1,2-Dichlorobenzene	ND		55	5.5	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
1,4-Dichlorobenzene	ND		55	9.1	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Diethyl phthalate	ND		440	24	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
2,4-Dimethylphenol	ND		220	66	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Dimethyl phthalate	9.8	J	160	5.5	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Di-n-butyl phthalate	ND		550	30	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Di-n-octyl phthalate	ND		160	13	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Fluoranthene	25	J	44	13	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Fluorene	ND		27	5.5	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Hexachlorobenzene	ND		55	16	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Hexachlorobutadiene	ND		55	16	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Indeno[1,2,3-cd]pyrene	ND	F1	44	13	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
1-Methylnaphthalene	ND		33	5.5	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
2-Methylnaphthalene	ND	F1	55	9.7	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
2-Methylphenol	ND		160	11	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
3 & 4 Methylphenol	ND		220	16	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Naphthalene	ND		27	5.5	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
N-Nitrosodiphenylamine	ND		66	8.8	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Pentachlorophenol	350	J	440	69	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Phenanthrene	20	J	66	6.4	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Phenol	ND		160	25	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
Pyrene	23	J	66	14	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10
1,2,4-Trichlorobenzene	ND		55	6.6	ug/Kg	☼	05/12/21 09:26	05/14/21 12:40	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	81		57 - 120	05/12/21 09:26	05/14/21 12:40	10

Euofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-3-0

Lab Sample ID: 580-102849-8

Date Collected: 04/29/21 11:25

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 89.0

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	63		47 - 119	05/12/21 09:26	05/14/21 12:40	10
Nitrobenzene-d5	67		54 - 120	05/12/21 09:26	05/14/21 12:40	10
Phenol-d5	51	S1-	59 - 120	05/12/21 09:26	05/14/21 12:40	10
Terphenyl-d14	108		73 - 125	05/12/21 09:26	05/14/21 12:40	10
2,4,6-Tribromophenol	92		52 - 115	05/12/21 09:26	05/14/21 12:40	10

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		2.2	0.82	ug/Kg	☼	05/12/21 11:42	05/18/21 15:11	1
PCB-1221	ND		2.2	0.46	ug/Kg	☼	05/12/21 11:42	05/18/21 15:11	1
PCB-1232	ND		2.2	0.54	ug/Kg	☼	05/12/21 11:42	05/18/21 15:11	1
PCB-1242	ND		2.2	0.39	ug/Kg	☼	05/12/21 11:42	05/18/21 15:11	1
PCB-1248	ND		2.2	0.32	ug/Kg	☼	05/12/21 11:42	05/18/21 15:11	1
PCB-1254	ND		2.2	0.41	ug/Kg	☼	05/12/21 11:42	05/18/21 15:11	1
PCB-1260	11	F2 F1 p	2.2	0.82	ug/Kg	☼	05/12/21 11:42	05/18/21 15:11	1
Polychlorinated biphenyls, Total	11	p	2.2	0.82	ug/Kg	☼	05/12/21 11:42	05/18/21 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	103		44 - 135	05/12/21 11:42	05/18/21 15:11	1
Tetrachloro-m-xylene	79		48 - 122	05/12/21 11:42	05/18/21 15:11	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	65		55	14	mg/Kg	☼	05/05/21 15:19	05/12/21 08:25	1
Motor Oil (>C24-C36)	470	F1	55	19	mg/Kg	☼	05/05/21 15:19	05/12/21 08:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150	05/05/21 15:19	05/12/21 08:25	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	5.0	F1	0.30	0.033	mg/Kg	☼	05/06/21 14:10	05/07/21 11:56	5
Arsenic	6.8		0.25	0.049	mg/Kg	☼	05/06/21 14:10	05/07/21 11:56	5
Cadmium	ND		0.39	0.038	mg/Kg	☼	05/06/21 14:10	05/07/21 11:56	5
Chromium	24		0.49	0.031	mg/Kg	☼	05/06/21 14:10	05/07/21 11:56	5
Copper	770		0.49	0.11	mg/Kg	☼	05/06/21 14:10	05/07/21 11:56	5
Lead	100	F1	0.25	0.024	mg/Kg	☼	05/06/21 14:10	05/07/21 11:56	5
Nickel	30		0.25	0.095	mg/Kg	☼	05/06/21 14:10	05/07/21 11:56	5
Selenium	2.0		0.54	0.14	mg/Kg	☼	05/06/21 14:10	05/07/21 11:56	5
Silver	0.39		0.098	0.0098	mg/Kg	☼	05/06/21 14:10	05/07/21 11:56	5
Zinc	120	F1	2.5	0.79	mg/Kg	☼	05/06/21 14:10	05/07/21 11:56	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.10		0.032	0.0096	mg/Kg	☼	05/12/21 14:54	05/12/21 17:03	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-3-1

Lab Sample ID: 580-102849-9

Date Collected: 04/29/21 11:45

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	14000		2000	97	mg/Kg			05/11/21 14:42	1

Client Sample ID: DWP-SB-3-1

Lab Sample ID: 580-102849-9

Date Collected: 04/29/21 11:45

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 88.2

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		23	2.6	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Acenaphthylene	ND		14	2.8	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Anthracene	ND		34	9.0	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Benzo[a]anthracene	16	J	23	6.2	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Benzo[a]pyrene	23	J	34	7.3	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Benzo[fluoranthene]	18	J	84	7.9	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Benzo[g,h,i]perylene	ND		34	10	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Benzoic acid	ND		2300	690	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Benzyl alcohol	ND		560	28	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Bis(2-ethylhexyl) phthalate	59	J	340	40	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Butyl benzyl phthalate	ND		110	29	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Carbazole	ND		84	4.1	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Chrysene	18	J	34	7.3	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Dibenz(a,h)anthracene	ND		28	6.8	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Dibenzofuran	6.6	J	84	3.3	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
1,2-Dichlorobenzene	ND		28	2.8	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
1,4-Dichlorobenzene	ND		28	4.7	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Diethyl phthalate	ND		230	12	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
2,4-Dimethylphenol	ND		110	34	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Dimethyl phthalate	13	J	84	2.8	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Di-n-butyl phthalate	ND		280	15	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Di-n-octyl phthalate	ND		84	6.8	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Fluoranthene	31		23	6.8	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Fluorene	ND		14	2.8	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Hexachlorobenzene	ND		28	8.4	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Hexachlorobutadiene	ND		28	8.4	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Indeno[1,2,3-cd]pyrene	11	J	23	6.8	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
1-Methylnaphthalene	9.7	J	17	2.8	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
2-Methylnaphthalene	8.9	J	28	5.0	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
2-Methylphenol	ND		84	5.5	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
3 & 4 Methylphenol	ND		110	8.4	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Naphthalene	4.4	J	14	2.8	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
N-Nitrosodiphenylamine	ND		34	4.5	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Pentachlorophenol	180	J	230	35	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Phenanthrene	25	J	34	3.3	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Phenol	ND		84	13	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
Pyrene	31	J	34	7.3	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5
1,2,4-Trichlorobenzene	ND		28	3.4	ug/Kg	☼	05/12/21 09:26	05/14/21 13:51	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	81		57 - 120	05/12/21 09:26	05/14/21 13:51	5

Euofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-3-1

Lab Sample ID: 580-102849-9

Date Collected: 04/29/21 11:45

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 88.2

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	67		47 - 119	05/12/21 09:26	05/14/21 13:51	5
Nitrobenzene-d5	69		54 - 120	05/12/21 09:26	05/14/21 13:51	5
Phenol-d5	84		59 - 120	05/12/21 09:26	05/14/21 13:51	5
Terphenyl-d14	115		73 - 125	05/12/21 09:26	05/14/21 13:51	5
2,4,6-Tribromophenol	102		52 - 115	05/12/21 09:26	05/14/21 13:51	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		21	7.8	ug/Kg	☼	05/05/21 15:06	05/06/21 21:58	1
PCB-1221	ND		21	4.4	ug/Kg	☼	05/05/21 15:06	05/06/21 21:58	1
PCB-1232	ND		21	5.2	ug/Kg	☼	05/05/21 15:06	05/06/21 21:58	1
PCB-1242	ND		21	3.7	ug/Kg	☼	05/05/21 15:06	05/06/21 21:58	1
PCB-1248	ND		21	3.1	ug/Kg	☼	05/05/21 15:06	05/06/21 21:58	1
PCB-1254	ND		21	3.9	ug/Kg	☼	05/05/21 15:06	05/06/21 21:58	1
PCB-1260	14	J	21	7.8	ug/Kg	☼	05/05/21 15:06	05/06/21 21:58	1
Polychlorinated biphenyls, Total	14	J	21	7.8	ug/Kg	☼	05/05/21 15:06	05/06/21 21:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	85		44 - 135	05/05/21 15:06	05/06/21 21:58	1
Tetrachloro-m-xylene	71		48 - 122	05/05/21 15:06	05/06/21 21:58	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	26	J	55	13	mg/Kg	☼	05/05/21 15:19	05/12/21 09:24	1
Motor Oil (>C24-C36)	210		55	19	mg/Kg	☼	05/05/21 15:19	05/12/21 09:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	77		50 - 150	05/05/21 15:19	05/12/21 09:24	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.5		0.26	0.030	mg/Kg	☼	05/06/21 14:10	05/07/21 12:38	5
Arsenic	6.6		0.22	0.044	mg/Kg	☼	05/06/21 14:10	05/07/21 12:38	5
Cadmium	0.32	J	0.35	0.034	mg/Kg	☼	05/06/21 14:10	05/07/21 12:38	5
Chromium	25		0.44	0.028	mg/Kg	☼	05/06/21 14:10	05/07/21 12:38	5
Copper	75		0.44	0.097	mg/Kg	☼	05/06/21 14:10	05/07/21 12:38	5
Lead	50		0.22	0.021	mg/Kg	☼	05/06/21 14:10	05/07/21 12:38	5
Nickel	27		0.22	0.085	mg/Kg	☼	05/06/21 14:10	05/07/21 12:38	5
Selenium	2.0		0.48	0.13	mg/Kg	☼	05/06/21 14:10	05/07/21 12:38	5
Silver	0.095		0.088	0.0088	mg/Kg	☼	05/06/21 14:10	05/07/21 12:38	5
Zinc	76		2.2	0.71	mg/Kg	☼	05/06/21 14:10	05/07/21 12:38	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.087		0.033	0.0098	mg/Kg	☼	05/12/21 14:54	05/12/21 17:44	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-3-2

Lab Sample ID: 580-102849-10

Date Collected: 04/29/21 12:20

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	6000		2000	97	mg/Kg			05/11/21 14:47	1

Client Sample ID: DWP-SB-3-2

Lab Sample ID: 580-102849-10

Date Collected: 04/29/21 12:20

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 86.0

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		23	2.7	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Acenaphthylene	ND		14	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Anthracene	ND		35	9.2	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Benzo[a]anthracene	7.5	J	23	6.4	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Benzo[a]pyrene	14	J	35	7.5	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Benzofluoranthene	15	J	87	8.1	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Benzo[g,h,i]perylene	ND		35	10	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Benzoic acid	ND		2300	700	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Benzyl alcohol	ND		580	29	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Bis(2-ethylhexyl) phthalate	41	J	350	41	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Butyl benzyl phthalate	ND		120	29	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Carbazole	ND		87	4.2	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Chrysene	11	J	35	7.5	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Dibenz(a,h)anthracene	ND		29	6.9	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Dibenzofuran	ND		87	3.4	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
1,2-Dichlorobenzene	ND		29	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
1,4-Dichlorobenzene	ND		29	4.8	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Diethyl phthalate	ND		230	13	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
2,4-Dimethylphenol	ND		120	35	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Dimethyl phthalate	ND		87	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Di-n-butyl phthalate	ND		290	16	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Di-n-octyl phthalate	ND		87	6.9	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Fluoranthene	14	J	23	6.9	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Fluorene	ND		14	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Hexachlorobenzene	ND		29	8.7	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Hexachlorobutadiene	ND		29	8.7	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Indeno[1,2,3-cd]pyrene	10	J	23	6.9	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
1-Methylnaphthalene	7.0	J	17	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
2-Methylnaphthalene	8.5	J	29	5.1	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
2-Methylphenol	ND		87	5.7	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
3 & 4 Methylphenol	ND		120	8.7	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Naphthalene	8.4	J	14	2.9	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
N-Nitrosodiphenylamine	ND		35	4.6	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Pentachlorophenol	ND		230	36	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Phenanthrene	9.6	J	35	3.4	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Phenol	ND		87	13	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
Pyrene	14	J	35	7.5	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5
1,2,4-Trichlorobenzene	ND		29	3.5	ug/Kg	☼	05/12/21 09:26	05/14/21 14:15	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	81		57 - 120	05/12/21 09:26	05/14/21 14:15	5

Eurofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-3-2

Lab Sample ID: 580-102849-10

Date Collected: 04/29/21 12:20

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 86.0

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	65		47 - 119	05/12/21 09:26	05/14/21 14:15	5
Nitrobenzene-d5	65		54 - 120	05/12/21 09:26	05/14/21 14:15	5
Phenol-d5	75		59 - 120	05/12/21 09:26	05/14/21 14:15	5
Terphenyl-d14	114		73 - 125	05/12/21 09:26	05/14/21 14:15	5
2,4,6-Tribromophenol	98		52 - 115	05/12/21 09:26	05/14/21 14:15	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		22	8.3	ug/Kg	☼	05/05/21 15:06	05/06/21 22:16	1
PCB-1221	ND		22	4.7	ug/Kg	☼	05/05/21 15:06	05/06/21 22:16	1
PCB-1232	ND		22	5.5	ug/Kg	☼	05/05/21 15:06	05/06/21 22:16	1
PCB-1242	ND		22	3.9	ug/Kg	☼	05/05/21 15:06	05/06/21 22:16	1
PCB-1248	ND		22	3.3	ug/Kg	☼	05/05/21 15:06	05/06/21 22:16	1
PCB-1254	ND		22	4.2	ug/Kg	☼	05/05/21 15:06	05/06/21 22:16	1
PCB-1260	15	J	22	8.3	ug/Kg	☼	05/05/21 15:06	05/06/21 22:16	1
Polychlorinated biphenyls, Total	15	J	22	8.3	ug/Kg	☼	05/05/21 15:06	05/06/21 22:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	92		44 - 135	05/05/21 15:06	05/06/21 22:16	1
Tetrachloro-m-xylene	76		48 - 122	05/05/21 15:06	05/06/21 22:16	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	24	J	53	13	mg/Kg	☼	05/05/21 15:19	05/12/21 10:04	1
Motor Oil (>C24-C36)	160		53	19	mg/Kg	☼	05/05/21 15:19	05/12/21 10:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	70		50 - 150	05/05/21 15:19	05/12/21 10:04	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.1		0.24	0.027	mg/Kg	☼	05/06/21 14:10	05/07/21 12:42	5
Arsenic	7.0		0.20	0.040	mg/Kg	☼	05/06/21 14:10	05/07/21 12:42	5
Cadmium	0.32		0.32	0.031	mg/Kg	☼	05/06/21 14:10	05/07/21 12:42	5
Chromium	26		0.40	0.025	mg/Kg	☼	05/06/21 14:10	05/07/21 12:42	5
Copper	37		0.40	0.088	mg/Kg	☼	05/06/21 14:10	05/07/21 12:42	5
Lead	54		0.20	0.019	mg/Kg	☼	05/06/21 14:10	05/07/21 12:42	5
Nickel	21		0.20	0.077	mg/Kg	☼	05/06/21 14:10	05/07/21 12:42	5
Selenium	1.4		0.44	0.11	mg/Kg	☼	05/06/21 14:10	05/07/21 12:42	5
Silver	0.064	J	0.080	0.0080	mg/Kg	☼	05/06/21 14:10	05/07/21 12:42	5
Zinc	120		2.0	0.65	mg/Kg	☼	05/06/21 14:10	05/07/21 12:42	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.084	F1 F2	0.028	0.0083	mg/Kg	☼	05/14/21 11:36	05/14/21 16:04	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-4-0

Lab Sample ID: 580-102849-11

Date Collected: 04/29/21 13:35

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	14000		2000	97	mg/Kg			05/11/21 14:52	1

Client Sample ID: DWP-SB-4-0

Lab Sample ID: 580-102849-11

Date Collected: 04/29/21 13:35

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 95.4

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		82	9.4	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Acenaphthylene	ND		51	10	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Anthracene	ND		120	33	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Benzo[a]anthracene	160		82	23	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Benzo[a]pyrene	240		120	27	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Benzofluoranthene	380		310	29	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Benzo[g,h,i]perylene	94 J		120	37	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Benzoic acid	ND		8200	2500	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Benzyl alcohol	ND		2000	100	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Bis(2-ethylhexyl) phthalate	420 J		1200	150	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Butyl benzyl phthalate	ND		410	100	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Carbazole	ND		310	15	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Chrysene	230		120	27	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Dibenz(a,h)anthracene	ND		100	25	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Dibenzofuran	ND		310	12	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
1,2-Dichlorobenzene	ND		100	10	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
1,4-Dichlorobenzene	ND		100	17	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Diethyl phthalate	ND		820	45	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
2,4-Dimethylphenol	ND		410	120	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Dimethyl phthalate	ND		310	10	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Di-n-butyl phthalate	ND		1000	55	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Di-n-octyl phthalate	ND		310	25	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Fluoranthene	330		82	25	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Fluorene	ND		51	10	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Hexachlorobenzene	ND		100	31	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Hexachlorobutadiene	ND		100	31	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Indeno[1,2,3-cd]pyrene	100		82	25	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
1-Methylnaphthalene	21 J		61	10	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
2-Methylnaphthalene	29 J		100	18	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
2-Methylphenol	ND		310	20	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
3 & 4 Methylphenol	ND		410	31	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Naphthalene	16 J		51	10	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
N-Nitrosodiphenylamine	ND		120	16	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Pentachlorophenol	ND		820	130	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Phenanthrene	190		120	12	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Phenol	ND		310	47	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
Pyrene	330		120	27	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20
1,2,4-Trichlorobenzene	ND		100	12	ug/Kg	☼	05/12/21 09:26	05/14/21 14:39	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	84		57 - 120	05/12/21 09:26	05/14/21 14:39	20

Euofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-4-0

Lab Sample ID: 580-102849-11

Date Collected: 04/29/21 13:35

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 95.4

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	83		47 - 119	05/12/21 09:26	05/14/21 14:39	20
Nitrobenzene-d5	74		54 - 120	05/12/21 09:26	05/14/21 14:39	20
Phenol-d5	57	S1-	59 - 120	05/12/21 09:26	05/14/21 14:39	20
Terphenyl-d14	121		73 - 125	05/12/21 09:26	05/14/21 14:39	20
2,4,6-Tribromophenol	108		52 - 115	05/12/21 09:26	05/14/21 14:39	20

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		20	7.5	ug/Kg	☼	05/05/21 15:06	05/06/21 22:34	1
PCB-1221	ND		20	4.3	ug/Kg	☼	05/05/21 15:06	05/06/21 22:34	1
PCB-1232	ND		20	5.0	ug/Kg	☼	05/05/21 15:06	05/06/21 22:34	1
PCB-1242	ND		20	3.6	ug/Kg	☼	05/05/21 15:06	05/06/21 22:34	1
PCB-1248	ND		20	3.0	ug/Kg	☼	05/05/21 15:06	05/06/21 22:34	1
PCB-1254	ND		20	3.8	ug/Kg	☼	05/05/21 15:06	05/06/21 22:34	1
PCB-1260	23		20	7.5	ug/Kg	☼	05/05/21 15:06	05/06/21 22:34	1
Polychlorinated biphenyls, Total	19 J		20	7.5	ug/Kg	☼	05/05/21 15:06	05/06/21 22:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	92		44 - 135	05/05/21 15:06	05/06/21 22:34	1
Tetrachloro-m-xylene	76		48 - 122	05/05/21 15:06	05/06/21 22:34	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	33 J		50	12	mg/Kg	☼	05/05/21 15:19	05/12/21 10:24	1
Motor Oil (>C24-C36)	310		50	17	mg/Kg	☼	05/05/21 15:19	05/12/21 10:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150	05/05/21 15:19	05/12/21 10:24	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	180		0.27	0.030	mg/Kg	☼	05/06/21 14:10	05/07/21 12:46	5
Arsenic	300		0.22	0.044	mg/Kg	☼	05/06/21 14:10	05/07/21 12:46	5
Cadmium	0.70		0.36	0.034	mg/Kg	☼	05/06/21 14:10	05/07/21 12:46	5
Chromium	47		0.44	0.028	mg/Kg	☼	05/06/21 14:10	05/07/21 12:46	5
Copper	230		0.44	0.098	mg/Kg	☼	05/06/21 14:10	05/07/21 12:46	5
Lead	340		0.22	0.021	mg/Kg	☼	05/06/21 14:10	05/07/21 12:46	5
Nickel	29		0.22	0.086	mg/Kg	☼	05/06/21 14:10	05/07/21 12:46	5
Selenium	2.1		0.49	0.13	mg/Kg	☼	05/06/21 14:10	05/07/21 12:46	5
Silver	0.50		0.089	0.0089	mg/Kg	☼	05/06/21 14:10	05/07/21 12:46	5
Zinc	1100		2.3	0.72	mg/Kg	☼	05/06/21 14:10	05/07/21 12:46	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.10		0.029	0.0088	mg/Kg	☼	05/14/21 11:36	05/14/21 16:13	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-4-1

Lab Sample ID: 580-102849-12

Date Collected: 04/29/21 13:45

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	9200		2000	97	mg/Kg			05/11/21 14:56	1

Client Sample ID: DWP-SB-4-1

Lab Sample ID: 580-102849-12

Date Collected: 04/29/21 13:45

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 94.3

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		83	9.6	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Acenaphthylene	ND		52	10	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Anthracene	ND		120	33	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Benzo[a]anthracene	ND		83	23	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Benzo[a]pyrene	ND		120	27	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Benzo[fluoranthene]	ND		310	29	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Benzo[g,h,i]perylene	ND	*	120	37	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Benzoic acid	ND		8300	2500	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Benzyl alcohol	ND		2100	100	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Bis(2-ethylhexyl) phthalate	ND		1200	150	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Butyl benzyl phthalate	ND		420	110	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Carbazole	ND		310	15	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Chrysene	ND		120	27	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Dibenz(a,h)anthracene	ND		100	25	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Dibenzofuran	ND		310	12	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
1,2-Dichlorobenzene	ND		100	10	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
1,4-Dichlorobenzene	ND		100	17	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Diethyl phthalate	ND		830	46	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
2,4-Dimethylphenol	ND		420	120	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Dimethyl phthalate	ND		310	10	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Di-n-butyl phthalate	ND		1000	56	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Di-n-octyl phthalate	ND		310	25	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Fluoranthene	48	J	83	25	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Fluorene	ND		52	10	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Hexachlorobenzene	ND		100	31	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Hexachlorobutadiene	ND		100	31	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Indeno[1,2,3-cd]pyrene	ND		83	25	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
1-Methylnaphthalene	ND		62	10	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
2-Methylnaphthalene	ND		100	18	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
2-Methylphenol	ND		310	20	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
3 & 4 Methylphenol	ND		420	31	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Naphthalene	ND		52	10	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
N-Nitrosodiphenylamine	ND		120	17	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Pentachlorophenol	ND		830	130	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Phenanthrene	31	J	120	12	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Phenol	ND		310	48	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
Pyrene	50	J	120	27	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20
1,2,4-Trichlorobenzene	ND		100	12	ug/Kg	☼	05/12/21 09:26	05/14/21 15:03	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	79		57 - 120	05/12/21 09:26	05/14/21 15:03	20

Euofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-4-1

Lab Sample ID: 580-102849-12

Date Collected: 04/29/21 13:45

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 94.3

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	67		47 - 119	05/12/21 09:26	05/14/21 15:03	20
Nitrobenzene-d5	60		54 - 120	05/12/21 09:26	05/14/21 15:03	20
Phenol-d5	47	S1-	59 - 120	05/12/21 09:26	05/14/21 15:03	20
Terphenyl-d14	107		73 - 125	05/12/21 09:26	05/14/21 15:03	20
2,4,6-Tribromophenol	86		52 - 115	05/12/21 09:26	05/14/21 15:03	20

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		21	7.8	ug/Kg	☼	05/05/21 15:06	05/06/21 22:51	1
PCB-1221	ND		21	4.4	ug/Kg	☼	05/05/21 15:06	05/06/21 22:51	1
PCB-1232	ND		21	5.1	ug/Kg	☼	05/05/21 15:06	05/06/21 22:51	1
PCB-1242	ND		21	3.7	ug/Kg	☼	05/05/21 15:06	05/06/21 22:51	1
PCB-1248	ND		21	3.0	ug/Kg	☼	05/05/21 15:06	05/06/21 22:51	1
PCB-1254	ND		21	3.9	ug/Kg	☼	05/05/21 15:06	05/06/21 22:51	1
PCB-1260	12	J	21	7.8	ug/Kg	☼	05/05/21 15:06	05/06/21 22:51	1
Polychlorinated biphenyls, Total	8.6	J	21	7.8	ug/Kg	☼	05/05/21 15:06	05/06/21 22:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	94		44 - 135	05/05/21 15:06	05/06/21 22:51	1
Tetrachloro-m-xylene	77		48 - 122	05/05/21 15:06	05/06/21 22:51	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	18	J	49	12	mg/Kg	☼	05/05/21 15:19	05/12/21 11:03	1
Motor Oil (>C24-C36)	120		49	17	mg/Kg	☼	05/05/21 15:19	05/12/21 11:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150	05/05/21 15:19	05/12/21 11:03	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	26		0.25	0.028	mg/Kg	☼	05/06/21 14:10	05/07/21 12:50	5
Arsenic	39		0.21	0.042	mg/Kg	☼	05/06/21 14:10	05/07/21 12:50	5
Cadmium	0.12	J	0.33	0.032	mg/Kg	☼	05/06/21 14:10	05/07/21 12:50	5
Chromium	20		0.42	0.026	mg/Kg	☼	05/06/21 14:10	05/07/21 12:50	5
Copper	310		0.42	0.092	mg/Kg	☼	05/06/21 14:10	05/07/21 12:50	5
Lead	100		0.21	0.020	mg/Kg	☼	05/06/21 14:10	05/07/21 12:50	5
Nickel	22		0.21	0.081	mg/Kg	☼	05/06/21 14:10	05/07/21 12:50	5
Selenium	1.8		0.46	0.12	mg/Kg	☼	05/06/21 14:10	05/07/21 12:50	5
Silver	0.23		0.084	0.0084	mg/Kg	☼	05/06/21 14:10	05/07/21 12:50	5
Zinc	190		2.1	0.67	mg/Kg	☼	05/06/21 14:10	05/07/21 12:50	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.051		0.028	0.0083	mg/Kg	☼	05/14/21 11:36	05/14/21 16:16	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-4-2

Lab Sample ID: 580-102849-13

Date Collected: 04/29/21 14:00

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	5000		2000	97	mg/Kg			05/11/21 15:01	1

Client Sample ID: DWP-SB-4-2

Lab Sample ID: 580-102849-13

Date Collected: 04/29/21 14:00

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 91.4

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		43	5.0	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Acenaphthylene	ND		27	5.4	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Anthracene	ND		65	17	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Benzo[a]anthracene	16	J F2	43	12	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Benzo[a]pyrene	15	J F1	65	14	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Benzo[fluoranthene]	ND	F2 F1	160	15	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Benzo[g,h,i]perylene	ND	F2 F1	65	19	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Benzoic acid	ND		4300	1300	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Benzyl alcohol	ND		1100	54	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Bis(2-ethylhexyl) phthalate	ND	F1	650	76	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Butyl benzyl phthalate	ND		220	55	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Carbazole	ND		160	7.9	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Chrysene	14	J F1	65	14	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Dibenz(a,h)anthracene	ND	F1	54	13	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Dibenzofuran	ND		160	6.4	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
1,2-Dichlorobenzene	ND		54	5.4	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
1,4-Dichlorobenzene	ND		54	8.9	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Diethyl phthalate	ND		430	24	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
2,4-Dimethylphenol	ND		220	65	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Dimethyl phthalate	13	J	160	5.4	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Di-n-butyl phthalate	ND		540	29	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Di-n-octyl phthalate	ND	F1	160	13	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Fluoranthene	32	J F2 F1	43	13	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Fluorene	ND		27	5.4	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Hexachlorobenzene	ND		54	16	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Hexachlorobutadiene	ND		54	16	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Indeno[1,2,3-cd]pyrene	ND	F1	43	13	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
1-Methylnaphthalene	ND		32	5.4	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
2-Methylnaphthalene	ND	F1	54	9.5	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
2-Methylphenol	ND		160	11	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
3 & 4 Methylphenol	ND		220	16	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Naphthalene	ND		27	5.4	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
N-Nitrosodiphenylamine	ND		65	8.6	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Pentachlorophenol	ND	F1	430	68	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Phenanthrene	19	J	65	6.2	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Phenol	ND		160	25	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
Pyrene	32	J F1	65	14	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10
1,2,4-Trichlorobenzene	ND		54	6.5	ug/Kg	☼	05/12/21 09:53	05/14/21 15:27	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	83		57 - 120	05/12/21 09:53	05/14/21 15:27	10

Eurofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-4-2

Lab Sample ID: 580-102849-13

Date Collected: 04/29/21 14:00

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 91.4

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	65		47 - 119	05/12/21 09:53	05/14/21 15:27	10
Nitrobenzene-d5	63		54 - 120	05/12/21 09:53	05/14/21 15:27	10
Phenol-d5	68		59 - 120	05/12/21 09:53	05/14/21 15:27	10
Terphenyl-d14	116		73 - 125	05/12/21 09:53	05/14/21 15:27	10
2,4,6-Tribromophenol	104		52 - 115	05/12/21 09:53	05/14/21 15:27	10

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		21	7.6	ug/Kg	☼	05/05/21 15:06	05/06/21 23:09	1
PCB-1221	ND		21	4.3	ug/Kg	☼	05/05/21 15:06	05/06/21 23:09	1
PCB-1232	ND		21	5.1	ug/Kg	☼	05/05/21 15:06	05/06/21 23:09	1
PCB-1242	ND		21	3.6	ug/Kg	☼	05/05/21 15:06	05/06/21 23:09	1
PCB-1248	ND		21	3.0	ug/Kg	☼	05/05/21 15:06	05/06/21 23:09	1
PCB-1254	ND		21	3.8	ug/Kg	☼	05/05/21 15:06	05/06/21 23:09	1
PCB-1260	ND		21	7.6	ug/Kg	☼	05/05/21 15:06	05/06/21 23:09	1
Polychlorinated biphenyls, Total	ND		21	7.6	ug/Kg	☼	05/05/21 15:06	05/06/21 23:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	97		44 - 135	05/05/21 15:06	05/06/21 23:09	1
Tetrachloro-m-xylene	74		48 - 122	05/05/21 15:06	05/06/21 23:09	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	16	J	53	13	mg/Kg	☼	05/05/21 15:19	05/12/21 11:23	1
Motor Oil (>C24-C36)	72		53	18	mg/Kg	☼	05/05/21 15:19	05/12/21 11:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	84		50 - 150	05/05/21 15:19	05/12/21 11:23	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	14		0.25	0.028	mg/Kg	☼	05/06/21 14:10	05/07/21 12:53	5
Arsenic	25		0.21	0.041	mg/Kg	☼	05/06/21 14:10	05/07/21 12:53	5
Cadmium	0.20	J	0.33	0.032	mg/Kg	☼	05/06/21 14:10	05/07/21 12:53	5
Chromium	18		0.41	0.026	mg/Kg	☼	05/06/21 14:10	05/07/21 12:53	5
Copper	37		0.41	0.091	mg/Kg	☼	05/06/21 14:10	05/07/21 12:53	5
Lead	51		0.21	0.020	mg/Kg	☼	05/06/21 14:10	05/07/21 12:53	5
Nickel	17		0.21	0.080	mg/Kg	☼	05/06/21 14:10	05/07/21 12:53	5
Selenium	1.6		0.45	0.12	mg/Kg	☼	05/06/21 14:10	05/07/21 12:53	5
Silver	0.078	J	0.083	0.0083	mg/Kg	☼	05/06/21 14:10	05/07/21 12:53	5
Zinc	120		2.1	0.67	mg/Kg	☼	05/06/21 14:10	05/07/21 12:53	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.050		0.032	0.0095	mg/Kg	☼	05/14/21 11:36	05/14/21 16:18	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-5-0

Lab Sample ID: 580-102849-14

Date Collected: 04/29/21 14:15

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	20000		2000	97	mg/Kg			05/11/21 15:06	1

Client Sample ID: DWP-SB-5-0

Lab Sample ID: 580-102849-14

Date Collected: 04/29/21 14:15

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 90.7

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		22	2.5	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Acenaphthylene	ND		14	2.7	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Anthracene	ND		33	8.7	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Benzo[a]anthracene	16	J	22	6.0	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Benzo[a]pyrene	21	J	33	7.1	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Benzo[fluoranthene]	140		81	7.6	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Benzo[g,h,i]perylene	ND		33	9.8	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Benzoic acid	ND		2200	660	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Benzyl alcohol	ND		540	27	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Bis(2-ethylhexyl) phthalate	160	J	330	39	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Butyl benzyl phthalate	110		110	28	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Carbazole	ND		81	4.0	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Chrysene	25	J	33	7.1	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Dibenz(a,h)anthracene	ND		27	6.5	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Dibenzofuran	ND		81	3.2	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
1,2-Dichlorobenzene	ND		27	2.7	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
1,4-Dichlorobenzene	ND		27	4.5	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Diethyl phthalate	250		220	12	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
2,4-Dimethylphenol	ND		110	33	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Dimethyl phthalate	390		81	2.7	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Di-n-butyl phthalate	17	J	270	15	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Di-n-octyl phthalate	160		81	6.5	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Fluoranthene	33		22	6.5	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Fluorene	ND		14	2.7	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Hexachlorobenzene	ND		27	8.1	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Hexachlorobutadiene	ND		27	8.1	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Indeno[1,2,3-cd]pyrene	13	J	22	6.5	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
1-Methylnaphthalene	ND		16	2.7	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
2-Methylnaphthalene	4.9	J	27	4.8	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
2-Methylphenol	ND		81	5.3	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
3 & 4 Methylphenol	ND		110	8.1	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Naphthalene	5.8	J	14	2.7	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
N-Nitrosodiphenylamine	ND		33	4.3	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Pentachlorophenol	170	J	220	34	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Phenanthrene	21	J	33	3.2	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Phenol	ND		81	12	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
Pyrene	30	J	33	7.1	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5
1,2,4-Trichlorobenzene	ND		27	3.3	ug/Kg	⊛	05/12/21 09:53	05/14/21 17:00	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	86		57 - 120	05/12/21 09:53	05/14/21 17:00	5

Euofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-5-0

Lab Sample ID: 580-102849-14

Date Collected: 04/29/21 14:15

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 90.7

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	79		47 - 119	05/12/21 09:53	05/14/21 17:00	5
Nitrobenzene-d5	76		54 - 120	05/12/21 09:53	05/14/21 17:00	5
Phenol-d5	81		59 - 120	05/12/21 09:53	05/14/21 17:00	5
Terphenyl-d14	111		73 - 125	05/12/21 09:53	05/14/21 17:00	5
2,4,6-Tribromophenol	109		52 - 115	05/12/21 09:53	05/14/21 17:00	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		22	8.0	ug/Kg	☼	05/05/21 15:06	05/06/21 23:26	1
PCB-1221	ND		22	4.6	ug/Kg	☼	05/05/21 15:06	05/06/21 23:26	1
PCB-1232	ND		22	5.3	ug/Kg	☼	05/05/21 15:06	05/06/21 23:26	1
PCB-1242	ND		22	3.8	ug/Kg	☼	05/05/21 15:06	05/06/21 23:26	1
PCB-1248	ND		22	3.1	ug/Kg	☼	05/05/21 15:06	05/06/21 23:26	1
PCB-1254	ND		22	4.0	ug/Kg	☼	05/05/21 15:06	05/06/21 23:26	1
PCB-1260	17	J p	22	8.0	ug/Kg	☼	05/05/21 15:06	05/06/21 23:26	1
Polychlorinated biphenyls, Total	17	J p	22	8.0	ug/Kg	☼	05/05/21 15:06	05/06/21 23:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	74		44 - 135	05/05/21 15:06	05/06/21 23:26	1
Tetrachloro-m-xylene	58		48 - 122	05/05/21 15:06	05/06/21 23:26	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	59		55	14	mg/Kg	☼	05/05/21 15:19	05/12/21 11:43	1
Motor Oil (>C24-C36)	550		55	19	mg/Kg	☼	05/05/21 15:19	05/12/21 11:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	85		50 - 150	05/05/21 15:19	05/12/21 11:43	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	6.5		0.25	0.029	mg/Kg	☼	05/06/21 14:10	05/07/21 12:57	5
Arsenic	13		0.21	0.042	mg/Kg	☼	05/06/21 14:10	05/07/21 12:57	5
Cadmium	0.31	J	0.34	0.032	mg/Kg	☼	05/06/21 14:10	05/07/21 12:57	5
Chromium	25		0.42	0.026	mg/Kg	☼	05/06/21 14:10	05/07/21 12:57	5
Copper	82		0.42	0.093	mg/Kg	☼	05/06/21 14:10	05/07/21 12:57	5
Lead	53		0.21	0.020	mg/Kg	☼	05/06/21 14:10	05/07/21 12:57	5
Nickel	27		0.21	0.081	mg/Kg	☼	05/06/21 14:10	05/07/21 12:57	5
Selenium	1.9		0.46	0.12	mg/Kg	☼	05/06/21 14:10	05/07/21 12:57	5
Silver	0.17		0.084	0.0084	mg/Kg	☼	05/06/21 14:10	05/07/21 12:57	5
Zinc	110		2.1	0.68	mg/Kg	☼	05/06/21 14:10	05/07/21 12:57	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.063		0.030	0.0089	mg/Kg	☼	05/14/21 11:36	05/14/21 16:21	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-5-1

Lab Sample ID: 580-102849-15

Date Collected: 04/29/21 14:30

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	8900		2000	97	mg/Kg			05/11/21 17:40	1

Client Sample ID: DWP-SB-5-1

Lab Sample ID: 580-102849-15

Date Collected: 04/29/21 14:30

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 92.7

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		21	2.4	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Acenaphthylene	ND		13	2.6	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Anthracene	ND		31	8.4	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Benzo[a]anthracene	18	J	21	5.8	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Benzo[a]pyrene	16	J	31	6.8	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Benzofluoranthene	150		79	7.3	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Benzo[g,h,i]perylene	ND		31	9.4	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Benzoic acid	ND		2100	640	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Benzyl alcohol	ND		520	26	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Bis(2-ethylhexyl) phthalate	58	J	310	37	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Butyl benzyl phthalate	ND		100	27	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Carbazole	ND		79	3.8	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Chrysene	25	J	31	6.8	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Dibenz(a,h)anthracene	ND		26	6.3	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Dibenzofuran	ND		79	3.1	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
1,2-Dichlorobenzene	ND		26	2.6	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
1,4-Dichlorobenzene	ND		26	4.4	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Diethyl phthalate	ND		210	12	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
2,4-Dimethylphenol	ND		100	31	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Dimethyl phthalate	ND		79	2.6	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Di-n-butyl phthalate	ND		260	14	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Di-n-octyl phthalate	ND		79	6.3	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Fluoranthene	39		21	6.3	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Fluorene	ND		13	2.6	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Hexachlorobenzene	ND		26	7.9	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Hexachlorobutadiene	ND		26	7.9	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Indeno[1,2,3-cd]pyrene	7.1	J	21	6.3	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
1-Methylnaphthalene	ND		16	2.6	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
2-Methylnaphthalene	ND		26	4.6	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
2-Methylphenol	ND		79	5.1	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
3 & 4 Methylphenol	ND		100	7.9	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Naphthalene	ND		13	2.6	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
N-Nitrosodiphenylamine	ND		31	4.2	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Pentachlorophenol	ND		210	33	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Phenanthrene	32		31	3.0	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Phenol	ND		79	12	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
Pyrene	34		31	6.8	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5
1,2,4-Trichlorobenzene	ND		26	3.1	ug/Kg	☼	05/12/21 09:53	05/14/21 17:24	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	87		57 - 120	05/12/21 09:53	05/14/21 17:24	5

Eurofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-5-1

Lab Sample ID: 580-102849-15

Date Collected: 04/29/21 14:30

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 92.7

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	72		47 - 119	05/12/21 09:53	05/14/21 17:24	5
Nitrobenzene-d5	62		54 - 120	05/12/21 09:53	05/14/21 17:24	5
Phenol-d5	71		59 - 120	05/12/21 09:53	05/14/21 17:24	5
Terphenyl-d14	118		73 - 125	05/12/21 09:53	05/14/21 17:24	5
2,4,6-Tribromophenol	103		52 - 115	05/12/21 09:53	05/14/21 17:24	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		21	7.8	ug/Kg	☼	05/05/21 15:06	05/06/21 23:44	1
PCB-1221	ND		21	4.4	ug/Kg	☼	05/05/21 15:06	05/06/21 23:44	1
PCB-1232	ND		21	5.2	ug/Kg	☼	05/05/21 15:06	05/06/21 23:44	1
PCB-1242	ND		21	3.7	ug/Kg	☼	05/05/21 15:06	05/06/21 23:44	1
PCB-1248	ND		21	3.1	ug/Kg	☼	05/05/21 15:06	05/06/21 23:44	1
PCB-1254	ND		21	3.9	ug/Kg	☼	05/05/21 15:06	05/06/21 23:44	1
PCB-1260	14	J	21	7.8	ug/Kg	☼	05/05/21 15:06	05/06/21 23:44	1
Polychlorinated biphenyls, Total	12	J	21	7.8	ug/Kg	☼	05/05/21 15:06	05/06/21 23:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	90		44 - 135	05/05/21 15:06	05/06/21 23:44	1
Tetrachloro-m-xylene	74		48 - 122	05/05/21 15:06	05/06/21 23:44	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	67		51	13	mg/Kg	☼	05/05/21 15:33	05/12/21 12:02	1
Motor Oil (>C24-C36)	490		51	18	mg/Kg	☼	05/05/21 15:33	05/12/21 12:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	79		50 - 150	05/05/21 15:33	05/12/21 12:02	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	3.6		0.27	0.031	mg/Kg	☼	05/06/21 14:10	05/07/21 13:01	5
Arsenic	7.1		0.22	0.045	mg/Kg	☼	05/06/21 14:10	05/07/21 13:01	5
Cadmium	0.27	J	0.36	0.035	mg/Kg	☼	05/06/21 14:10	05/07/21 13:01	5
Chromium	25		0.45	0.028	mg/Kg	☼	05/06/21 14:10	05/07/21 13:01	5
Copper	150		0.45	0.099	mg/Kg	☼	05/06/21 14:10	05/07/21 13:01	5
Lead	48		0.22	0.022	mg/Kg	☼	05/06/21 14:10	05/07/21 13:01	5
Nickel	28		0.22	0.087	mg/Kg	☼	05/06/21 14:10	05/07/21 13:01	5
Selenium	3.2		0.49	0.13	mg/Kg	☼	05/06/21 14:10	05/07/21 13:01	5
Silver	0.12		0.090	0.0090	mg/Kg	☼	05/06/21 14:10	05/07/21 13:01	5
Zinc	95		2.3	0.72	mg/Kg	☼	05/06/21 14:10	05/07/21 13:01	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.065		0.027	0.0082	mg/Kg	☼	05/14/21 11:36	05/14/21 16:23	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-5-2

Lab Sample ID: 580-102849-16

Date Collected: 04/29/21 14:50

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	2300		2000	97	mg/Kg			05/11/21 17:55	1

Client Sample ID: DWP-SB-5-2

Lab Sample ID: 580-102849-16

Date Collected: 04/29/21 14:50

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 90.9

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		22	2.5	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Acenaphthylene	ND		13	2.7	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Anthracene	ND		32	8.6	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Benzo[a]anthracene	ND		22	5.9	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Benzo[a]pyrene	ND		32	7.0	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Benzo[fluoranthene]	ND		81	7.5	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Benzo[g,h,i]perylene	ND		32	9.7	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Benzoic acid	ND		2200	660	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Benzyl alcohol	ND		540	27	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Bis(2-ethylhexyl) phthalate	ND		320	38	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Butyl benzyl phthalate	ND		110	27	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Carbazole	ND		81	3.9	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Chrysene	ND		32	7.0	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Dibenz(a,h)anthracene	ND		27	6.5	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Dibenzofuran	ND		81	3.2	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
1,2-Dichlorobenzene	ND		27	2.7	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
1,4-Dichlorobenzene	ND		27	4.5	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Diethyl phthalate	ND		220	12	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
2,4-Dimethylphenol	ND		110	32	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Dimethyl phthalate	ND		81	2.7	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Di-n-butyl phthalate	ND		270	15	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Di-n-octyl phthalate	ND		81	6.5	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Fluoranthene	10	J	22	6.5	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Fluorene	ND		13	2.7	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Hexachlorobenzene	ND		27	8.1	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Hexachlorobutadiene	ND		27	8.1	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Indeno[1,2,3-cd]pyrene	ND		22	6.5	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
1-Methylnaphthalene	ND		16	2.7	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
2-Methylnaphthalene	ND		27	4.7	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
2-Methylphenol	ND		81	5.3	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
3 & 4 Methylphenol	ND		110	8.1	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Naphthalene	ND		13	2.7	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
N-Nitrosodiphenylamine	ND		32	4.3	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Pentachlorophenol	ND		220	34	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Phenanthrene	13	J	32	3.1	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Phenol	ND		81	12	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
Pyrene	11	J	32	7.0	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5
1,2,4-Trichlorobenzene	ND		27	3.2	ug/Kg	☼	05/12/21 09:53	05/14/21 17:48	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	86		57 - 120	05/12/21 09:53	05/14/21 17:48	5

Eurofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-5-2

Lab Sample ID: 580-102849-16

Date Collected: 04/29/21 14:50

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 90.9

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	71		47 - 119	05/12/21 09:53	05/14/21 17:48	5
Nitrobenzene-d5	79		54 - 120	05/12/21 09:53	05/14/21 17:48	5
Phenol-d5	78		59 - 120	05/12/21 09:53	05/14/21 17:48	5
Terphenyl-d14	115		73 - 125	05/12/21 09:53	05/14/21 17:48	5
2,4,6-Tribromophenol	101		52 - 115	05/12/21 09:53	05/14/21 17:48	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		21	7.8	ug/Kg	☼	05/05/21 15:06	05/07/21 00:02	1
PCB-1221	ND		21	4.4	ug/Kg	☼	05/05/21 15:06	05/07/21 00:02	1
PCB-1232	ND		21	5.2	ug/Kg	☼	05/05/21 15:06	05/07/21 00:02	1
PCB-1242	ND		21	3.7	ug/Kg	☼	05/05/21 15:06	05/07/21 00:02	1
PCB-1248	ND		21	3.1	ug/Kg	☼	05/05/21 15:06	05/07/21 00:02	1
PCB-1254	ND		21	3.9	ug/Kg	☼	05/05/21 15:06	05/07/21 00:02	1
PCB-1260	ND		21	7.8	ug/Kg	☼	05/05/21 15:06	05/07/21 00:02	1
Polychlorinated biphenyls, Total	ND		21	7.8	ug/Kg	☼	05/05/21 15:06	05/07/21 00:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	103		44 - 135	05/05/21 15:06	05/07/21 00:02	1
Tetrachloro-m-xylene	76		48 - 122	05/05/21 15:06	05/07/21 00:02	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	37	J	54	13	mg/Kg	☼	05/05/21 15:33	05/12/21 12:22	1
Motor Oil (>C24-C36)	220		54	19	mg/Kg	☼	05/05/21 15:33	05/12/21 12:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	76		50 - 150	05/05/21 15:33	05/12/21 12:22	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.6		0.28	0.032	mg/Kg	☼	05/06/21 14:10	05/07/21 13:05	5
Arsenic	6.2		0.24	0.047	mg/Kg	☼	05/06/21 14:10	05/07/21 13:05	5
Cadmium	0.22	J	0.38	0.037	mg/Kg	☼	05/06/21 14:10	05/07/21 13:05	5
Chromium	16		0.47	0.030	mg/Kg	☼	05/06/21 14:10	05/07/21 13:05	5
Copper	23		0.47	0.10	mg/Kg	☼	05/06/21 14:10	05/07/21 13:05	5
Lead	31		0.24	0.023	mg/Kg	☼	05/06/21 14:10	05/07/21 13:05	5
Nickel	12		0.24	0.092	mg/Kg	☼	05/06/21 14:10	05/07/21 13:05	5
Selenium	1.7		0.52	0.14	mg/Kg	☼	05/06/21 14:10	05/07/21 13:05	5
Silver	0.056	J	0.095	0.0095	mg/Kg	☼	05/06/21 14:10	05/07/21 13:05	5
Zinc	55		2.4	0.76	mg/Kg	☼	05/06/21 14:10	05/07/21 13:05	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.056		0.027	0.0081	mg/Kg	☼	05/14/21 11:36	05/14/21 16:25	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-5-3

Lab Sample ID: 580-102849-17

Date Collected: 04/29/21 15:00

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	2400		2000	97	mg/Kg			05/11/21 18:00	1

Client Sample ID: DWP-SB-5-3

Lab Sample ID: 580-102849-17

Date Collected: 04/29/21 15:00

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 90.3

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		22	2.5	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Acenaphthylene	ND		14	2.7	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Anthracene	ND		33	8.7	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Benzo[a]anthracene	ND		22	6.0	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Benzo[a]pyrene	ND		33	7.1	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Benzo[fluoranthene]	ND		81	7.6	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Benzo[g,h,i]perylene	ND		33	9.8	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Benzoic acid	ND		2200	660	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Benzyl alcohol	ND		540	27	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Bis(2-ethylhexyl) phthalate	ND		330	39	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Butyl benzyl phthalate	ND		110	28	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Carbazole	ND		81	4.0	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Chrysene	ND		33	7.1	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Dibenz(a,h)anthracene	ND		27	6.5	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Dibenzofuran	ND		81	3.2	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
1,2-Dichlorobenzene	ND		27	2.7	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
1,4-Dichlorobenzene	ND		27	4.5	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Diethyl phthalate	ND		220	12	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
2,4-Dimethylphenol	ND		110	33	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Dimethyl phthalate	ND		81	2.7	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Di-n-butyl phthalate	ND		270	15	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Di-n-octyl phthalate	ND		81	6.5	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Fluoranthene	12	J	22	6.5	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Fluorene	ND		14	2.7	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Hexachlorobenzene	ND		27	8.1	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Hexachlorobutadiene	ND		27	8.1	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Indeno[1,2,3-cd]pyrene	ND		22	6.5	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
1-Methylnaphthalene	4.0	J	16	2.7	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
2-Methylnaphthalene	ND		27	4.8	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
2-Methylphenol	ND		81	5.3	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
3 & 4 Methylphenol	ND		110	8.1	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Naphthalene	ND		14	2.7	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
N-Nitrosodiphenylamine	ND		33	4.3	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Pentachlorophenol	ND		220	34	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Phenanthrene	24	J	33	3.2	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Phenol	ND		81	12	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
Pyrene	8.3	J	33	7.1	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5
1,2,4-Trichlorobenzene	ND		27	3.3	ug/Kg	☼	05/12/21 09:53	05/14/21 18:11	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	71		57 - 120	05/12/21 09:53	05/14/21 18:11	5

Euofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-5-3

Lab Sample ID: 580-102849-17

Date Collected: 04/29/21 15:00

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 90.3

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	68		47 - 119	05/12/21 09:53	05/14/21 18:11	5
Nitrobenzene-d5	64		54 - 120	05/12/21 09:53	05/14/21 18:11	5
Phenol-d5	58	S1-	59 - 120	05/12/21 09:53	05/14/21 18:11	5
Terphenyl-d14	110		73 - 125	05/12/21 09:53	05/14/21 18:11	5
2,4,6-Tribromophenol	94		52 - 115	05/12/21 09:53	05/14/21 18:11	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		20	7.6	ug/Kg	☼	05/05/21 15:06	05/07/21 00:19	1
PCB-1221	ND		20	4.3	ug/Kg	☼	05/05/21 15:06	05/07/21 00:19	1
PCB-1232	ND		20	5.0	ug/Kg	☼	05/05/21 15:06	05/07/21 00:19	1
PCB-1242	ND		20	3.6	ug/Kg	☼	05/05/21 15:06	05/07/21 00:19	1
PCB-1248	ND		20	3.0	ug/Kg	☼	05/05/21 15:06	05/07/21 00:19	1
PCB-1254	ND		20	3.8	ug/Kg	☼	05/05/21 15:06	05/07/21 00:19	1
PCB-1260	ND		20	7.6	ug/Kg	☼	05/05/21 15:06	05/07/21 00:19	1
Polychlorinated biphenyls, Total	ND		20	7.6	ug/Kg	☼	05/05/21 15:06	05/07/21 00:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	108		44 - 135	05/05/21 15:06	05/07/21 00:19	1
Tetrachloro-m-xylene	78		48 - 122	05/05/21 15:06	05/07/21 00:19	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND	*1	53	13	mg/Kg	☼	05/12/21 16:07	05/14/21 19:00	1
Motor Oil (>C24-C36)	38	J *1	53	19	mg/Kg	☼	05/12/21 16:07	05/14/21 19:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	79		50 - 150	05/12/21 16:07	05/14/21 19:00	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.8		0.25	0.028	mg/Kg	☼	05/06/21 14:10	05/07/21 13:09	5
Arsenic	7.2		0.21	0.041	mg/Kg	☼	05/06/21 14:10	05/07/21 13:09	5
Cadmium	0.14	J	0.33	0.032	mg/Kg	☼	05/06/21 14:10	05/07/21 13:09	5
Chromium	21		0.41	0.026	mg/Kg	☼	05/06/21 14:10	05/07/21 13:09	5
Copper	26		0.41	0.091	mg/Kg	☼	05/06/21 14:10	05/07/21 13:09	5
Lead	19		0.21	0.020	mg/Kg	☼	05/06/21 14:10	05/07/21 13:09	5
Nickel	19		0.21	0.080	mg/Kg	☼	05/06/21 14:10	05/07/21 13:09	5
Selenium	1.7		0.45	0.12	mg/Kg	☼	05/06/21 14:10	05/07/21 13:09	5
Silver	0.046	J	0.082	0.0082	mg/Kg	☼	05/06/21 14:10	05/07/21 13:09	5
Zinc	68		2.1	0.66	mg/Kg	☼	05/06/21 14:10	05/07/21 13:09	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.048		0.031	0.0093	mg/Kg	☼	05/14/21 11:36	05/14/21 16:33	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-6-0

Lab Sample ID: 580-102849-18

Date Collected: 04/29/21 15:15

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	15000		2000	97	mg/Kg			05/11/21 18:05	1

Client Sample ID: DWP-SB-6-0

Lab Sample ID: 580-102849-18

Date Collected: 04/29/21 15:15

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 85.5

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		45	5.2	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Acenaphthylene	ND		28	5.7	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Anthracene	ND		68	18	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Benzo[a]anthracene	14	J	45	13	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Benzo[a]pyrene	15	J	68	15	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Benzo[fluoranthene]	ND		170	16	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Benzo[g,h,i]perylene	ND		68	20	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Benzoic acid	ND		4500	1400	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Benzyl alcohol	ND		1100	57	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Bis(2-ethylhexyl) phthalate	110	J	680	81	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Butyl benzyl phthalate	ND		230	58	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Carbazole	ND		170	8.3	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Chrysene	15	J	68	15	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Dibenz(a,h)anthracene	ND		57	14	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Dibenzofuran	ND		170	6.7	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
1,2-Dichlorobenzene	ND		57	5.7	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
1,4-Dichlorobenzene	ND		57	9.4	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Diethyl phthalate	ND		450	25	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
2,4-Dimethylphenol	ND		230	68	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Dimethyl phthalate	ND		170	5.7	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Di-n-butyl phthalate	ND		570	31	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Di-n-octyl phthalate	ND		170	14	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Fluoranthene	33	J	45	14	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Fluorene	ND		28	5.7	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Hexachlorobenzene	ND		57	17	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Hexachlorobutadiene	ND		57	17	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Indeno[1,2,3-cd]pyrene	ND		45	14	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
1-Methylnaphthalene	ND		34	5.7	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
2-Methylnaphthalene	ND		57	10	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
2-Methylphenol	ND		170	11	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
3 & 4 Methylphenol	ND		230	17	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Naphthalene	ND		28	5.7	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
N-Nitrosodiphenylamine	ND		68	9.1	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Pentachlorophenol	ND		450	72	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Phenanthrene	26	J	68	6.6	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Phenol	ND		170	26	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
Pyrene	32	J	68	15	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10
1,2,4-Trichlorobenzene	ND		57	6.8	ug/Kg	☼	05/12/21 09:53	05/14/21 18:35	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	83		57 - 120	05/12/21 09:53	05/14/21 18:35	10

Eurofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-6-0

Lab Sample ID: 580-102849-18

Date Collected: 04/29/21 15:15

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 85.5

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	62		47 - 119	05/12/21 09:53	05/14/21 18:35	10
Nitrobenzene-d5	68		54 - 120	05/12/21 09:53	05/14/21 18:35	10
Phenol-d5	70		59 - 120	05/12/21 09:53	05/14/21 18:35	10
Terphenyl-d14	116		73 - 125	05/12/21 09:53	05/14/21 18:35	10
2,4,6-Tribromophenol	100		52 - 115	05/12/21 09:53	05/14/21 18:35	10

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		22	8.0	ug/Kg	☼	05/05/21 15:06	05/07/21 00:37	1
PCB-1221	ND		22	4.6	ug/Kg	☼	05/05/21 15:06	05/07/21 00:37	1
PCB-1232	ND		22	5.3	ug/Kg	☼	05/05/21 15:06	05/07/21 00:37	1
PCB-1242	ND		22	3.8	ug/Kg	☼	05/05/21 15:06	05/07/21 00:37	1
PCB-1248	ND		22	3.1	ug/Kg	☼	05/05/21 15:06	05/07/21 00:37	1
PCB-1254	ND		22	4.0	ug/Kg	☼	05/05/21 15:06	05/07/21 00:37	1
PCB-1260	16	J	22	8.0	ug/Kg	☼	05/05/21 15:06	05/07/21 00:37	1
Polychlorinated biphenyls, Total	16	J	22	8.0	ug/Kg	☼	05/05/21 15:06	05/07/21 00:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	92		44 - 135	05/05/21 15:06	05/07/21 00:37	1
Tetrachloro-m-xylene	76		48 - 122	05/05/21 15:06	05/07/21 00:37	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	33	J *1	58	14	mg/Kg	☼	05/12/21 16:07	05/14/21 19:40	1
Motor Oil (>C24-C36)	250	*1	58	20	mg/Kg	☼	05/12/21 16:07	05/14/21 19:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	86		50 - 150	05/12/21 16:07	05/14/21 19:40	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.7		0.31	0.035	mg/Kg	☼	05/06/21 14:10	05/07/21 13:32	5
Arsenic	7.0		0.26	0.052	mg/Kg	☼	05/06/21 14:10	05/07/21 13:32	5
Cadmium	0.34	J	0.41	0.040	mg/Kg	☼	05/06/21 14:10	05/07/21 13:32	5
Chromium	21		0.52	0.033	mg/Kg	☼	05/06/21 14:10	05/07/21 13:32	5
Copper	84		0.52	0.11	mg/Kg	☼	05/06/21 14:10	05/07/21 13:32	5
Lead	64		0.26	0.025	mg/Kg	☼	05/06/21 14:10	05/07/21 13:32	5
Nickel	23		0.26	0.10	mg/Kg	☼	05/06/21 14:10	05/07/21 13:32	5
Selenium	2.3		0.57	0.15	mg/Kg	☼	05/06/21 14:10	05/07/21 13:32	5
Silver	0.16		0.10	0.010	mg/Kg	☼	05/06/21 14:10	05/07/21 13:32	5
Zinc	100		2.6	0.83	mg/Kg	☼	05/06/21 14:10	05/07/21 13:32	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.13		0.033	0.0099	mg/Kg	☼	05/14/21 11:36	05/14/21 16:35	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-6-1

Lab Sample ID: 580-102849-19

Date Collected: 04/29/21 15:30

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	13000		2000	97	mg/Kg			05/11/21 18:14	1

Client Sample ID: DWP-SB-6-1

Lab Sample ID: 580-102849-19

Date Collected: 04/29/21 15:30

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 85.8

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		45	5.2	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Acenaphthylene	ND		28	5.6	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Anthracene	ND		68	18	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Benzo[a]anthracene	ND		45	12	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Benzo[a]pyrene	17	J	68	15	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Benzo[fluoranthene]	ND		170	16	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Benzo[g,h,i]perylene	ND		68	20	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Benzoic acid	ND		4500	1400	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Benzyl alcohol	ND		1100	56	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Bis(2-ethylhexyl) phthalate	ND		680	80	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Butyl benzyl phthalate	ND		230	57	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Carbazole	ND		170	8.2	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Chrysene	ND		68	15	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Dibenz(a,h)anthracene	ND		56	14	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Dibenzofuran	ND		170	6.6	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
1,2-Dichlorobenzene	ND		56	5.6	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
1,4-Dichlorobenzene	ND		56	9.3	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Diethyl phthalate	ND		450	25	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
2,4-Dimethylphenol	ND		230	68	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Dimethyl phthalate	ND		170	5.6	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Di-n-butyl phthalate	ND		560	30	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Di-n-octyl phthalate	ND		170	14	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Fluoranthene	27	J	45	14	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Fluorene	ND		28	5.6	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Hexachlorobenzene	ND		56	17	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Hexachlorobutadiene	ND		56	17	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Indeno[1,2,3-cd]pyrene	ND		45	14	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
1-Methylnaphthalene	ND		34	5.6	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
2-Methylnaphthalene	ND		56	9.9	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
2-Methylphenol	ND		170	11	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
3 & 4 Methylphenol	ND		230	17	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Naphthalene	ND		28	5.6	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
N-Nitrosodiphenylamine	ND		68	9.0	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Pentachlorophenol	ND		450	71	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Phenanthrene	25	J	68	6.5	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Phenol	ND		170	26	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
Pyrene	30	J	68	15	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10
1,2,4-Trichlorobenzene	ND		56	6.8	ug/Kg	☼	05/12/21 09:53	05/14/21 18:59	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	79		57 - 120	05/12/21 09:53	05/14/21 18:59	10

Eurofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-6-1

Lab Sample ID: 580-102849-19

Date Collected: 04/29/21 15:30

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 85.8

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	60		47 - 119	05/12/21 09:53	05/14/21 18:59	10
Nitrobenzene-d5	59		54 - 120	05/12/21 09:53	05/14/21 18:59	10
Phenol-d5	56	S1-	59 - 120	05/12/21 09:53	05/14/21 18:59	10
Terphenyl-d14	117		73 - 125	05/12/21 09:53	05/14/21 18:59	10
2,4,6-Tribromophenol	100		52 - 115	05/12/21 09:53	05/14/21 18:59	10

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		23	8.5	ug/Kg	☼	05/05/21 15:06	05/07/21 00:55	1
PCB-1221	ND		23	4.8	ug/Kg	☼	05/05/21 15:06	05/07/21 00:55	1
PCB-1232	ND		23	5.6	ug/Kg	☼	05/05/21 15:06	05/07/21 00:55	1
PCB-1242	ND		23	4.0	ug/Kg	☼	05/05/21 15:06	05/07/21 00:55	1
PCB-1248	ND		23	3.3	ug/Kg	☼	05/05/21 15:06	05/07/21 00:55	1
PCB-1254	ND		23	4.3	ug/Kg	☼	05/05/21 15:06	05/07/21 00:55	1
PCB-1260	15	J	23	8.5	ug/Kg	☼	05/05/21 15:06	05/07/21 00:55	1
Polychlorinated biphenyls, Total	11	J	23	8.5	ug/Kg	☼	05/05/21 15:06	05/07/21 00:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	102		44 - 135	05/05/21 15:06	05/07/21 00:55	1
Tetrachloro-m-xylene	81		48 - 122	05/05/21 15:06	05/07/21 00:55	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	25	J *1	57	14	mg/Kg	☼	05/12/21 16:07	05/14/21 20:21	1
Motor Oil (>C24-C36)	130	*1	57	20	mg/Kg	☼	05/12/21 16:07	05/14/21 20:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	81		50 - 150	05/12/21 16:07	05/14/21 20:21	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.3		0.29	0.033	mg/Kg	☼	05/06/21 14:10	05/07/21 13:35	5
Arsenic	6.1		0.24	0.048	mg/Kg	☼	05/06/21 14:10	05/07/21 13:35	5
Cadmium	0.41		0.38	0.037	mg/Kg	☼	05/06/21 14:10	05/07/21 13:35	5
Chromium	23		0.48	0.030	mg/Kg	☼	05/06/21 14:10	05/07/21 13:35	5
Copper	98		0.48	0.11	mg/Kg	☼	05/06/21 14:10	05/07/21 13:35	5
Lead	55		0.24	0.023	mg/Kg	☼	05/06/21 14:10	05/07/21 13:35	5
Nickel	24		0.24	0.092	mg/Kg	☼	05/06/21 14:10	05/07/21 13:35	5
Selenium	2.5		0.53	0.14	mg/Kg	☼	05/06/21 14:10	05/07/21 13:35	5
Silver	0.12		0.096	0.0096	mg/Kg	☼	05/06/21 14:10	05/07/21 13:35	5
Zinc	82		2.4	0.77	mg/Kg	☼	05/06/21 14:10	05/07/21 13:35	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.096		0.032	0.0095	mg/Kg	☼	05/14/21 11:36	05/14/21 16:37	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-6-2

Lab Sample ID: 580-102849-20

Date Collected: 04/29/21 15:40

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	4400		2000	97	mg/Kg			05/11/21 18:19	1

Client Sample ID: DWP-SB-6-2

Lab Sample ID: 580-102849-20

Date Collected: 04/29/21 15:40

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 87.7

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		23	2.6	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Acenaphthylene	ND		14	2.8	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Anthracene	ND		34	9.1	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Benzo[a]anthracene	36		23	6.3	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Benzo[a]pyrene	45		34	7.4	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Benzo[fluoranthene]	76 J		85	8.0	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Benzo[g,h,i]perylene	12 J		34	10	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Benzoic acid	ND		2300	700	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Benzyl alcohol	ND		570	28	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Bis(2-ethylhexyl) phthalate	ND		340	40	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Butyl benzyl phthalate	ND		110	29	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Carbazole	ND		85	4.2	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Chrysene	38		34	7.4	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Dibenz(a,h)anthracene	ND		28	6.8	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Dibenzofuran	ND		85	3.4	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
1,2-Dichlorobenzene	ND		28	2.8	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
1,4-Dichlorobenzene	ND		28	4.7	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Diethyl phthalate	ND		230	13	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
2,4-Dimethylphenol	ND		110	34	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Dimethyl phthalate	ND		85	2.8	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Di-n-butyl phthalate	ND		280	15	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Di-n-octyl phthalate	ND		85	6.8	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Fluoranthene	78		23	6.8	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Fluorene	4.0 J		14	2.8	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Hexachlorobenzene	ND		28	8.5	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Hexachlorobutadiene	ND		28	8.5	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Indeno[1,2,3-cd]pyrene	15 J		23	6.8	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
1-Methylnaphthalene	ND		17	2.8	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
2-Methylnaphthalene	ND		28	5.0	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
2-Methylphenol	ND		85	5.6	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
3 & 4 Methylphenol	ND		110	8.5	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Naphthalene	3.3 J		14	2.8	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
N-Nitrosodiphenylamine	ND		34	4.6	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Pentachlorophenol	ND		230	36	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Phenanthrene	62		34	3.3	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Phenol	ND		85	13	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
Pyrene	73		34	7.4	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5
1,2,4-Trichlorobenzene	ND		28	3.4	ug/Kg	☼	05/12/21 09:53	05/14/21 19:23	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	60		57 - 120	05/12/21 09:53	05/14/21 19:23	5

Euofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-6-2

Lab Sample ID: 580-102849-20

Date Collected: 04/29/21 15:40

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 87.7

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	58		47 - 119	05/12/21 09:53	05/14/21 19:23	5
Nitrobenzene-d5	47	S1-	54 - 120	05/12/21 09:53	05/14/21 19:23	5
Phenol-d5	56	S1-	59 - 120	05/12/21 09:53	05/14/21 19:23	5
Terphenyl-d14	88		73 - 125	05/12/21 09:53	05/14/21 19:23	5
2,4,6-Tribromophenol	83		52 - 115	05/12/21 09:53	05/14/21 19:23	5

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		22	8.0	ug/Kg	☼	05/05/21 15:06	05/07/21 01:12	1
PCB-1221	ND		22	4.6	ug/Kg	☼	05/05/21 15:06	05/07/21 01:12	1
PCB-1232	ND		22	5.3	ug/Kg	☼	05/05/21 15:06	05/07/21 01:12	1
PCB-1242	ND		22	3.8	ug/Kg	☼	05/05/21 15:06	05/07/21 01:12	1
PCB-1248	ND		22	3.2	ug/Kg	☼	05/05/21 15:06	05/07/21 01:12	1
PCB-1254	ND		22	4.0	ug/Kg	☼	05/05/21 15:06	05/07/21 01:12	1
PCB-1260	ND		22	8.0	ug/Kg	☼	05/05/21 15:06	05/07/21 01:12	1
Polychlorinated biphenyls, Total	ND		22	8.0	ug/Kg	☼	05/05/21 15:06	05/07/21 01:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	105		44 - 135	05/05/21 15:06	05/07/21 01:12	1
Tetrachloro-m-xylene	83		48 - 122	05/05/21 15:06	05/07/21 01:12	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND	*1	56	14	mg/Kg	☼	05/12/21 16:07	05/14/21 20:40	1
Motor Oil (>C24-C36)	59	*1	56	20	mg/Kg	☼	05/12/21 16:07	05/14/21 20:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	82		50 - 150	05/12/21 16:07	05/14/21 20:40	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.2		0.22	0.025	mg/Kg	☼	05/06/21 14:10	05/07/21 13:39	5
Arsenic	5.4		0.19	0.037	mg/Kg	☼	05/06/21 14:10	05/07/21 13:39	5
Cadmium	0.23	J	0.30	0.029	mg/Kg	☼	05/06/21 14:10	05/07/21 13:39	5
Chromium	18		0.37	0.023	mg/Kg	☼	05/06/21 14:10	05/07/21 13:39	5
Copper	26		0.37	0.082	mg/Kg	☼	05/06/21 14:10	05/07/21 13:39	5
Lead	38		0.19	0.018	mg/Kg	☼	05/06/21 14:10	05/07/21 13:39	5
Nickel	14		0.19	0.072	mg/Kg	☼	05/06/21 14:10	05/07/21 13:39	5
Selenium	1.7		0.41	0.11	mg/Kg	☼	05/06/21 14:10	05/07/21 13:39	5
Silver	0.057	J	0.074	0.0074	mg/Kg	☼	05/06/21 14:10	05/07/21 13:39	5
Zinc	68		1.9	0.60	mg/Kg	☼	05/06/21 14:10	05/07/21 13:39	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.045		0.029	0.0087	mg/Kg	☼	05/14/21 11:36	05/14/21 16:40	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-6-3

Lab Sample ID: 580-102849-21

Date Collected: 04/29/21 15:45

Matrix: Solid

Date Received: 05/04/21 12:00

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	4200		2000	97	mg/Kg			05/11/21 18:24	1

Client Sample ID: DWP-SB-6-3

Lab Sample ID: 580-102849-21

Date Collected: 04/29/21 15:45

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 88.8

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	9.0	J	44	5.0	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Acenaphthylene	ND		27	5.4	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Anthracene	32	J	65	17	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Benzo[a]anthracene	260		44	12	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Benzo[a]pyrene	460		65	14	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Benzofluoranthene	770		160	15	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Benzo[g,h,i]perylene	110		65	20	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Benzoic acid	ND		4400	1300	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Benzyl alcohol	ND		1100	54	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Bis(2-ethylhexyl) phthalate	ND		650	77	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Butyl benzyl phthalate	ND		220	56	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Carbazole	ND		160	8.0	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Chrysene	330		65	14	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Dibenz(a,h)anthracene	22	J	54	13	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Dibenzofuran	ND		160	6.4	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
1,2-Dichlorobenzene	ND		54	5.4	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
1,4-Dichlorobenzene	ND		54	9.0	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Diethyl phthalate	ND		440	24	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
2,4-Dimethylphenol	ND		220	65	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Dimethyl phthalate	ND		160	5.4	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Di-n-butyl phthalate	ND		540	29	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Di-n-octyl phthalate	ND		160	13	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Fluoranthene	370		44	13	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Fluorene	7.0	J	27	5.4	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Hexachlorobenzene	ND		54	16	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Hexachlorobutadiene	ND		54	16	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Indeno[1,2,3-cd]pyrene	90		44	13	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
1-Methylnaphthalene	ND		33	5.4	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
2-Methylnaphthalene	ND		54	9.6	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
2-Methylphenol	ND		160	11	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
3 & 4 Methylphenol	ND		220	16	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Naphthalene	18	J	27	5.4	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
N-Nitrosodiphenylamine	ND		65	8.7	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Pentachlorophenol	ND		440	69	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Phenanthrene	180		65	6.3	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Phenol	ND		160	25	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
Pyrene	500		65	14	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10
1,2,4-Trichlorobenzene	ND		54	6.5	ug/Kg	☼	05/12/21 09:53	05/14/21 19:47	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorobiphenyl	83		57 - 120	05/12/21 09:53	05/14/21 19:47	10

Euofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-6-3

Lab Sample ID: 580-102849-21

Date Collected: 04/29/21 15:45

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 88.8

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	59		47 - 119	05/12/21 09:53	05/14/21 19:47	10
Nitrobenzene-d5	62		54 - 120	05/12/21 09:53	05/14/21 19:47	10
Phenol-d5	63		59 - 120	05/12/21 09:53	05/14/21 19:47	10
Terphenyl-d14	118		73 - 125	05/12/21 09:53	05/14/21 19:47	10
2,4,6-Tribromophenol	86		52 - 115	05/12/21 09:53	05/14/21 19:47	10

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		22	8.3	ug/Kg	☼	05/05/21 15:06	05/07/21 01:30	1
PCB-1221	ND		22	4.7	ug/Kg	☼	05/05/21 15:06	05/07/21 01:30	1
PCB-1232	ND		22	5.5	ug/Kg	☼	05/05/21 15:06	05/07/21 01:30	1
PCB-1242	ND		22	3.9	ug/Kg	☼	05/05/21 15:06	05/07/21 01:30	1
PCB-1248	ND		22	3.2	ug/Kg	☼	05/05/21 15:06	05/07/21 01:30	1
PCB-1254	ND		22	4.1	ug/Kg	☼	05/05/21 15:06	05/07/21 01:30	1
PCB-1260	ND		22	8.3	ug/Kg	☼	05/05/21 15:06	05/07/21 01:30	1
Polychlorinated biphenyls, Total	ND		22	8.3	ug/Kg	☼	05/05/21 15:06	05/07/21 01:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	103		44 - 135	05/05/21 15:06	05/07/21 01:30	1
Tetrachloro-m-xylene	77		48 - 122	05/05/21 15:06	05/07/21 01:30	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	16	J *1	56	14	mg/Kg	☼	05/12/21 16:07	05/14/21 21:00	1
Motor Oil (>C24-C36)	110	*1	56	20	mg/Kg	☼	05/12/21 16:07	05/14/21 21:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	80		50 - 150	05/12/21 16:07	05/14/21 21:00	1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.5		0.24	0.027	mg/Kg	☼	05/06/21 14:10	05/07/21 13:43	5
Arsenic	5.6		0.20	0.040	mg/Kg	☼	05/06/21 14:10	05/07/21 13:43	5
Cadmium	0.20	J	0.32	0.031	mg/Kg	☼	05/06/21 14:10	05/07/21 13:43	5
Chromium	22		0.40	0.025	mg/Kg	☼	05/06/21 14:10	05/07/21 13:43	5
Copper	31		0.40	0.088	mg/Kg	☼	05/06/21 14:10	05/07/21 13:43	5
Lead	54		0.20	0.019	mg/Kg	☼	05/06/21 14:10	05/07/21 13:43	5
Nickel	18		0.20	0.077	mg/Kg	☼	05/06/21 14:10	05/07/21 13:43	5
Selenium	1.7		0.44	0.11	mg/Kg	☼	05/06/21 14:10	05/07/21 13:43	5
Silver	0.051	J	0.080	0.0080	mg/Kg	☼	05/06/21 14:10	05/07/21 13:43	5
Zinc	76		2.0	0.64	mg/Kg	☼	05/06/21 14:10	05/07/21 13:43	5

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.034		0.024	0.0071	mg/Kg	☼	05/14/21 11:36	05/14/21 16:42	1

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: ER-1-042921

Lab Sample ID: 580-102849-22

Date Collected: 04/29/21 06:00

Matrix: Water

Date Received: 05/04/21 12:00

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Phenol	ND		0.97	0.35	ug/L		05/05/21 11:19	05/06/21 13:44	1
1,4-Dichlorobenzene	ND		0.39	0.039	ug/L		05/05/21 11:19	05/06/21 13:44	1
Benzyl alcohol	ND		4.8	0.17	ug/L		05/05/21 11:19	05/06/21 13:44	1
1,2-Dichlorobenzene	ND		0.39	0.048	ug/L		05/05/21 11:19	05/06/21 13:44	1
2-Methylphenol	ND		0.58	0.048	ug/L		05/05/21 11:19	05/06/21 13:44	1
3 & 4 Methylphenol	ND		0.58	0.097	ug/L		05/05/21 11:19	05/06/21 13:44	1
2,4-Dimethylphenol	ND		3.9	0.15	ug/L		05/05/21 11:19	05/06/21 13:44	1
Benzoic acid	ND		9.7	1.3	ug/L		05/05/21 11:19	05/06/21 13:44	1
1,2,4-Trichlorobenzene	ND		0.39	0.087	ug/L		05/05/21 11:19	05/06/21 13:44	1
Naphthalene	ND		0.39	0.15	ug/L		05/05/21 11:19	05/06/21 13:44	1
Hexachlorobutadiene	ND		0.97	0.058	ug/L		05/05/21 11:19	05/06/21 13:44	1
2-Methylnaphthalene	ND		0.39	0.058	ug/L		05/05/21 11:19	05/06/21 13:44	1
1-Methylnaphthalene	ND		0.97	0.048	ug/L		05/05/21 11:19	05/06/21 13:44	1
Dimethyl phthalate	ND		0.58	0.058	ug/L		05/05/21 11:19	05/06/21 13:44	1
Acenaphthylene	ND		0.97	0.058	ug/L		05/05/21 11:19	05/06/21 13:44	1
Acenaphthene	ND		0.39	0.048	ug/L		05/05/21 11:19	05/06/21 13:44	1
Dibenzofuran	ND		0.39	0.097	ug/L		05/05/21 11:19	05/06/21 13:44	1
Diethyl phthalate	ND		0.97	0.15	ug/L		05/05/21 11:19	05/06/21 13:44	1
Fluorene	ND		0.24	0.048	ug/L		05/05/21 11:19	05/06/21 13:44	1
N-Nitrosodiphenylamine	ND		0.97	0.068	ug/L		05/05/21 11:19	05/06/21 13:44	1
Hexachlorobenzene	ND		0.58	0.039	ug/L		05/05/21 11:19	05/06/21 13:44	1
Pentachlorophenol	ND		9.7	0.49	ug/L		05/05/21 11:19	05/06/21 13:44	1
Phenanthrene	ND		0.97	0.12	ug/L		05/05/21 11:19	05/06/21 13:44	1
Anthracene	ND		0.97	0.048	ug/L		05/05/21 11:19	05/06/21 13:44	1
Carbazole	ND		0.58	0.097	ug/L		05/05/21 11:19	05/06/21 13:44	1
Di-n-butyl phthalate	ND		2.9	0.18	ug/L		05/05/21 11:19	05/06/21 13:44	1
Fluoranthene	ND		0.24	0.058	ug/L		05/05/21 11:19	05/06/21 13:44	1
Pyrene	ND		0.97	0.039	ug/L		05/05/21 11:19	05/06/21 13:44	1
Butyl benzyl phthalate	ND		3.9	0.26	ug/L		05/05/21 11:19	05/06/21 13:44	1
Benzo[a]anthracene	ND		0.24	0.048	ug/L		05/05/21 11:19	05/06/21 13:44	1
Chrysene	ND		0.24	0.039	ug/L		05/05/21 11:19	05/06/21 13:44	1
Bis(2-ethylhexyl) phthalate	ND		2.9	0.72	ug/L		05/05/21 11:19	05/06/21 13:44	1
Di-n-octyl phthalate	ND		0.97	0.13	ug/L		05/05/21 11:19	05/06/21 13:44	1
Benzofluoranthene	ND		0.48	0.048	ug/L		05/05/21 11:19	05/06/21 13:44	1
Benzo[a]pyrene	ND		0.24	0.039	ug/L		05/05/21 11:19	05/06/21 13:44	1
Indeno[1,2,3-cd]pyrene	ND		0.39	0.13	ug/L		05/05/21 11:19	05/06/21 13:44	1
Dibenz(a,h)anthracene	ND		0.24	0.068	ug/L		05/05/21 11:19	05/06/21 13:44	1
Benzo[g,h,i]perylene	ND		0.24	0.039	ug/L		05/05/21 11:19	05/06/21 13:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Fluorophenol	40		14 - 120	05/05/21 11:19	05/06/21 13:44	1
Phenol-d5	25		10 - 120	05/05/21 11:19	05/06/21 13:44	1
2,4,6-Tribromophenol	77		50 - 125	05/05/21 11:19	05/06/21 13:44	1
Nitrobenzene-d5	68		46 - 125	05/05/21 11:19	05/06/21 13:44	1
2-Fluorobiphenyl	64		51 - 120	05/05/21 11:19	05/06/21 13:44	1
Terphenyl-d14	113		63 - 122	05/05/21 11:19	05/06/21 13:44	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.47	0.064	ug/L		05/05/21 12:10	05/08/21 07:47	1

Eurofins FGS, Seattle

Client Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: ER-1-042921

Lab Sample ID: 580-102849-22

Date Collected: 04/29/21 06:00

Matrix: Water

Date Received: 05/04/21 12:00

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1221	ND		0.47	0.079	ug/L		05/05/21 12:10	05/08/21 07:47	1
PCB-1232	ND		0.47	0.066	ug/L		05/05/21 12:10	05/08/21 07:47	1
PCB-1242	ND		0.47	0.062	ug/L		05/05/21 12:10	05/08/21 07:47	1
PCB-1248	ND		0.47	0.054	ug/L		05/05/21 12:10	05/08/21 07:47	1
PCB-1254	ND		0.47	0.079	ug/L		05/05/21 12:10	05/08/21 07:47	1
PCB-1260	ND		0.47	0.064	ug/L		05/05/21 12:10	05/08/21 07:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	72		35 - 120	05/05/21 12:10	05/08/21 07:47	1
Tetrachloro-m-xylene	53		29 - 120	05/05/21 12:10	05/08/21 07:47	1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	H	0.47	0.063	ug/L		05/11/21 17:45	05/12/21 14:28	1
PCB-1221	ND	H	0.47	0.078	ug/L		05/11/21 17:45	05/12/21 14:28	1
PCB-1232	ND	H	0.47	0.065	ug/L		05/11/21 17:45	05/12/21 14:28	1
PCB-1242	ND	H	0.47	0.061	ug/L		05/11/21 17:45	05/12/21 14:28	1
PCB-1248	ND	H	0.47	0.054	ug/L		05/11/21 17:45	05/12/21 14:28	1
PCB-1254	ND	H	0.47	0.078	ug/L		05/11/21 17:45	05/12/21 14:28	1
PCB-1260	ND	H	0.47	0.063	ug/L		05/11/21 17:45	05/12/21 14:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	135	S1+	35 - 120	05/11/21 17:45	05/12/21 14:28	1
Tetrachloro-m-xylene	80		29 - 120	05/11/21 17:45	05/12/21 14:28	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.12	0.073	mg/L		05/06/21 11:41	05/10/21 22:42	1
Motor Oil (>C24-C36)	0.20	J	0.39	0.11	mg/L		05/06/21 11:41	05/10/21 22:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	70		50 - 150	05/06/21 11:41	05/10/21 22:42	1

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010	0.00020	mg/L		05/05/21 16:03	05/06/21 14:23	1
Antimony	ND		0.00080	0.00013	mg/L		05/05/21 16:03	05/06/21 14:23	1
Cadmium	ND		0.00040	0.000037	mg/L		05/05/21 16:03	05/06/21 14:23	1
Chromium	0.00027	J	0.00080	0.00017	mg/L		05/05/21 16:03	05/06/21 14:23	1
Copper	ND		0.0020	0.00060	mg/L		05/05/21 16:03	05/06/21 14:23	1
Lead	0.000060	J B	0.00040	0.000040	mg/L		05/05/21 16:03	05/06/21 14:23	1
Nickel	ND		0.0030	0.00013	mg/L		05/05/21 16:03	05/06/21 14:23	1
Selenium	ND		0.0080	0.0021	mg/L		05/05/21 16:03	05/06/21 14:23	1
Silver	ND		0.00040	0.000025	mg/L		05/05/21 16:03	05/06/21 14:23	1
Zinc	0.0010	J B	0.0070	0.00093	mg/L		05/05/21 16:03	05/06/21 14:23	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00041	B	0.00030	0.00015	mg/L		05/05/21 11:25	05/05/21 17:53	1

Euofins FGS, Seattle

Default Detection Limits

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Prep: 3510C

Analyte	RL	MDL	Units
1,2,4-Trichlorobenzene	0.40	0.090	ug/L
1,2-Dichlorobenzene	0.40	0.050	ug/L
1,4-Dichlorobenzene	0.40	0.040	ug/L
1-Methylnaphthalene	1.0	0.050	ug/L
2,4-Dimethylphenol	4.0	0.16	ug/L
2-Methylnaphthalene	0.40	0.060	ug/L
2-Methylphenol	0.60	0.050	ug/L
3 & 4 Methylphenol	0.60	0.10	ug/L
Acenaphthene	0.40	0.050	ug/L
Acenaphthylene	1.0	0.060	ug/L
Anthracene	1.0	0.050	ug/L
Benzo[a]anthracene	0.25	0.050	ug/L
Benzo[a]pyrene	0.25	0.040	ug/L
Benzo[g,h,i]perylene	0.25	0.040	ug/L
Benzo[fluoranthene	0.50	0.050	ug/L
Benzoic acid	10	1.3	ug/L
Benzyl alcohol	5.0	0.18	ug/L
Bis(2-ethylhexyl) phthalate	3.0	0.74	ug/L
Butyl benzyl phthalate	4.0	0.27	ug/L
Carbazole	0.60	0.10	ug/L
Chrysene	0.25	0.040	ug/L
Dibenz(a,h)anthracene	0.25	0.070	ug/L
Dibenzofuran	0.40	0.10	ug/L
Diethyl phthalate	1.0	0.15	ug/L
Dimethyl phthalate	0.60	0.060	ug/L
Di-n-butyl phthalate	3.0	0.19	ug/L
Di-n-octyl phthalate	1.0	0.13	ug/L
Fluoranthene	0.25	0.060	ug/L
Fluorene	0.25	0.050	ug/L
Hexachlorobenzene	0.60	0.040	ug/L
Hexachlorobutadiene	1.0	0.060	ug/L
Indeno[1,2,3-cd]pyrene	0.40	0.13	ug/L
Naphthalene	0.40	0.16	ug/L
N-Nitrosodiphenylamine	1.0	0.070	ug/L
Pentachlorophenol	10	0.51	ug/L
Phenanthrene	1.0	0.12	ug/L
Phenol	1.0	0.36	ug/L
Pyrene	1.0	0.040	ug/L

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Prep: 3546

Analyte	RL	MDL	Units
1,2,4-Trichlorobenzene	50	6.0	ug/Kg
1,2-Dichlorobenzene	50	5.0	ug/Kg
1,4-Dichlorobenzene	50	8.3	ug/Kg
1-Methylnaphthalene	30	5.0	ug/Kg
2,4-Dimethylphenol	200	60	ug/Kg
2-Methylnaphthalene	50	8.8	ug/Kg
2-Methylphenol	150	9.8	ug/Kg
3 & 4 Methylphenol	200	15	ug/Kg
Acenaphthene	40	4.6	ug/Kg

Default Detection Limits

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Prep: 3546

Analyte	RL	MDL	Units
Acenaphthylene	25	5.0	ug/Kg
Anthracene	60	16	ug/Kg
Benzo[a]anthracene	40	11	ug/Kg
Benzo[a]pyrene	60	13	ug/Kg
Benzo[g,h,i]perylene	60	18	ug/Kg
Benzofluoranthene	150	14	ug/Kg
Benzoic acid	4000	1200	ug/Kg
Benzyl alcohol	1000	50	ug/Kg
Bis(2-ethylhexyl) phthalate	600	71	ug/Kg
Butyl benzyl phthalate	200	51	ug/Kg
Carbazole	150	7.3	ug/Kg
Chrysene	60	13	ug/Kg
Dibenz(a,h)anthracene	50	12	ug/Kg
Dibenzofuran	150	5.9	ug/Kg
Diethyl phthalate	400	22	ug/Kg
Dimethyl phthalate	150	5.0	ug/Kg
Di-n-butyl phthalate	500	27	ug/Kg
Di-n-octyl phthalate	150	12	ug/Kg
Fluoranthene	40	12	ug/Kg
Fluorene	25	5.0	ug/Kg
Hexachlorobenzene	50	15	ug/Kg
Hexachlorobutadiene	50	15	ug/Kg
Indeno[1,2,3-cd]pyrene	40	12	ug/Kg
Naphthalene	25	5.0	ug/Kg
N-Nitrosodiphenylamine	60	8.0	ug/Kg
Pentachlorophenol	400	63	ug/Kg
Phenanthrene	60	5.8	ug/Kg
Phenol	150	23	ug/Kg
Pyrene	60	13	ug/Kg

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Prep: 3510C

Analyte	RL	MDL	Units
PCB-1016	0.45	0.061	ug/L
PCB-1221	0.45	0.075	ug/L
PCB-1232	0.45	0.063	ug/L
PCB-1242	0.45	0.059	ug/L
PCB-1248	0.45	0.052	ug/L
PCB-1254	0.45	0.075	ug/L
PCB-1260	0.45	0.061	ug/L

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Prep: 3546

Analyte	RL	MDL	Units
PCB-1016	20	7.4	ug/Kg
PCB-1221	20	4.2	ug/Kg
PCB-1232	20	4.9	ug/Kg
PCB-1242	20	3.5	ug/Kg
PCB-1248	20	2.9	ug/Kg
PCB-1254	20	3.7	ug/Kg
PCB-1260	20	7.4	ug/Kg

Default Detection Limits

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Prep: 3546

Analyte	RL	MDL	Units
Polychlorinated biphenyls, Total	20	7.4	ug/Kg

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Prep: 3510C

Analyte	RL	MDL	Units
#2 Diesel (C10-C24)	0.11	0.065	mg/L
Motor Oil (>C24-C36)	0.35	0.096	mg/L

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Prep: 3546

Analyte	RL	MDL	Units
#2 Diesel (C10-C24)	50	12	mg/Kg
Motor Oil (>C24-C36)	50	18	mg/Kg

Method: 6020B - Metals (ICP/MS)

Prep: 3050B

Analyte	RL	MDL	Units
Antimony	0.30	0.034	mg/Kg
Arsenic	0.25	0.050	mg/Kg
Cadmium	0.40	0.039	mg/Kg
Chromium	0.50	0.032	mg/Kg
Copper	0.50	0.11	mg/Kg
Lead	0.25	0.024	mg/Kg
Nickel	0.25	0.097	mg/Kg
Selenium	0.55	0.14	mg/Kg
Silver	0.10	0.010	mg/Kg
Zinc	2.6	0.81	mg/Kg

Method: 6020B - Metals (ICP/MS) - Total Recoverable

Prep: 3005A

Analyte	RL	MDL	Units
Antimony	0.00080	0.00013	mg/L
Arsenic	0.0010	0.00020	mg/L
Cadmium	0.00040	0.000037	mg/L
Chromium	0.00080	0.00017	mg/L
Copper	0.0020	0.00060	mg/L
Lead	0.00040	0.000040	mg/L
Nickel	0.0030	0.00013	mg/L
Selenium	0.0080	0.0021	mg/L
Silver	0.00040	0.000025	mg/L
Zinc	0.0070	0.00093	mg/L

Method: 7470A - Mercury (CVAA)

Prep: 7470A

Analyte	RL	MDL	Units
Mercury	0.00030	0.00015	mg/L

Method: 7471A - Mercury (CVAA)

Prep: 7471A

Default Detection Limits

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 7471A - Mercury (CVAA)

Prep: 7471A

Analyte	RL	MDL	Units
Mercury	0.030	0.0090	mg/Kg

General Chemistry

Analyte	RL	MDL	Units
Total Organic Carbon - Average Dup	2000	97	mg/Kg

Surrogate Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		FBP (57-120)	2FP (47-119)	NBZ (54-120)	PHL (59-120)	TPHL (73-125)	TBP (52-115)
580-102849-1	DWP-SB-1-0	77	66	63	67	118	98
580-102849-2	DWP-SB-1-0-D	82	68	67	68	119	102
580-102849-3	DWP-SB-1-1	77	65	69	63	111	98
580-102849-4	DWP-SB-2-0	89	75	73	83	114	95
580-102849-5	DWP-SB-2-1	87	66	67	63	113	95
580-102849-6	DWP-SB-2-2	84	73	77	72	111	105
580-102849-7	DWP-SB-2-3	81	64	63	62	117	97
580-102849-8	DWP-SB-3-0	81	63	67	51 S1-	108	92
580-102849-8 MS	DWP-SB-3-0	92	69	83	77	121	111
580-102849-8 MSD	DWP-SB-3-0	81	71	74	71	123	89
580-102849-9	DWP-SB-3-1	81	67	69	84	115	102
580-102849-10	DWP-SB-3-2	81	65	65	75	114	98
580-102849-11	DWP-SB-4-0	84	83	74	57 S1-	121	108
580-102849-12	DWP-SB-4-1	79	67	60	47 S1-	107	86
580-102849-13	DWP-SB-4-2	83	65	63	68	116	104
580-102849-13 MS	DWP-SB-4-2	87	67	80	71	123	106
580-102849-13 MSD	DWP-SB-4-2	91	73	76	87	124	81
580-102849-14	DWP-SB-5-0	86	79	76	81	111	109
580-102849-15	DWP-SB-5-1	87	72	62	71	118	103
580-102849-16	DWP-SB-5-2	86	71	79	78	115	101
580-102849-17	DWP-SB-5-3	71	68	64	58 S1-	110	94
580-102849-18	DWP-SB-6-0	83	62	68	70	116	100
580-102849-19	DWP-SB-6-1	79	60	59	56 S1-	117	100
580-102849-20	DWP-SB-6-2	60	58	47 S1-	56 S1-	88	83
580-102849-21	DWP-SB-6-3	83	59	62	63	118	86
LCS 580-356370/2-A	Lab Control Sample	78	67	63	69	102	86
LCS 580-356370/2-A - RA	Lab Control Sample	78	62	73	65	102	85
LCS 580-356379/2-A	Lab Control Sample	85	69	75	77	124	106
LCSD 580-356370/3-A	Lab Control Sample Dup	81	66	66	67	108	94
LCSD 580-356370/3-A - RA	Lab Control Sample Dup	79	65	70	68	107	88
LCSD 580-356379/3-A	Lab Control Sample Dup	81	75	73	77	113	88
MB 580-356370/1-A	Method Blank	83	79	71	84	111	96
MB 580-356379/1-A	Method Blank	93	73	79	76	116	94

Surrogate Legend

FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol
NBZ = Nitrobenzene-d5
PHL = Phenol-d5
TPHL = Terphenyl-d14
TBP = 2,4,6-Tribromophenol

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (14-120)	PHL (10-120)	TBP (50-125)	NBZ (46-125)	FBP (51-120)	TPHL (63-122)
580-102849-22	ER-1-042921	40	25	77	68	64	113
LCS 580-355848/2-A	Lab Control Sample	41	26	87	77	84	103

Surrogate Summary

Client: Leidos, Inc.

Job ID: 580-102849-1

Project/Site: Duwamish Waterway Park

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)					
		2FP (14-120)	PHL (10-120)	TBP (50-125)	NBZ (46-125)	FBP (51-120)	TPHL (63-122)
LCSD 580-355848/3-A	Lab Control Sample Dup	49	31	101	82	86	113
MB 580-355848/1-A	Method Blank	41	20	74	67	78	125 S1+

Surrogate Legend

2FP = 2-Fluorophenol
 PHL = Phenol-d5
 TBP = 2,4,6-Tribromophenol
 NBZ = Nitrobenzene-d5
 FBP = 2-Fluorobiphenyl
 TPHL = Terphenyl-d14

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCBP1 (44-135)	TCX1 (48-122)
580-102849-1	DWP-SB-1-0	105	82
580-102849-2	DWP-SB-1-0-D	99	80
580-102849-3	DWP-SB-1-1	87	78
580-102849-4	DWP-SB-2-0	106	82
580-102849-5	DWP-SB-2-1	87	77
580-102849-6	DWP-SB-2-2	90	78
580-102849-7	DWP-SB-2-3	85	67
580-102849-8	DWP-SB-3-0	103	79
580-102849-8 MS	DWP-SB-3-0	107	78
580-102849-8 MSD	DWP-SB-3-0	99	78
580-102849-9	DWP-SB-3-1	85	71
580-102849-10	DWP-SB-3-2	92	76
580-102849-11	DWP-SB-4-0	92	76
580-102849-12	DWP-SB-4-1	94	77
580-102849-13	DWP-SB-4-2	97	74
580-102849-14	DWP-SB-5-0	74	58
580-102849-15	DWP-SB-5-1	90	74
580-102849-16	DWP-SB-5-2	103	76
580-102849-17	DWP-SB-5-3	108	78
580-102849-18	DWP-SB-6-0	92	76
580-102849-19	DWP-SB-6-1	102	81
580-102849-20	DWP-SB-6-2	105	83
580-102849-21	DWP-SB-6-3	103	77
LCS 580-355875/2-A	Lab Control Sample	120	86
LCS 580-356391/2-A	Lab Control Sample	91	82
MB 580-355875/1-A	Method Blank	113	85
MB 580-356391/1-A	Method Blank	84	79

Surrogate Legend

DCBP = DCB Decachlorobiphenyl
 TCX = Tetrachloro-m-xylene

Surrogate Summary

Client: Leidos, Inc.

Job ID: 580-102849-1

Project/Site: Duwamish Waterway Park

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCBP1 (35-120)	TCX2 (29-120)
580-102849-22	ER-1-042921	72	53
LCS 580-355853/4-A	Lab Control Sample	74	57
LCSD 580-355853/5-A	Lab Control Sample Dup	12 S1-	4 S1-
MB 580-355853/1-A	Method Blank	77	67

Surrogate Legend

DCBP = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		DCBP1 (35-120)	TCX1 (29-120)
580-102849-22 - RE	ER-1-042921	135 S1+	80
LCS 580-356325/2-A	Lab Control Sample	91	81
LCSD 580-356325/3-A	Lab Control Sample Dup	86	75
MB 580-356325/1-A	Method Blank	84	76

Surrogate Legend

DCBP = DCB Decachlorobiphenyl

TCX = Tetrachloro-m-xylene

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		OTPH (50-150)
580-102849-1	DWP-SB-1-0	75
580-102849-1 DU	DWP-SB-1-0	82
580-102849-2	DWP-SB-1-0-D	78
580-102849-3	DWP-SB-1-1	76
580-102849-4	DWP-SB-2-0	74
580-102849-5	DWP-SB-2-1	76
580-102849-6	DWP-SB-2-2	75
580-102849-7	DWP-SB-2-3	75
580-102849-8	DWP-SB-3-0	76
580-102849-8 MS	DWP-SB-3-0	89
580-102849-8 MSD	DWP-SB-3-0	90
580-102849-9	DWP-SB-3-1	77
580-102849-10	DWP-SB-3-2	70
580-102849-11	DWP-SB-4-0	76
580-102849-11 DU	DWP-SB-4-0	80
580-102849-12	DWP-SB-4-1	84
580-102849-13	DWP-SB-4-2	84
580-102849-14	DWP-SB-5-0	85
580-102849-15	DWP-SB-5-1	79
580-102849-16	DWP-SB-5-2	76
580-102849-17	DWP-SB-5-3	79
580-102849-17 DU	DWP-SB-5-3	88

Eurofins FGS, Seattle

Surrogate Summary

Client: Leidos, Inc.

Job ID: 580-102849-1

Project/Site: Duwamish Waterway Park

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Matrix: Solid

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH (50-150)
580-102849-18	DWP-SB-6-0	86
580-102849-18 DU	DWP-SB-6-0	91
580-102849-19	DWP-SB-6-1	81
580-102849-20	DWP-SB-6-2	82
580-102849-21	DWP-SB-6-3	80
LCS 580-355879/2-A	Lab Control Sample	90
LCS 580-356426/2-A	Lab Control Sample	102
LCSD 580-355879/3-A	Lab Control Sample Dup	93
LCSD 580-356426/3-A	Lab Control Sample Dup	75
MB 580-355879/1-A	Method Blank	75
MB 580-356426/1-A	Method Blank	86

Surrogate Legend

OTPH = o-Terphenyl

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	OTPH (50-150)
580-102849-22	ER-1-042921	70
LCS 580-355928/2-A	Lab Control Sample	77
LCSD 580-355928/3-A	Lab Control Sample Dup	83
MB 580-355928/1-A	Method Blank	67

Surrogate Legend

OTPH = o-Terphenyl

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 580-355848/1-A

Matrix: Water

Analysis Batch: 355915

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 355848

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzyl alcohol	ND		5.0	0.18	ug/L		05/05/21 11:19	05/06/21 12:10	1
Benzoic acid	ND		10	1.3	ug/L		05/05/21 11:19	05/06/21 12:10	1
1,2-Dichlorobenzene	ND		0.40	0.050	ug/L		05/05/21 11:19	05/06/21 12:10	1
1,4-Dichlorobenzene	ND		0.40	0.040	ug/L		05/05/21 11:19	05/06/21 12:10	1
2,4-Dimethylphenol	ND		4.0	0.16	ug/L		05/05/21 11:19	05/06/21 12:10	1
Dimethyl phthalate	ND		0.60	0.060	ug/L		05/05/21 11:19	05/06/21 12:10	1
Acenaphthylene	ND		1.0	0.060	ug/L		05/05/21 11:19	05/06/21 12:10	1
Acenaphthene	ND		0.40	0.050	ug/L		05/05/21 11:19	05/06/21 12:10	1
Dibenzofuran	ND		0.40	0.10	ug/L		05/05/21 11:19	05/06/21 12:10	1
Diethyl phthalate	ND		1.0	0.15	ug/L		05/05/21 11:19	05/06/21 12:10	1
Fluorene	ND		0.25	0.050	ug/L		05/05/21 11:19	05/06/21 12:10	1
Hexachlorobenzene	ND		0.60	0.040	ug/L		05/05/21 11:19	05/06/21 12:10	1
Hexachlorobutadiene	ND		1.0	0.060	ug/L		05/05/21 11:19	05/06/21 12:10	1
1-Methylnaphthalene	ND		1.0	0.050	ug/L		05/05/21 11:19	05/06/21 12:10	1
Anthracene	ND		1.0	0.050	ug/L		05/05/21 11:19	05/06/21 12:10	1
2-Methylnaphthalene	ND		0.40	0.060	ug/L		05/05/21 11:19	05/06/21 12:10	1
Carbazole	ND		0.60	0.10	ug/L		05/05/21 11:19	05/06/21 12:10	1
2-Methylphenol	ND		0.60	0.050	ug/L		05/05/21 11:19	05/06/21 12:10	1
Di-n-butyl phthalate	ND		3.0	0.19	ug/L		05/05/21 11:19	05/06/21 12:10	1
3 & 4 Methylphenol	ND		0.60	0.10	ug/L		05/05/21 11:19	05/06/21 12:10	1
Fluoranthene	ND		0.25	0.060	ug/L		05/05/21 11:19	05/06/21 12:10	1
Naphthalene	ND		0.40	0.16	ug/L		05/05/21 11:19	05/06/21 12:10	1
Butyl benzyl phthalate	ND		4.0	0.27	ug/L		05/05/21 11:19	05/06/21 12:10	1
Benzo[a]anthracene	ND		0.25	0.050	ug/L		05/05/21 11:19	05/06/21 12:10	1
N-Nitrosodiphenylamine	ND		1.0	0.070	ug/L		05/05/21 11:19	05/06/21 12:10	1
Chrysene	ND		0.25	0.040	ug/L		05/05/21 11:19	05/06/21 12:10	1
Pentachlorophenol	ND		10	0.51	ug/L		05/05/21 11:19	05/06/21 12:10	1
Bis(2-ethylhexyl) phthalate	ND		3.0	0.74	ug/L		05/05/21 11:19	05/06/21 12:10	1
Phenanthrene	ND		1.0	0.12	ug/L		05/05/21 11:19	05/06/21 12:10	1
Di-n-octyl phthalate	ND		1.0	0.13	ug/L		05/05/21 11:19	05/06/21 12:10	1
Phenol	ND		1.0	0.36	ug/L		05/05/21 11:19	05/06/21 12:10	1
Benzofluoranthene	ND		0.50	0.050	ug/L		05/05/21 11:19	05/06/21 12:10	1
Benzo[a]pyrene	ND		0.25	0.040	ug/L		05/05/21 11:19	05/06/21 12:10	1
Pyrene	ND		1.0	0.040	ug/L		05/05/21 11:19	05/06/21 12:10	1
Indeno[1,2,3-cd]pyrene	ND		0.40	0.13	ug/L		05/05/21 11:19	05/06/21 12:10	1
Dibenz(a,h)anthracene	ND		0.25	0.070	ug/L		05/05/21 11:19	05/06/21 12:10	1
1,2,4-Trichlorobenzene	ND		0.40	0.090	ug/L		05/05/21 11:19	05/06/21 12:10	1
Benzo[g,h,i]perylene	ND		0.25	0.040	ug/L		05/05/21 11:19	05/06/21 12:10	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	78		51 - 120	05/05/21 11:19	05/06/21 12:10	1
2-Fluorophenol	41		14 - 120	05/05/21 11:19	05/06/21 12:10	1
Nitrobenzene-d5	67		46 - 125	05/05/21 11:19	05/06/21 12:10	1
Phenol-d5	20		10 - 120	05/05/21 11:19	05/06/21 12:10	1
Terphenyl-d14	125	S1+	63 - 122	05/05/21 11:19	05/06/21 12:10	1
2,4,6-Tribromophenol	74		50 - 125	05/05/21 11:19	05/06/21 12:10	1

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-355848/2-A

Matrix: Water

Analysis Batch: 355915

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 355848

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzyl alcohol	2.00	0.531	J	ug/L		27	10 - 120
Benzoic acid	4.00	1.47	J	ug/L		37	10 - 120
1,2-Dichlorobenzene	2.00	1.44		ug/L		72	31 - 120
1,4-Dichlorobenzene	2.00	1.44		ug/L		72	28 - 120
2,4-Dimethylphenol	2.00	1.43	J	ug/L		72	47 - 120
Dimethyl phthalate	2.00	1.71		ug/L		86	65 - 128
Acenaphthylene	2.00	1.71		ug/L		86	48 - 125
Acenaphthene	2.00	1.71		ug/L		85	49 - 120
Dibenzofuran	2.00	1.67		ug/L		83	51 - 120
Diethyl phthalate	2.00	1.88		ug/L		94	60 - 134
Fluorene	2.00	1.64		ug/L		82	55 - 125
Hexachlorobenzene	2.00	1.55		ug/L		78	49 - 125
Hexachlorobutadiene	2.00	1.59		ug/L		80	17 - 125
1-Methylnaphthalene	2.00	1.75		ug/L		87	41 - 125
Anthracene	2.00	1.64		ug/L		82	50 - 131
2-Methylnaphthalene	2.00	1.66		ug/L		83	43 - 120
Carbazole	2.00	1.87		ug/L		94	10 - 150
2-Methylphenol	2.00	1.07		ug/L		53	36 - 120
Di-n-butyl phthalate	2.00	1.89	J	ug/L		95	55 - 167
3 & 4 Methylphenol	2.00	0.946		ug/L		47	29 - 120
Fluoranthene	2.00	1.77		ug/L		88	60 - 133
Naphthalene	2.00	1.70		ug/L		85	42 - 120
Butyl benzyl phthalate	2.00	1.96	J	ug/L		98	60 - 150
Benzo[a]anthracene	2.00	1.60		ug/L		80	56 - 131
N-Nitrosodiphenylamine	2.00	1.50		ug/L		75	52 - 135
Chrysene	2.00	1.85		ug/L		92	57 - 125
Pentachlorophenol	4.00	3.48	J	ug/L		87	10 - 135
Bis(2-ethylhexyl) phthalate	2.00	2.31	J	ug/L		115	48 - 150
Phenanthrene	2.00	1.67		ug/L		84	54 - 125
Di-n-octyl phthalate	2.00	1.85		ug/L		92	48 - 150
Phenol	2.00	0.525	J	ug/L		26	13 - 120
Benzofluoranthene	4.00	3.71		ug/L		93	61 - 126
Benzo[a]pyrene	2.00	1.87		ug/L		94	55 - 125
Pyrene	2.00	1.64		ug/L		82	57 - 133
Indeno[1,2,3-cd]pyrene	2.00	1.38		ug/L		69	39 - 148
Dibenz(a,h)anthracene	2.00	1.47		ug/L		74	48 - 134
1,2,4-Trichlorobenzene	2.00	1.67		ug/L		83	31 - 120
Benzo[g,h,i]perylene	2.00	1.52		ug/L		76	46 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	84		51 - 120
2-Fluorophenol	41		14 - 120
Nitrobenzene-d5	77		46 - 125
Phenol-d5	26		10 - 120
Terphenyl-d14	103		63 - 122
2,4,6-Tribromophenol	87		50 - 125

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-355848/3-A
Matrix: Water
Analysis Batch: 355915

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 355848

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzyl alcohol	2.00	0.689	J	ug/L		34	10 - 120	26	35
Benzoic acid	4.00	2.00	J	ug/L		50	10 - 120	30	35
1,2-Dichlorobenzene	2.00	1.68		ug/L		84	31 - 120	16	35
1,4-Dichlorobenzene	2.00	1.61		ug/L		81	28 - 120	11	35
2,4-Dimethylphenol	2.00	1.50	J	ug/L		75	47 - 120	4	30
Dimethyl phthalate	2.00	1.71		ug/L		86	65 - 128	0	30
Acenaphthylene	2.00	1.68		ug/L		84	48 - 125	2	30
Acenaphthene	2.00	1.72		ug/L		86	49 - 120	1	30
Dibenzofuran	2.00	1.63		ug/L		82	51 - 120	2	30
Diethyl phthalate	2.00	1.89		ug/L		94	60 - 134	0	24
Fluorene	2.00	1.65		ug/L		82	55 - 125	0	30
Hexachlorobenzene	2.00	1.69		ug/L		84	49 - 125	8	30
Hexachlorobutadiene	2.00	1.59		ug/L		80	17 - 125	0	35
1-Methylnaphthalene	2.00	1.73		ug/L		86	41 - 125	1	35
Anthracene	2.00	1.77		ug/L		88	50 - 131	7	24
2-Methylnaphthalene	2.00	1.69		ug/L		85	43 - 120	2	35
Carbazole	2.00	2.06		ug/L		103	10 - 150	10	30
2-Methylphenol	2.00	1.33		ug/L		67	36 - 120	22	35
Di-n-butyl phthalate	2.00	2.00	J	ug/L		100	55 - 167	6	30
3 & 4 Methylphenol	2.00	1.13		ug/L		57	29 - 120	18	35
Fluoranthene	2.00	1.84		ug/L		92	60 - 133	4	30
Naphthalene	2.00	1.76		ug/L		88	42 - 120	4	35
Butyl benzyl phthalate	2.00	1.81	J	ug/L		91	60 - 150	8	30
Benzo[a]anthracene	2.00	1.59		ug/L		80	56 - 131	1	30
N-Nitrosodiphenylamine	2.00	1.67		ug/L		83	52 - 135	10	30
Chrysene	2.00	1.79		ug/L		90	57 - 125	3	30
Pentachlorophenol	4.00	3.66	J	ug/L		92	10 - 135	5	35
Bis(2-ethylhexyl) phthalate	2.00	2.22	J	ug/L		111	48 - 150	4	35
Phenanthrene	2.00	1.77		ug/L		88	54 - 125	6	30
Di-n-octyl phthalate	2.00	1.99		ug/L		99	48 - 150	7	30
Phenol	2.00	0.651	J	ug/L		33	13 - 120	21	30
Benzofluoranthene	4.00	4.06		ug/L		102	61 - 126	9	30
Benzo[a]pyrene	2.00	2.09		ug/L		104	55 - 125	11	30
Pyrene	2.00	1.80		ug/L		90	57 - 133	10	23
Indeno[1,2,3-cd]pyrene	2.00	1.67		ug/L		83	39 - 148	19	30
Dibenz(a,h)anthracene	2.00	1.65		ug/L		82	48 - 134	11	35
1,2,4-Trichlorobenzene	2.00	1.69		ug/L		85	31 - 120	2	35
Benzo[g,h,i]perylene	2.00	1.70		ug/L		85	46 - 140	11	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl	86		51 - 120
2-Fluorophenol	49		14 - 120
Nitrobenzene-d5	82		46 - 125
Phenol-d5	31		10 - 120
Terphenyl-d14	113		63 - 122
2,4,6-Tribromophenol	101		50 - 125

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-356370/1-A

Matrix: Solid

Analysis Batch: 356466

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 356370

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzyl alcohol	ND		100	5.0	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Benzoic acid	ND		400	120	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
1,2-Dichlorobenzene	ND		5.0	0.50	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
1,4-Dichlorobenzene	ND		5.0	0.83	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
2,4-Dimethylphenol	ND		20	6.0	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Dimethyl phthalate	ND		15	0.50	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Acenaphthylene	ND		2.5	0.50	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Acenaphthene	ND		4.0	0.46	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Dibenzofuran	ND		15	0.59	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Diethyl phthalate	ND		40	2.2	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Fluorene	ND		2.5	0.50	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Hexachlorobenzene	ND		5.0	1.5	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Hexachlorobutadiene	ND		5.0	1.5	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
1-Methylnaphthalene	ND		3.0	0.50	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Anthracene	ND		6.0	1.6	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
2-Methylnaphthalene	ND		5.0	0.88	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Carbazole	ND		15	0.73	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
2-Methylphenol	ND		15	0.98	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Di-n-butyl phthalate	ND		50	2.7	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
3 & 4 Methylphenol	ND		20	1.5	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Fluoranthene	ND		4.0	1.2	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Naphthalene	ND		2.5	0.50	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Butyl benzyl phthalate	ND		20	5.1	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Benzo[a]anthracene	ND		4.0	1.1	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
N-Nitrosodiphenylamine	ND		6.0	0.80	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Chrysene	ND		6.0	1.3	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Pentachlorophenol	ND		40	6.3	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Bis(2-ethylhexyl) phthalate	ND		60	7.1	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Phenanthrene	ND		6.0	0.58	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Di-n-octyl phthalate	ND		15	1.2	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Phenol	ND		15	2.3	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Benzofluoranthene	ND		15	1.4	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Benzo[a]pyrene	ND		6.0	1.3	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Pyrene	ND		6.0	1.3	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Indeno[1,2,3-cd]pyrene	ND		4.0	1.2	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Dibenz(a,h)anthracene	ND		5.0	1.2	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
1,2,4-Trichlorobenzene	ND		5.0	0.60	ug/Kg		05/12/21 09:26	05/13/21 22:34	1
Benzo[g,h,i]perylene	ND		6.0	1.8	ug/Kg		05/12/21 09:26	05/13/21 22:34	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	83		57 - 120	05/12/21 09:26	05/13/21 22:34	1
2-Fluorophenol	79		47 - 119	05/12/21 09:26	05/13/21 22:34	1
Nitrobenzene-d5	71		54 - 120	05/12/21 09:26	05/13/21 22:34	1
Phenol-d5	84		59 - 120	05/12/21 09:26	05/13/21 22:34	1
Terphenyl-d14	111		73 - 125	05/12/21 09:26	05/13/21 22:34	1
2,4,6-Tribromophenol	96		52 - 115	05/12/21 09:26	05/13/21 22:34	1

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-356370/2-A

Matrix: Solid

Analysis Batch: 356466

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 356370

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzyl alcohol	100	73.4	J	ug/Kg		73	10 - 134
Benzoic acid	200	ND		ug/Kg		12	10 - 120
1,2-Dichlorobenzene	100	77.3		ug/Kg		77	62 - 120
1,4-Dichlorobenzene	100	73.4		ug/Kg		73	57 - 120
2,4-Dimethylphenol	100	83.0		ug/Kg		83	31 - 129
Dimethyl phthalate	100	90.9		ug/Kg		91	71 - 120
Acenaphthylene	100	84.8		ug/Kg		85	63 - 120
Acenaphthene	100	85.6		ug/Kg		86	64 - 120
Dibenzofuran	100	82.8		ug/Kg		83	68 - 120
Diethyl phthalate	100	95.0		ug/Kg		95	66 - 135
Fluorene	100	83.5		ug/Kg		83	68 - 121
Hexachlorobenzene	100	86.7		ug/Kg		87	65 - 126
Hexachlorobutadiene	100	77.2		ug/Kg		77	64 - 130
1-Methylnaphthalene	100	79.6		ug/Kg		80	69 - 120
Anthracene	100	86.0		ug/Kg		86	67 - 131
2-Methylnaphthalene	100	104		ug/Kg		104	70 - 120
Carbazole	100	101		ug/Kg		101	43 - 150
2-Methylphenol	100	69.0		ug/Kg		69	53 - 120
Di-n-butyl phthalate	100	96.2		ug/Kg		96	66 - 150
3 & 4 Methylphenol	100	70.7		ug/Kg		71	54 - 120
Fluoranthene	100	89.8		ug/Kg		90	69 - 133
Naphthalene	100	78.9		ug/Kg		79	68 - 120
Butyl benzyl phthalate	100	92.4		ug/Kg		92	58 - 150
Benzo[a]anthracene	100	85.6		ug/Kg		86	60 - 135
N-Nitrosodiphenylamine	100	82.6		ug/Kg		83	67 - 128
Chrysene	100	90.5		ug/Kg		90	69 - 127
Pentachlorophenol	200	130		ug/Kg		65	10 - 120
Bis(2-ethylhexyl) phthalate	100	106		ug/Kg		106	45 - 150
Phenanthrene	100	89.8		ug/Kg		90	68 - 126
Di-n-octyl phthalate	100	105		ug/Kg		105	53 - 150
Phenol	100	71.2		ug/Kg		71	59 - 120
Benzofluoranthene	200	207		ug/Kg		103	71 - 120
Benzo[a]pyrene	100	105		ug/Kg		105	62 - 129
Pyrene	100	84.1		ug/Kg		84	68 - 141
Indeno[1,2,3-cd]pyrene	100	62.6		ug/Kg		63	52 - 146
Dibenz(a,h)anthracene	100	64.5		ug/Kg		64	59 - 139
1,2,4-Trichlorobenzene	100	78.4		ug/Kg		78	66 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl	78		57 - 120
2-Fluorophenol	67		47 - 119
Nitrobenzene-d5	63		54 - 120
Phenol-d5	69		59 - 120
Terphenyl-d14	102		73 - 125
2,4,6-Tribromophenol	86		52 - 115

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-356370/3-A

Matrix: Solid

Analysis Batch: 356466

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 356370

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	RPD Limit
							Limits	RPD		
Benzyl alcohol	100	52.2	J	ug/Kg		52	10 - 134	34	40	
Benzoic acid	200	ND		ug/Kg		14	10 - 120	14	40	
1,2-Dichlorobenzene	100	73.3		ug/Kg		73	62 - 120	5	30	
1,4-Dichlorobenzene	100	67.6		ug/Kg		68	57 - 120	8	35	
2,4-Dimethylphenol	100	77.5		ug/Kg		78	31 - 129	7	40	
Dimethyl phthalate	100	93.3		ug/Kg		93	71 - 120	3	21	
Acenaphthylene	100	87.6		ug/Kg		88	63 - 120	3	18	
Acenaphthene	100	87.0		ug/Kg		87	64 - 120	2	19	
Dibenzofuran	100	83.7		ug/Kg		84	68 - 120	1	18	
Diethyl phthalate	100	97.2		ug/Kg		97	66 - 135	2	22	
Fluorene	100	84.4		ug/Kg		84	68 - 121	1	17	
Hexachlorobenzene	100	86.2		ug/Kg		86	65 - 126	1	32	
Hexachlorobutadiene	100	79.8		ug/Kg		80	64 - 130	3	19	
1-Methylnaphthalene	100	84.1		ug/Kg		84	69 - 120	6	24	
Anthracene	100	86.9		ug/Kg		87	67 - 131	1	28	
2-Methylnaphthalene	100	109		ug/Kg		109	70 - 120	5	21	
Carbazole	100	104		ug/Kg		104	43 - 150	3	24	
2-Methylphenol	100	64.5		ug/Kg		65	53 - 120	7	40	
Di-n-butyl phthalate	100	97.4		ug/Kg		97	66 - 150	1	26	
3 & 4 Methylphenol	100	77.1		ug/Kg		77	54 - 120	9	36	
Fluoranthene	100	93.2		ug/Kg		93	69 - 133	4	21	
Naphthalene	100	79.7		ug/Kg		80	68 - 120	1	15	
Butyl benzyl phthalate	100	94.9		ug/Kg		95	58 - 150	3	27	
Benzo[a]anthracene	100	88.8		ug/Kg		89	60 - 135	4	21	
N-Nitrosodiphenylamine	100	83.8		ug/Kg		84	67 - 128	1	30	
Chrysene	100	93.0		ug/Kg		93	69 - 127	3	27	
Pentachlorophenol	200	133		ug/Kg		67	10 - 120	2	40	
Bis(2-ethylhexyl) phthalate	100	108		ug/Kg		108	45 - 150	2	25	
Phenanthrene	100	90.8		ug/Kg		91	68 - 126	1	27	
Di-n-octyl phthalate	100	105		ug/Kg		105	53 - 150	0	18	
Phenol	100	67.8		ug/Kg		68	59 - 120	5	30	
Benzofluoranthene	200	206		ug/Kg		103	71 - 120	0	25	
Benzo[a]pyrene	100	104		ug/Kg		104	62 - 129	1	27	
Pyrene	100	86.0		ug/Kg		86	68 - 141	2	24	
Indeno[1,2,3-cd]pyrene	100	66.4		ug/Kg		66	52 - 146	6	30	
Dibenz(a,h)anthracene	100	68.0		ug/Kg		68	59 - 139	5	29	
1,2,4-Trichlorobenzene	100	81.6		ug/Kg		82	66 - 120	4	18	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	81		57 - 120
2-Fluorophenol	66		47 - 119
Nitrobenzene-d5	66		54 - 120
Phenol-d5	67		59 - 120
Terphenyl-d14	108		73 - 125
2,4,6-Tribromophenol	94		52 - 115

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-102849-8 MS

Matrix: Solid

Analysis Batch: 356541

Client Sample ID: DWP-SB-3-0

Prep Type: Total/NA

Prep Batch: 356370

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Acenaphthene	ND		110	112		ug/Kg	☼	102		64 - 120
Acenaphthylene	ND		110	113		ug/Kg	☼	103		63 - 120
Anthracene	ND		110	100		ug/Kg	☼	91		67 - 131
Benzo[a]anthracene	ND		110	123		ug/Kg	☼	112		60 - 135
Benzo[a]pyrene	14	J	110	143		ug/Kg	☼	116		62 - 129
Benzo[fluoranthene]	89	J	221	272		ug/Kg	☼	83		71 - 120
Benzo[g,h,i]perylene	ND	F1	110	60.9	J F1	ug/Kg	☼	55		64 - 146
Benzoic acid	ND		221	ND		ug/Kg	☼	NC		10 - 120
Benzyl alcohol	ND		110	88.0	J	ug/Kg	☼	80		10 - 134
Bis(2-ethylhexyl) phthalate	140	J	110	210	J	ug/Kg	☼	66		45 - 150
Butyl benzyl phthalate	ND		110	127	J	ug/Kg	☼	115		58 - 150
Carbazole	ND		110	118	J	ug/Kg	☼	107		43 - 150
Chrysene	18	J	110	135		ug/Kg	☼	106		69 - 127
Dibenz(a,h)anthracene	ND	F1	110	64.2	F1	ug/Kg	☼	58		59 - 139
Dibenzofuran	ND		110	117	J	ug/Kg	☼	106		68 - 120
1,2-Dichlorobenzene	ND		110	86.5		ug/Kg	☼	78		62 - 120
1,4-Dichlorobenzene	ND		110	87.0		ug/Kg	☼	79		57 - 120
Diethyl phthalate	ND		110	113	J	ug/Kg	☼	103		66 - 135
2,4-Dimethylphenol	ND		110	81.8	J	ug/Kg	☼	74		31 - 129
Dimethyl phthalate	9.8	J	110	137	J	ug/Kg	☼	115		71 - 120
Di-n-butyl phthalate	ND		110	137	J	ug/Kg	☼	124		66 - 150
Di-n-octyl phthalate	ND		110	156	J	ug/Kg	☼	142		53 - 150
Fluoranthene	25	J	110	148		ug/Kg	☼	111		69 - 133
Fluorene	ND		110	109		ug/Kg	☼	99		68 - 121
Hexachlorobenzene	ND		110	119		ug/Kg	☼	108		65 - 126
Hexachlorobutadiene	ND		110	93.9		ug/Kg	☼	85		64 - 130
Indeno[1,2,3-cd]pyrene	ND	F1	110	53.0	F1	ug/Kg	☼	48		52 - 146
1-Methylnaphthalene	ND		110	122		ug/Kg	☼	111		69 - 120
2-Methylnaphthalene	ND	F1	110	146	F1	ug/Kg	☼	132		70 - 120
2-Methylphenol	ND		110	79.3	J	ug/Kg	☼	72		53 - 120
3 & 4 Methylphenol	ND		110	70.9	J	ug/Kg	☼	64		54 - 120
Naphthalene	ND		110	117		ug/Kg	☼	106		68 - 120
N-Nitrosodiphenylamine	ND		110	109		ug/Kg	☼	99		67 - 128
Pentachlorophenol	350	J	221	570		ug/Kg	☼	98		10 - 120
Phenanthrene	20	J	110	148		ug/Kg	☼	117		68 - 126
Phenol	ND		110	85.7	J	ug/Kg	☼	78		59 - 120
Pyrene	23	J	110	147		ug/Kg	☼	112		68 - 141
1,2,4-Trichlorobenzene	ND		110	96.7		ug/Kg	☼	88		66 - 120

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	92		57 - 120
2-Fluorophenol	69		47 - 119
Nitrobenzene-d5	83		54 - 120
Phenol-d5	77		59 - 120
Terphenyl-d14	121		73 - 125
2,4,6-Tribromophenol	111		52 - 115

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-102849-8 MSD

Matrix: Solid

Analysis Batch: 356541

Client Sample ID: DWP-SB-3-0

Prep Type: Total/NA

Prep Batch: 356370

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
Acenaphthene	ND		110	104		ug/Kg	☼	94	64 - 120	8	19
Acenaphthylene	ND		110	104		ug/Kg	☼	94	63 - 120	9	18
Anthracene	ND		110	101		ug/Kg	☼	92	67 - 131	1	28
Benzo[a]anthracene	ND		110	114		ug/Kg	☼	104	60 - 135	8	21
Benzo[a]pyrene	14	J	110	114		ug/Kg	☼	91	62 - 129	22	27
Benzo[fluoranthene]	89	J	220	269		ug/Kg	☼	82	71 - 120	1	25
Benzo[g,h,i]perylene	ND	F1	110	52.1	J F1	ug/Kg	☼	47	64 - 146	16	26
Benzoic acid	ND		220	ND		ug/Kg	☼	NC	10 - 120	NC	40
Benzyl alcohol	ND		110	103	J	ug/Kg	☼	93	10 - 134	15	40
Bis(2-ethylhexyl) phthalate	140	J	110	200	J	ug/Kg	☼	57	45 - 150	5	25
Butyl benzyl phthalate	ND		110	120	J	ug/Kg	☼	109	58 - 150	6	27
Carbazole	ND		110	116	J	ug/Kg	☼	106	43 - 150	1	24
Chrysene	18	J	110	128		ug/Kg	☼	100	69 - 127	6	27
Dibenz(a,h)anthracene	ND	F1	110	58.0	F1	ug/Kg	☼	53	59 - 139	10	29
Dibenzofuran	ND		110	106	J	ug/Kg	☼	96	68 - 120	10	18
1,2-Dichlorobenzene	ND		110	85.0		ug/Kg	☼	77	62 - 120	2	30
1,4-Dichlorobenzene	ND		110	82.9		ug/Kg	☼	75	57 - 120	5	35
Diethyl phthalate	ND		110	105	J	ug/Kg	☼	95	66 - 135	8	22
2,4-Dimethylphenol	ND		110	82.4	J	ug/Kg	☼	75	31 - 129	1	40
Dimethyl phthalate	9.8	J	110	121	J	ug/Kg	☼	101	71 - 120	12	21
Di-n-butyl phthalate	ND		110	126	J	ug/Kg	☼	114	66 - 150	9	26
Di-n-octyl phthalate	ND		110	162	J	ug/Kg	☼	147	53 - 150	3	18
Fluoranthene	25	J	110	147		ug/Kg	☼	111	69 - 133	1	21
Fluorene	ND		110	103		ug/Kg	☼	94	68 - 121	5	17
Hexachlorobenzene	ND		110	115		ug/Kg	☼	104	65 - 126	3	32
Hexachlorobutadiene	ND		110	90.2		ug/Kg	☼	82	64 - 130	4	19
Indeno[1,2,3-cd]pyrene	ND	F1	110	70.5		ug/Kg	☼	64	52 - 146	28	30
1-Methylnaphthalene	ND		110	115		ug/Kg	☼	104	69 - 120	6	24
2-Methylnaphthalene	ND	F1	110	148	F1	ug/Kg	☼	134	70 - 120	1	21
2-Methylphenol	ND		110	77.1	J	ug/Kg	☼	70	53 - 120	3	40
3 & 4 Methylphenol	ND		110	74.5	J	ug/Kg	☼	68	54 - 120	5	36
Naphthalene	ND		110	115		ug/Kg	☼	104	68 - 120	2	15
N-Nitrosodiphenylamine	ND		110	97.2		ug/Kg	☼	88	67 - 128	12	30
Pentachlorophenol	350	J	220	608		ug/Kg	☼	115	10 - 120	6	40
Phenanthrene	20	J	110	125		ug/Kg	☼	96	68 - 126	17	27
Phenol	ND		110	88.7	J	ug/Kg	☼	81	59 - 120	3	30
Pyrene	23	J	110	140		ug/Kg	☼	106	68 - 141	5	24
1,2,4-Trichlorobenzene	ND		110	84.3		ug/Kg	☼	77	66 - 120	14	18

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	81		57 - 120
2-Fluorophenol	71		47 - 119
Nitrobenzene-d5	74		54 - 120
Phenol-d5	71		59 - 120
Terphenyl-d14	123		73 - 125
2,4,6-Tribromophenol	89		52 - 115

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 580-356379/1-A

Matrix: Solid

Analysis Batch: 356541

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 356379

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzyl alcohol	ND		100	5.0	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Benzoic acid	ND		400	120	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
1,2-Dichlorobenzene	ND		5.0	0.50	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
1,4-Dichlorobenzene	ND		5.0	0.83	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
2,4-Dimethylphenol	ND		20	6.0	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Dimethyl phthalate	ND		15	0.50	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Acenaphthylene	ND		2.5	0.50	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Acenaphthene	ND		4.0	0.46	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Dibenzofuran	ND		15	0.59	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Diethyl phthalate	ND		40	2.2	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Fluorene	ND		2.5	0.50	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Hexachlorobenzene	ND		5.0	1.5	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Hexachlorobutadiene	ND		5.0	1.5	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
1-Methylnaphthalene	ND		3.0	0.50	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Anthracene	ND		6.0	1.6	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
2-Methylnaphthalene	ND		5.0	0.88	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Carbazole	ND		15	0.73	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
2-Methylphenol	ND		15	0.98	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Di-n-butyl phthalate	ND		50	2.7	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
3 & 4 Methylphenol	ND		20	1.5	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Fluoranthene	ND		4.0	1.2	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Naphthalene	ND		2.5	0.50	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Butyl benzyl phthalate	ND		20	5.1	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Benzo[a]anthracene	ND		4.0	1.1	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
N-Nitrosodiphenylamine	ND		6.0	0.80	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Chrysene	ND		6.0	1.3	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Pentachlorophenol	ND		40	6.3	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Bis(2-ethylhexyl) phthalate	ND		60	7.1	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Phenanthrene	ND		6.0	0.58	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Di-n-octyl phthalate	ND		15	1.2	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Phenol	ND		15	2.3	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Benzofluoranthene	ND		15	1.4	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Benzo[a]pyrene	ND		6.0	1.3	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Pyrene	ND		6.0	1.3	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Indeno[1,2,3-cd]pyrene	ND		4.0	1.2	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Dibenz(a,h)anthracene	ND		5.0	1.2	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
1,2,4-Trichlorobenzene	ND		5.0	0.60	ug/Kg		05/12/21 09:53	05/14/21 11:29	1
Benzo[g,h,i]perylene	ND		6.0	1.8	ug/Kg		05/12/21 09:53	05/14/21 11:29	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
2-Fluorobiphenyl	93		57 - 120	05/12/21 09:53	05/14/21 11:29	1
2-Fluorophenol	73		47 - 119	05/12/21 09:53	05/14/21 11:29	1
Nitrobenzene-d5	79		54 - 120	05/12/21 09:53	05/14/21 11:29	1
Phenol-d5	76		59 - 120	05/12/21 09:53	05/14/21 11:29	1
Terphenyl-d14	116		73 - 125	05/12/21 09:53	05/14/21 11:29	1
2,4,6-Tribromophenol	94		52 - 115	05/12/21 09:53	05/14/21 11:29	1

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 580-356379/2-A

Matrix: Solid

Analysis Batch: 356541

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 356379

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzyl alcohol	100	57.5	J	ug/Kg		57	10 - 134
Benzoic acid	200	ND		ug/Kg		25	10 - 120
1,2-Dichlorobenzene	100	80.9		ug/Kg		81	62 - 120
1,4-Dichlorobenzene	100	75.4		ug/Kg		75	57 - 120
2,4-Dimethylphenol	100	82.4		ug/Kg		82	31 - 129
Dimethyl phthalate	100	91.0		ug/Kg		91	71 - 120
Acenaphthylene	100	90.3		ug/Kg		90	63 - 120
Acenaphthene	100	90.8		ug/Kg		91	64 - 120
Dibenzofuran	100	89.5		ug/Kg		89	68 - 120
Diethyl phthalate	100	99.5		ug/Kg		99	66 - 135
Fluorene	100	87.9		ug/Kg		88	68 - 121
Hexachlorobenzene	100	102		ug/Kg		102	65 - 126
Hexachlorobutadiene	100	85.4		ug/Kg		85	64 - 130
1-Methylnaphthalene	100	90.1		ug/Kg		90	69 - 120
Anthracene	100	93.9		ug/Kg		94	67 - 131
2-Methylnaphthalene	100	95.7		ug/Kg		96	70 - 120
Carbazole	100	117		ug/Kg		117	43 - 150
2-Methylphenol	100	70.6		ug/Kg		71	53 - 120
Di-n-butyl phthalate	100	111		ug/Kg		111	66 - 150
3 & 4 Methylphenol	100	78.0		ug/Kg		78	54 - 120
Fluoranthene	100	104		ug/Kg		104	69 - 133
Naphthalene	100	84.8		ug/Kg		85	68 - 120
Butyl benzyl phthalate	100	106		ug/Kg		106	58 - 150
Benzo[a]anthracene	100	94.6		ug/Kg		95	60 - 135
N-Nitrosodiphenylamine	100	94.9		ug/Kg		95	67 - 128
Chrysene	100	99.7		ug/Kg		100	69 - 127
Pentachlorophenol	200	191		ug/Kg		95	10 - 120
Bis(2-ethylhexyl) phthalate	100	121		ug/Kg		121	45 - 150
Phenanthrene	100	104		ug/Kg		104	68 - 126
Di-n-octyl phthalate	100	104		ug/Kg		104	53 - 150
Phenol	100	75.4		ug/Kg		75	59 - 120
Benzofluoranthene	200	205		ug/Kg		103	71 - 120
Benzo[a]pyrene	100	105		ug/Kg		105	62 - 129
Pyrene	100	96.6		ug/Kg		97	68 - 141
Indeno[1,2,3-cd]pyrene	100	95.1		ug/Kg		95	52 - 146
Dibenz(a,h)anthracene	100	81.2		ug/Kg		81	59 - 139
1,2,4-Trichlorobenzene	100	84.6		ug/Kg		85	66 - 120
Benzo[g,h,i]perylene	100	81.8		ug/Kg		82	64 - 146

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	85		57 - 120
2-Fluorophenol	69		47 - 119
Nitrobenzene-d5	75		54 - 120
Phenol-d5	77		59 - 120
Terphenyl-d14	124		73 - 125
2,4,6-Tribromophenol	106		52 - 115

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 580-356379/3-A
Matrix: Solid
Analysis Batch: 356541

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 356379

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	RPD Limit
							Limits	RPD		
Benzyl alcohol	100	46.7	J	ug/Kg		47	10 - 134	21	40	
Benzoic acid	200	ND		ug/Kg		22	10 - 120	9	40	
1,2-Dichlorobenzene	100	87.1		ug/Kg		87	62 - 120	7	30	
1,4-Dichlorobenzene	100	83.2		ug/Kg		83	57 - 120	10	35	
2,4-Dimethylphenol	100	90.2		ug/Kg		90	31 - 129	9	40	
Dimethyl phthalate	100	94.9		ug/Kg		95	71 - 120	4	21	
Acenaphthylene	100	91.0		ug/Kg		91	63 - 120	1	18	
Acenaphthene	100	91.2		ug/Kg		91	64 - 120	0	19	
Dibenzofuran	100	89.4		ug/Kg		89	68 - 120	0	18	
Diethyl phthalate	100	102		ug/Kg		102	66 - 135	2	22	
Fluorene	100	89.0		ug/Kg		89	68 - 121	1	17	
Hexachlorobenzene	100	89.7		ug/Kg		90	65 - 126	13	32	
Hexachlorobutadiene	100	88.8		ug/Kg		89	64 - 130	4	19	
1-Methylnaphthalene	100	92.5		ug/Kg		93	69 - 120	3	24	
Anthracene	100	88.7		ug/Kg		89	67 - 131	6	28	
2-Methylnaphthalene	100	104		ug/Kg		104	70 - 120	8	21	
Carbazole	100	106		ug/Kg		106	43 - 150	9	24	
2-Methylphenol	100	76.6		ug/Kg		77	53 - 120	8	40	
Di-n-butyl phthalate	100	102		ug/Kg		102	66 - 150	9	26	
3 & 4 Methylphenol	100	85.3		ug/Kg		85	54 - 120	9	36	
Fluoranthene	100	97.6		ug/Kg		98	69 - 133	7	21	
Naphthalene	100	87.7		ug/Kg		88	68 - 120	3	15	
Butyl benzyl phthalate	100	104		ug/Kg		104	58 - 150	2	27	
Benzo[a]anthracene	100	90.8		ug/Kg		91	60 - 135	4	21	
N-Nitrosodiphenylamine	100	85.3		ug/Kg		85	67 - 128	11	30	
Chrysene	100	101		ug/Kg		101	69 - 127	1	27	
Pentachlorophenol	200	186		ug/Kg		93	10 - 120	2	40	
Bis(2-ethylhexyl) phthalate	100	112		ug/Kg		112	45 - 150	7	25	
Phenanthrene	100	92.7		ug/Kg		93	68 - 126	11	27	
Di-n-octyl phthalate	100	103		ug/Kg		103	53 - 150	1	18	
Phenol	100	81.4		ug/Kg		81	59 - 120	8	30	
Benzofluoranthene	200	204		ug/Kg		102	71 - 120	1	25	
Benzo[a]pyrene	100	110		ug/Kg		110	62 - 129	4	27	
Pyrene	100	91.5		ug/Kg		92	68 - 141	5	24	
Indeno[1,2,3-cd]pyrene	100	101		ug/Kg		101	52 - 146	6	30	
Dibenz(a,h)anthracene	100	87.6		ug/Kg		88	59 - 139	8	29	
1,2,4-Trichlorobenzene	100	89.0		ug/Kg		89	66 - 120	5	18	
Benzo[g,h,i]perylene	100	86.8		ug/Kg		87	64 - 146	6	26	

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2-Fluorobiphenyl	81		57 - 120
2-Fluorophenol	75		47 - 119
Nitrobenzene-d5	73		54 - 120
Phenol-d5	77		59 - 120
Terphenyl-d14	113		73 - 125
2,4,6-Tribromophenol	88		52 - 115

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-102849-13 MS

Matrix: Solid

Analysis Batch: 356541

Client Sample ID: DWP-SB-4-2

Prep Type: Total/NA

Prep Batch: 356379

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier					
Benzyl alcohol	ND		108	82.0	J	ug/Kg	☼	76		10 - 134
Benzoic acid	ND		216	ND		ug/Kg	☼	NC		10 - 120
1,2-Dichlorobenzene	ND		108	90.1		ug/Kg	☼	83		62 - 120
1,4-Dichlorobenzene	ND		108	89.0		ug/Kg	☼	82		57 - 120
2,4-Dimethylphenol	ND		108	82.6	J	ug/Kg	☼	76		31 - 129
Dimethyl phthalate	13	J	108	115	J	ug/Kg	☼	95		71 - 120
Acenaphthylene	ND		108	99.8		ug/Kg	☼	92		63 - 120
Acenaphthene	ND		108	104		ug/Kg	☼	96		64 - 120
Dibenzofuran	ND		108	99.2	J	ug/Kg	☼	92		68 - 120
Diethyl phthalate	ND		108	105	J	ug/Kg	☼	97		66 - 135
Fluorene	ND		108	97.5		ug/Kg	☼	90		68 - 121
Hexachlorobenzene	ND		108	111		ug/Kg	☼	102		65 - 126
Hexachlorobutadiene	ND		108	89.3		ug/Kg	☼	82		64 - 130
1-Methylnaphthalene	ND		108	90.8		ug/Kg	☼	84		69 - 120
Anthracene	ND		108	103		ug/Kg	☼	95		67 - 131
2-Methylnaphthalene	ND	F1	108	131	F1	ug/Kg	☼	121		70 - 120
Carbazole	ND		108	118	J	ug/Kg	☼	109		43 - 150
2-Methylphenol	ND		108	72.0	J	ug/Kg	☼	67		53 - 120
Di-n-butyl phthalate	ND		108	123	J	ug/Kg	☼	113		66 - 150
3 & 4 Methylphenol	ND		108	83.0	J	ug/Kg	☼	77		54 - 120
Fluoranthene	32	J F2 F1	108	165		ug/Kg	☼	123		69 - 133
Naphthalene	ND		108	97.3		ug/Kg	☼	90		68 - 120
Butyl benzyl phthalate	ND		108	134	J	ug/Kg	☼	124		58 - 150
Benzo[a]anthracene	16	J F2	108	121		ug/Kg	☼	97		60 - 135
N-Nitrosodiphenylamine	ND		108	99.5		ug/Kg	☼	92		67 - 128
Chrysene	14	J F1	108	145	F1	ug/Kg	☼	134		69 - 127
Pentachlorophenol	ND	F1	216	515	F1	ug/Kg	☼	238		10 - 120
Bis(2-ethylhexyl) phthalate	ND	F1	108	169	J F1	ug/Kg	☼	156		45 - 150
Phenanthrene	19	J	108	142		ug/Kg	☼	114		68 - 126
Di-n-octyl phthalate	ND	F1	108	168	F1	ug/Kg	☼	156		53 - 150
Phenol	ND		108	79.1	J	ug/Kg	☼	73		59 - 120
Benzofluoranthene	ND	F2 F1	216	281	F1	ug/Kg	☼	130		71 - 120
Benzo[a]pyrene	15	J F1	108	140		ug/Kg	☼	115		62 - 129
Pyrene	32	J F1	108	159		ug/Kg	☼	117		68 - 141
Indeno[1,2,3-cd]pyrene	ND	F1	108	49.2	F1	ug/Kg	☼	46		52 - 146
Dibenz(a,h)anthracene	ND	F1	108	41.9	J F1	ug/Kg	☼	39		59 - 139
1,2,4-Trichlorobenzene	ND		108	86.5		ug/Kg	☼	80		66 - 120
Benzo[g,h,i]perylene	ND	F2 F1	108	43.1	J F1	ug/Kg	☼	40		64 - 146
		MS MS								
Surrogate	%Recovery	Qualifier	Limits							
2-Fluorobiphenyl	87		57 - 120							
2-Fluorophenol	67		47 - 119							
Nitrobenzene-d5	80		54 - 120							
Phenol-d5	71		59 - 120							
Terphenyl-d14	123		73 - 125							
2,4,6-Tribromophenol	106		52 - 115							

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 580-102849-13 MSD

Matrix: Solid

Analysis Batch: 356541

Client Sample ID: DWP-SB-4-2

Prep Type: Total/NA

Prep Batch: 356379

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
Benzyl alcohol	ND		109	84.9	J	ug/Kg	☼	78	10 - 134	3	40
Benzoic acid	ND		217	ND		ug/Kg	☼	NC	10 - 120	NC	40
1,2-Dichlorobenzene	ND		109	92.9		ug/Kg	☼	86	62 - 120	3	30
1,4-Dichlorobenzene	ND		109	89.1		ug/Kg	☼	82	57 - 120	0	35
2,4-Dimethylphenol	ND		109	102	J	ug/Kg	☼	94	31 - 129	21	40
Dimethyl phthalate	13	J	109	122	J	ug/Kg	☼	101	71 - 120	6	21
Acenaphthylene	ND		109	108		ug/Kg	☼	100	63 - 120	8	18
Acenaphthene	ND		109	112		ug/Kg	☼	103	64 - 120	7	19
Dibenzofuran	ND		109	105	J	ug/Kg	☼	97	68 - 120	6	18
Diethyl phthalate	ND		109	119	J	ug/Kg	☼	109	66 - 135	12	22
Fluorene	ND		109	112		ug/Kg	☼	103	68 - 121	14	17
Hexachlorobenzene	ND		109	106		ug/Kg	☼	98	65 - 126	4	32
Hexachlorobutadiene	ND		109	90.7		ug/Kg	☼	84	64 - 130	2	19
1-Methylnaphthalene	ND		109	104		ug/Kg	☼	96	69 - 120	13	24
Anthracene	ND		109	109		ug/Kg	☼	100	67 - 131	6	28
2-Methylnaphthalene	ND	F1	109	112		ug/Kg	☼	103	70 - 120	16	21
Carbazole	ND		109	122	J	ug/Kg	☼	112	43 - 150	3	24
2-Methylphenol	ND		109	89.4	J	ug/Kg	☼	82	53 - 120	22	40
Di-n-butyl phthalate	ND		109	130	J	ug/Kg	☼	120	66 - 150	6	26
3 & 4 Methylphenol	ND		109	64.0	J	ug/Kg	☼	59	54 - 120	26	36
Fluoranthene	32	J F2 F1	109	207	F1 F2	ug/Kg	☼	162	69 - 133	23	21
Naphthalene	ND		109	94.4		ug/Kg	☼	87	68 - 120	3	15
Butyl benzyl phthalate	ND		109	131	J	ug/Kg	☼	121	58 - 150	2	27
Benzo[a]anthracene	16	J F2	109	152	F2	ug/Kg	☼	126	60 - 135	23	21
N-Nitrosodiphenylamine	ND		109	99.7		ug/Kg	☼	92	67 - 128	0	30
Chrysene	14	J F1	109	177	F1	ug/Kg	☼	163	69 - 127	20	27
Pentachlorophenol	ND	F1	217	540	F1	ug/Kg	☼	249	10 - 120	5	40
Bis(2-ethylhexyl) phthalate	ND	F1	109	165	J F1	ug/Kg	☼	152	45 - 150	2	25
Phenanthrene	19	J	109	156		ug/Kg	☼	126	68 - 126	9	27
Di-n-octyl phthalate	ND	F1	109	195	F1	ug/Kg	☼	179	53 - 150	14	18
Phenol	ND		109	81.6	J	ug/Kg	☼	75	59 - 120	3	30
Benzofluoranthene	ND	F2 F1	217	367	F1 F2	ug/Kg	☼	169	71 - 120	27	25
Benzo[a]pyrene	15	J F1	109	176	F1	ug/Kg	☼	148	62 - 129	23	27
Pyrene	32	J F1	109	199	F1	ug/Kg	☼	153	68 - 141	22	24
Indeno[1,2,3-cd]pyrene	ND	F1	109	56.0		ug/Kg	☼	52	52 - 146	13	30
Dibenz(a,h)anthracene	ND	F1	109	55.9	F1	ug/Kg	☼	51	59 - 139	29	29
1,2,4-Trichlorobenzene	ND		109	79.5		ug/Kg	☼	73	66 - 120	9	18
Benzo[g,h,i]perylene	ND	F2 F1	109	58.2	J F2 F1	ug/Kg	☼	54	64 - 146	30	26

Surrogate	MSD %Recovery	MSD Qualifier	Limits
2-Fluorobiphenyl	91		57 - 120
2-Fluorophenol	73		47 - 119
Nitrobenzene-d5	76		54 - 120
Phenol-d5	87		59 - 120
Terphenyl-d14	124		73 - 125
2,4,6-Tribromophenol	81		52 - 115

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) - RA

Lab Sample ID: LCS 580-356370/2-A

Matrix: Solid

Analysis Batch: 356704

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 356370

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzo[g,h,i]perylene - RA	100	92.7		ug/Kg		93	64 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Fluorobiphenyl - RA	78		57 - 120
2-Fluorophenol - RA	62		47 - 119
Nitrobenzene-d5 - RA	73		54 - 120
Phenol-d5 - RA	65		59 - 120
Terphenyl-d14 - RA	102		73 - 125
2,4,6-Tribromophenol - RA	85		52 - 115

Lab Sample ID: LCSD 580-356370/3-A

Matrix: Solid

Analysis Batch: 356704

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 356370

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzo[g,h,i]perylene - RA	100	85.5		ug/Kg		85	64 - 146	8	26

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl - RA	79		57 - 120
2-Fluorophenol - RA	65		47 - 119
Nitrobenzene-d5 - RA	70		54 - 120
Phenol-d5 - RA	68		59 - 120
Terphenyl-d14 - RA	107		73 - 125
2,4,6-Tribromophenol - RA	88		52 - 115

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 580-355853/1-A

Matrix: Water

Analysis Batch: 356184

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 355853

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.45	0.061	ug/L		05/05/21 12:10	05/10/21 13:10	1
PCB-1221	ND		0.45	0.075	ug/L		05/05/21 12:10	05/10/21 13:10	1
PCB-1232	ND		0.45	0.063	ug/L		05/05/21 12:10	05/10/21 13:10	1
PCB-1242	ND		0.45	0.059	ug/L		05/05/21 12:10	05/10/21 13:10	1
PCB-1248	ND		0.45	0.052	ug/L		05/05/21 12:10	05/10/21 13:10	1
PCB-1254	ND		0.45	0.075	ug/L		05/05/21 12:10	05/10/21 13:10	1
PCB-1260	ND		0.45	0.061	ug/L		05/05/21 12:10	05/10/21 13:10	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl	77		35 - 120	05/05/21 12:10	05/10/21 13:10	1
Tetrachloro-m-xylene	67		29 - 120	05/05/21 12:10	05/10/21 13:10	1

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 580-355853/4-A
Matrix: Water
Analysis Batch: 356184

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355853

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
PCB-1016	1.00	0.616		ug/L		62	50 - 120	
PCB-1260	1.00	0.628		ug/L		63	56 - 120	
LCS LCS								
Surrogate	%Recovery	Qualifier	Limits					
DCB Decachlorobiphenyl	74		35 - 120					
Tetrachloro-m-xylene	57		29 - 120					

Lab Sample ID: LCSD 580-355853/5-A
Matrix: Water
Analysis Batch: 356184

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 355853

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits		RPD	
									RPD	Limit
PCB-1016	1.00	ND	*- *1	ug/L		2	50 - 120	186	18	
PCB-1260	1.00	ND	*- *1	ug/L		0.7	56 - 120	195	15	
LCSD LCSD										
Surrogate	%Recovery	Qualifier	Limits							
DCB Decachlorobiphenyl	12	S1-	35 - 120							
Tetrachloro-m-xylene	4	S1-	29 - 120							

Lab Sample ID: MB 580-355875/1-A
Matrix: Solid
Analysis Batch: 356024

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 355875

Analyte	MB MB		RL	MDL	Unit	D	Prepared		Analyzed		Dil Fac
	Result	Qualifier									
PCB-1016	ND		20	7.4	ug/Kg		05/05/21 15:06	05/07/21 12:17	12:17	1	
PCB-1221	ND		20	4.2	ug/Kg		05/05/21 15:06	05/07/21 12:17	12:17	1	
PCB-1232	ND		20	4.9	ug/Kg		05/05/21 15:06	05/07/21 12:17	12:17	1	
PCB-1242	ND		20	3.5	ug/Kg		05/05/21 15:06	05/07/21 12:17	12:17	1	
PCB-1248	ND		20	2.9	ug/Kg		05/05/21 15:06	05/07/21 12:17	12:17	1	
PCB-1254	ND		20	3.7	ug/Kg		05/05/21 15:06	05/07/21 12:17	12:17	1	
PCB-1260	ND		20	7.4	ug/Kg		05/05/21 15:06	05/07/21 12:17	12:17	1	
Polychlorinated biphenyls, Total	ND		20	7.4	ug/Kg		05/05/21 15:06	05/07/21 12:17	12:17	1	
MB MB											
Surrogate	%Recovery	Qualifier	Limits	Prepared		Analyzed		Dil Fac			
DCB Decachlorobiphenyl	113		44 - 135	05/05/21 15:06		05/07/21 12:17		12:17		1	
Tetrachloro-m-xylene	85		48 - 122	05/05/21 15:06		05/07/21 12:17		12:17		1	

Lab Sample ID: LCS 580-355875/2-A
Matrix: Solid
Analysis Batch: 356024

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355875

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	
PCB-1016	100	84.4		ug/Kg		84	55 - 132	
PCB-1260	100	105		ug/Kg		105	54 - 126	
LCS LCS								
Surrogate	%Recovery	Qualifier	Limits					
DCB Decachlorobiphenyl	120		44 - 135					

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCS 580-355875/2-A
Matrix: Solid
Analysis Batch: 356024

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355875

<u>Surrogate</u>	<u>LCS</u> <u>%Recovery</u>	<u>LCS</u> <u>Qualifier</u>	<u>Limits</u>
Tetrachloro-m-xylene	86		48 - 122

Lab Sample ID: MB 580-356325/1-A
Matrix: Water
Analysis Batch: 356354

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 356325

<u>Analyte</u>	<u>MB</u> <u>Result</u>	<u>MB</u> <u>Qualifier</u>	<u>RL</u>	<u>MDL</u>	<u>Unit</u>	<u>D</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
PCB-1016	ND		0.45	0.061	ug/L		05/11/21 17:45	05/12/21 10:56	1
PCB-1221	ND		0.45	0.075	ug/L		05/11/21 17:45	05/12/21 10:56	1
PCB-1232	ND		0.45	0.063	ug/L		05/11/21 17:45	05/12/21 10:56	1
PCB-1242	ND		0.45	0.059	ug/L		05/11/21 17:45	05/12/21 10:56	1
PCB-1248	ND		0.45	0.052	ug/L		05/11/21 17:45	05/12/21 10:56	1
PCB-1254	ND		0.45	0.075	ug/L		05/11/21 17:45	05/12/21 10:56	1
PCB-1260	ND		0.45	0.061	ug/L		05/11/21 17:45	05/12/21 10:56	1

<u>Surrogate</u>	<u>MB</u> <u>%Recovery</u>	<u>MB</u> <u>Qualifier</u>	<u>Limits</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Dil Fac</u>
DCB Decachlorobiphenyl	84		35 - 120	05/11/21 17:45	05/12/21 10:56	1
Tetrachloro-m-xylene	76		29 - 120	05/11/21 17:45	05/12/21 10:56	1

Lab Sample ID: LCS 580-356325/2-A
Matrix: Water
Analysis Batch: 356354

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 356325

<u>Analyte</u>	<u>Spike</u> <u>Added</u>	<u>LCS</u> <u>Result</u>	<u>LCS</u> <u>Qualifier</u>	<u>Unit</u>	<u>D</u>	<u>%Rec</u>	<u>%Rec.</u> <u>Limits</u>
PCB-1016	1.00	0.713		ug/L		71	50 - 120
PCB-1260	1.00	0.711		ug/L		71	56 - 120

<u>Surrogate</u>	<u>LCS</u> <u>%Recovery</u>	<u>LCS</u> <u>Qualifier</u>	<u>Limits</u>
DCB Decachlorobiphenyl	91		35 - 120
Tetrachloro-m-xylene	81		29 - 120

Lab Sample ID: LCSD 580-356325/3-A
Matrix: Water
Analysis Batch: 356354

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 356325

<u>Analyte</u>	<u>Spike</u> <u>Added</u>	<u>LCSD</u> <u>Result</u>	<u>LCSD</u> <u>Qualifier</u>	<u>Unit</u>	<u>D</u>	<u>%Rec</u>	<u>%Rec.</u> <u>Limits</u>	<u>RPD</u> <u>RPD</u>	<u>Limit</u>
PCB-1016	1.00	0.673		ug/L		67	50 - 120	5	18
PCB-1260	1.00	0.658		ug/L		66	56 - 120	8	15

<u>Surrogate</u>	<u>LCSD</u> <u>%Recovery</u>	<u>LCSD</u> <u>Qualifier</u>	<u>Limits</u>
DCB Decachlorobiphenyl	86		35 - 120
Tetrachloro-m-xylene	75		29 - 120

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: MB 580-356391/1-A

Matrix: Solid

Analysis Batch: 356799

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 356391

Analyte	MB MB		RL	MDL	Unit	D	Prepared		Analyzed		Dil Fac
	Result	Qualifier									
PCB-1016	ND		2.0	0.74	ug/Kg		05/12/21 11:42	05/18/21 12:30			1
PCB-1221	ND		2.0	0.42	ug/Kg		05/12/21 11:42	05/18/21 12:30			1
PCB-1232	ND		2.0	0.49	ug/Kg		05/12/21 11:42	05/18/21 12:30			1
PCB-1242	ND		2.0	0.35	ug/Kg		05/12/21 11:42	05/18/21 12:30			1
PCB-1248	ND		2.0	0.29	ug/Kg		05/12/21 11:42	05/18/21 12:30			1
PCB-1254	ND		2.0	0.37	ug/Kg		05/12/21 11:42	05/18/21 12:30			1
PCB-1260	ND		2.0	0.74	ug/Kg		05/12/21 11:42	05/18/21 12:30			1
Polychlorinated biphenyls, Total	ND		2.0	0.74	ug/Kg		05/12/21 11:42	05/18/21 12:30			1

Surrogate	MB MB		Limits	Prepared		Analyzed		Dil Fac
	%Recovery	Qualifier						
DCB Decachlorobiphenyl	84		44 - 135	05/12/21 11:42		05/18/21 12:30		1
Tetrachloro-m-xylene	79		48 - 122	05/12/21 11:42		05/18/21 12:30		1

Lab Sample ID: LCS 580-356391/2-A

Matrix: Solid

Analysis Batch: 356799

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 356391

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	
PCB-1016	12.5	9.26		ug/Kg		74	55 - 132	
PCB-1260	12.5	8.40		ug/Kg		67	54 - 126	

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	91		44 - 135
Tetrachloro-m-xylene	82		48 - 122

Lab Sample ID: 580-102849-8 MS

Matrix: Solid

Analysis Batch: 356799

Client Sample ID: DWP-SB-3-0

Prep Type: Total/NA

Prep Batch: 356391

Analyte	Sample Result	Sample Qualifier	Spike Added	MS MS		Unit	D	%Rec	%Rec.	
				Result	Qualifier				Limits	
PCB-1016	ND		14.0	8.44		ug/Kg	☼	60	55 - 132	
PCB-1260	11	F2 F1 p	14.0	17.6	F1 p	ug/Kg	☼	49	54 - 126	

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	107		44 - 135
Tetrachloro-m-xylene	78		48 - 122

Lab Sample ID: 580-102849-8 MSD

Matrix: Solid

Analysis Batch: 356799

Client Sample ID: DWP-SB-3-0

Prep Type: Total/NA

Prep Batch: 356391

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD MSD		Unit	D	%Rec	%Rec.		RPD	Limit
				Result	Qualifier				Limits			
PCB-1016	ND		13.9	7.59	p	ug/Kg	☼	55	55 - 132	11	33	
PCB-1260	11	F2 F1 p	13.9	21.4	F2	ug/Kg	☼	77	54 - 126	19	13	

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
DCB Decachlorobiphenyl	99		44 - 135

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QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: 580-102849-8 MSD
Matrix: Solid
Analysis Batch: 356799

Client Sample ID: DWP-SB-3-0
Prep Type: Total/NA
Prep Batch: 356391

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
Tetrachloro-m-xylene	78		48 - 122

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-355879/1-A
Matrix: Solid
Analysis Batch: 356321

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 355879

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
#2 Diesel (C10-C24)	ND		50	12	mg/Kg		05/05/21 15:19	05/12/21 04:28	1
Motor Oil (>C24-C36)	ND		50	18	mg/Kg		05/05/21 15:19	05/12/21 04:28	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
o-Terphenyl	75		50 - 150	05/05/21 15:19	05/12/21 04:28	1

Lab Sample ID: LCS 580-355879/2-A
Matrix: Solid
Analysis Batch: 356321

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355879

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (>C24-C36)	500	424		mg/Kg		85	70 - 129

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
o-Terphenyl	90		50 - 150

Lab Sample ID: LCSD 580-355879/3-A
Matrix: Solid
Analysis Batch: 356321

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 355879

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	
								RPD	Limit
#2 Diesel (C10-C24)	500	442		mg/Kg		88	70 - 125	2	16
Motor Oil (>C24-C36)	500	421		mg/Kg		84	70 - 129	1	16

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
o-Terphenyl	93		50 - 150

Lab Sample ID: 580-102849-8 MS
Matrix: Solid
Analysis Batch: 356321

Client Sample ID: DWP-SB-3-0
Prep Type: Total/NA
Prep Batch: 355879

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Motor Oil (>C24-C36)	470	F1	532	861		mg/Kg	☼	74	70 - 129

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
o-Terphenyl	89		50 - 150

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 580-102849-8 MSD

Matrix: Solid
Analysis Batch: 356321

Client Sample ID: DWP-SB-3-0

Prep Type: Total/NA
Prep Batch: 355879

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier		Result	Qualifier						
#2 Diesel (C10-C24)	65		555	510		mg/Kg	☼	80	70 - 125	3	16
Motor Oil (>C24-C36)	470	F1	555	787	F1	mg/Kg	☼	58	70 - 129	9	16
		MSD	MSD								
Surrogate	%Recovery	Qualifier	Limits								
<i>o</i> -Terphenyl	90		50 - 150								

Lab Sample ID: 580-102849-1 DU

Matrix: Solid
Analysis Batch: 356321

Client Sample ID: DWP-SB-1-0

Prep Type: Total/NA
Prep Batch: 355879

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier		Result				
#2 Diesel (C10-C24)	72		60.5		mg/Kg	☼	18	35
Motor Oil (>C24-C36)	570		432		mg/Kg	☼	28	35
		DU	DU					
Surrogate	%Recovery	Qualifier	Limits					
<i>o</i> -Terphenyl	82		50 - 150					

Lab Sample ID: 580-102849-11 DU

Matrix: Solid
Analysis Batch: 356321

Client Sample ID: DWP-SB-4-0

Prep Type: Total/NA
Prep Batch: 355879

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier		Result				
#2 Diesel (C10-C24)	33	J	38.2	J	mg/Kg	☼	15	35
Motor Oil (>C24-C36)	310		322		mg/Kg	☼	2	35
		DU	DU					
Surrogate	%Recovery	Qualifier	Limits					
<i>o</i> -Terphenyl	80		50 - 150					

Lab Sample ID: MB 580-355928/1-A

Matrix: Water
Analysis Batch: 356218

Client Sample ID: Method Blank

Prep Type: Total/NA
Prep Batch: 355928

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
#2 Diesel (C10-C24)	ND		0.11	0.065	mg/L		05/06/21 11:41	05/10/21 18:25	1
Motor Oil (>C24-C36)	ND		0.35	0.096	mg/L		05/06/21 11:41	05/10/21 18:25	1
		MB	MB						
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
<i>o</i> -Terphenyl	67		50 - 150	05/06/21 11:41	05/10/21 18:25	1			

Lab Sample ID: LCS 580-355928/2-A

Matrix: Water
Analysis Batch: 356218

Client Sample ID: Lab Control Sample

Prep Type: Total/NA
Prep Batch: 355928

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
#2 Diesel (C10-C24)	2.00	1.55		mg/L		78	50 - 120	
Motor Oil (>C24-C36)	2.00	1.66		mg/L		83	64 - 120	

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCS 580-355928/2-A
Matrix: Water
Analysis Batch: 356218

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355928

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	77		50 - 150

Lab Sample ID: LCSD 580-355928/3-A
Matrix: Water
Analysis Batch: 356218

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 355928

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
							Limits	RPD	Limit	Limit
#2 Diesel (C10-C24)	2.00	1.67		mg/L		83	50 - 120	7	26	
Motor Oil (>C24-C36)	2.00	1.85		mg/L		93	64 - 120	11	24	

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	83		50 - 150

Lab Sample ID: MB 580-356426/1-A
Matrix: Solid
Analysis Batch: 356563

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 356426

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared		Analyzed		Dil Fac
							Time	Time	Time	Time	
#2 Diesel (C10-C24)	ND		50	12	mg/Kg		05/12/21 16:07	05/14/21 18:00	05/14/21 18:00	18:00	1
Motor Oil (>C24-C36)	ND		50	18	mg/Kg		05/12/21 16:07	05/14/21 18:00	05/14/21 18:00	18:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared		Analyzed		Dil Fac
o-Terphenyl	86		50 - 150	05/12/21 16:07	16:07	05/14/21 18:00	18:00	1

Lab Sample ID: LCS 580-356426/2-A
Matrix: Solid
Analysis Batch: 356563

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 356426

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	Limits
#2 Diesel (C10-C24)	500	462		mg/Kg		92	70 - 125	
Motor Oil (>C24-C36)	500	496		mg/Kg		99	70 - 129	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
o-Terphenyl	102		50 - 150

Lab Sample ID: LCSD 580-356426/3-A
Matrix: Solid
Analysis Batch: 356688

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 356426

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	
							Limits	RPD	Limit	Limit
#2 Diesel (C10-C24)	500	352	*1	mg/Kg		70	70 - 125	27	16	
Motor Oil (>C24-C36)	500	350	*1	mg/Kg		70	70 - 129	35	16	

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	75		50 - 150

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 580-102849-17 DU
Matrix: Solid
Analysis Batch: 356563

Client Sample ID: DWP-SB-5-3
Prep Type: Total/NA
Prep Batch: 356426

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
#2 Diesel (C10-C24)	ND	*1	ND	*1	mg/Kg	☼	NC	35
Motor Oil (>C24-C36)	38	J *1	35.8	J *1	mg/Kg	☼	5	35
Surrogate	%Recovery	DU Qualifier	Limits					
<i>o</i> -Terphenyl	88		50 - 150					

Lab Sample ID: 580-102849-18 DU
Matrix: Solid
Analysis Batch: 356563

Client Sample ID: DWP-SB-6-0
Prep Type: Total/NA
Prep Batch: 356426

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
#2 Diesel (C10-C24)	33	J *1	46.0	J *1	mg/Kg	☼	34	35
Motor Oil (>C24-C36)	250	*1	264	*1	mg/Kg	☼	4	35
Surrogate	%Recovery	DU Qualifier	Limits					
<i>o</i> -Terphenyl	91		50 - 150					

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 580-355949/22-A
Matrix: Solid
Analysis Batch: 356151

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 355949

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	ND		0.30	0.034	mg/Kg		05/06/21 14:10	05/07/21 11:49	5
Arsenic	ND		0.25	0.050	mg/Kg		05/06/21 14:10	05/07/21 11:49	5
Cadmium	ND		0.40	0.039	mg/Kg		05/06/21 14:10	05/07/21 11:49	5
Chromium	ND		0.50	0.032	mg/Kg		05/06/21 14:10	05/07/21 11:49	5
Copper	ND		0.50	0.11	mg/Kg		05/06/21 14:10	05/07/21 11:49	5
Lead	ND		0.25	0.024	mg/Kg		05/06/21 14:10	05/07/21 11:49	5
Nickel	ND		0.25	0.097	mg/Kg		05/06/21 14:10	05/07/21 11:49	5
Selenium	ND		0.55	0.14	mg/Kg		05/06/21 14:10	05/07/21 11:49	5
Silver	ND		0.10	0.010	mg/Kg		05/06/21 14:10	05/07/21 11:49	5
Zinc	ND		2.6	0.81	mg/Kg		05/06/21 14:10	05/07/21 11:49	5

Lab Sample ID: LCS 580-355949/23-A
Matrix: Solid
Analysis Batch: 356151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355949

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	Limits
		Result	Qualifier				
Antimony	50.0	51.3		mg/Kg		103	80 - 120
Arsenic	50.0	51.2		mg/Kg		102	80 - 120
Cadmium	50.0	51.0		mg/Kg		102	80 - 120
Chromium	50.0	51.3		mg/Kg		103	80 - 120
Copper	50.0	51.4		mg/Kg		103	80 - 120
Lead	50.0	51.6		mg/Kg		103	80 - 120
Nickel	50.0	51.2		mg/Kg		102	80 - 120
Selenium	50.0	51.5		mg/Kg		103	80 - 120

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-355949/23-A
Matrix: Solid
Analysis Batch: 356151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355949
%Rec. Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Silver	50.0	51.2		mg/Kg		102	80 - 120
Zinc	50.0	51.5		mg/Kg		103	80 - 120

Lab Sample ID: LCSD 580-355949/24-A
Matrix: Solid
Analysis Batch: 356151

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 355949
%Rec. RPD

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Antimony	50.0	51.0		mg/Kg		102	80 - 120	1	20
Arsenic	50.0	51.1		mg/Kg		102	80 - 120	0	20
Cadmium	50.0	50.9		mg/Kg		102	80 - 120	0	20
Chromium	50.0	51.0		mg/Kg		102	80 - 120	1	20
Copper	50.0	51.5		mg/Kg		103	80 - 120	0	20
Lead	50.0	51.7		mg/Kg		103	80 - 120	0	20
Nickel	50.0	51.1		mg/Kg		102	80 - 120	0	20
Selenium	50.0	53.2		mg/Kg		106	80 - 120	3	20
Silver	50.0	51.0		mg/Kg		102	80 - 120	0	20
Zinc	50.0	51.2		mg/Kg		102	80 - 120	1	20

Lab Sample ID: 580-102849-8 MS
Matrix: Solid
Analysis Batch: 356151

Client Sample ID: DWP-SB-3-0
Prep Type: Total/NA
Prep Batch: 355949
%Rec. Limits

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Antimony	5.0	F1	41.7	37.9	F1	mg/Kg	☼	79	80 - 120
Arsenic	6.8		41.7	46.4		mg/Kg	☼	95	80 - 120
Cadmium	ND		41.7	41.5		mg/Kg	☼	99	80 - 120
Chromium	24		41.7	64.3		mg/Kg	☼	98	80 - 120
Copper	770		41.7	139	4	mg/Kg	☼	-1516	80 - 120
Lead	100	F1	41.7	97.0	F1	mg/Kg	☼	-8	80 - 120
Nickel	30		41.7	70.2		mg/Kg	☼	97	80 - 120
Selenium	2.0		41.7	41.9		mg/Kg	☼	96	80 - 120
Silver	0.39		41.7	42.1		mg/Kg	☼	100	80 - 120
Zinc	120	F1	41.7	146	F1	mg/Kg	☼	70	80 - 120

Lab Sample ID: 580-102849-8 MSD
Matrix: Solid
Analysis Batch: 356151

Client Sample ID: DWP-SB-3-0
Prep Type: Total/NA
Prep Batch: 355949
%Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Antimony	5.0	F1	43.7	41.4		mg/Kg	☼	83	80 - 120	9	20
Arsenic	6.8		43.7	51.1		mg/Kg	☼	101	80 - 120	10	20
Cadmium	ND		43.7	44.5		mg/Kg	☼	102	80 - 120	7	20
Chromium	24		43.7	70.0		mg/Kg	☼	106	80 - 120	9	20
Copper	770		43.7	136	4	mg/Kg	☼	-1454	80 - 120	2	20
Lead	100	F1	43.7	103	F1	mg/Kg	☼	5	80 - 120	6	20
Nickel	30		43.7	73.4		mg/Kg	☼	100	80 - 120	4	20
Selenium	2.0		43.7	46.0		mg/Kg	☼	101	80 - 120	9	20
Silver	0.39		43.7	45.1		mg/Kg	☼	102	80 - 120	7	20

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QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-102849-8 MSD
Matrix: Solid
Analysis Batch: 356151

Client Sample ID: DWP-SB-3-0
Prep Type: Total/NA
Prep Batch: 355949
%Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Zinc	120	F1	43.7	149	F1	mg/Kg	☼	74	80 - 120	2	20

Lab Sample ID: 580-102849-8 DU
Matrix: Solid
Analysis Batch: 356151

Client Sample ID: DWP-SB-3-0
Prep Type: Total/NA
Prep Batch: 355949
%Rec. RPD

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	5.0	F1	1.51	F3	mg/Kg	☼	108	20
Arsenic	6.8		6.48		mg/Kg	☼	5	20
Cadmium	ND		0.359	J	mg/Kg	☼	NC	20
Chromium	24		26.0		mg/Kg	☼	10	20
Copper	770		87.5	F3	mg/Kg	☼	159	20
Lead	100	F1	59.3	F3	mg/Kg	☼	51	20
Nickel	30		29.1		mg/Kg	☼	2	20
Selenium	2.0		2.11		mg/Kg	☼	7	20
Silver	0.39		0.129	F3	mg/Kg	☼	101	20
Zinc	120	F1	101		mg/Kg	☼	14	20

Lab Sample ID: MB 580-356096/22-A
Matrix: Solid
Analysis Batch: 356264

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 356096
%Rec. RPD

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.30	0.034	mg/Kg		05/08/21 09:29	05/10/21 12:59	5
Arsenic	ND		0.25	0.050	mg/Kg		05/08/21 09:29	05/10/21 12:59	5
Cadmium	ND		0.40	0.039	mg/Kg		05/08/21 09:29	05/10/21 12:59	5
Chromium	ND		0.50	0.032	mg/Kg		05/08/21 09:29	05/10/21 12:59	5
Copper	ND		0.50	0.11	mg/Kg		05/08/21 09:29	05/10/21 12:59	5
Lead	ND		0.25	0.024	mg/Kg		05/08/21 09:29	05/10/21 12:59	5
Nickel	ND		0.25	0.097	mg/Kg		05/08/21 09:29	05/10/21 12:59	5
Selenium	ND		0.55	0.14	mg/Kg		05/08/21 09:29	05/10/21 12:59	5
Silver	ND		0.10	0.010	mg/Kg		05/08/21 09:29	05/10/21 12:59	5
Zinc	ND		2.6	0.81	mg/Kg		05/08/21 09:29	05/10/21 12:59	5

Lab Sample ID: LCS 580-356096/23-A
Matrix: Solid
Analysis Batch: 356264

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 356096
%Rec. RPD

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Antimony	50.0	51.1		mg/Kg		102	80 - 120
Arsenic	50.0	56.8		mg/Kg		114	80 - 120
Cadmium	50.0	53.8		mg/Kg		108	80 - 120
Chromium	50.0	57.4		mg/Kg		115	80 - 120
Copper	50.0	55.8		mg/Kg		112	80 - 120
Lead	50.0	55.1		mg/Kg		110	80 - 120
Nickel	50.0	57.6		mg/Kg		115	80 - 120
Selenium	50.0	54.7		mg/Kg		109	80 - 120
Silver	50.0	56.5		mg/Kg		113	80 - 120
Zinc	50.0	55.2		mg/Kg		110	80 - 120

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-356096/24-A
Matrix: Solid
Analysis Batch: 356264

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 356096

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		RPD	Limit
							Limits	RPD		
Antimony	50.0	52.0		mg/Kg		104	80 - 120	2	20	
Arsenic	50.0	57.5		mg/Kg		115	80 - 120	1	20	
Cadmium	50.0	54.6		mg/Kg		109	80 - 120	2	20	
Chromium	50.0	58.4		mg/Kg		117	80 - 120	2	20	
Copper	50.0	56.9		mg/Kg		114	80 - 120	2	20	
Lead	50.0	56.1		mg/Kg		112	80 - 120	2	20	
Nickel	50.0	58.2		mg/Kg		116	80 - 120	1	20	
Selenium	50.0	53.6		mg/Kg		107	80 - 120	2	20	
Silver	50.0	56.8		mg/Kg		114	80 - 120	1	20	
Zinc	50.0	56.2		mg/Kg		112	80 - 120	2	20	

Lab Sample ID: MB 580-355883/15-A
Matrix: Water
Analysis Batch: 355993

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 355883

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	ND		0.00080	0.00013	mg/L		05/05/21 16:05	05/06/21 14:19	1
Arsenic	ND		0.0010	0.00020	mg/L		05/05/21 16:05	05/06/21 14:19	1
Cadmium	ND		0.00040	0.000037	mg/L		05/05/21 16:05	05/06/21 14:19	1
Chromium	ND		0.00080	0.00017	mg/L		05/05/21 16:05	05/06/21 14:19	1
Copper	ND		0.0020	0.00060	mg/L		05/05/21 16:05	05/06/21 14:19	1
Lead	0.000102	J	0.00040	0.000040	mg/L		05/05/21 16:05	05/06/21 14:19	1
Nickel	0.000144	J	0.0030	0.00013	mg/L		05/05/21 16:05	05/06/21 14:19	1
Selenium	ND		0.0080	0.0021	mg/L		05/05/21 16:05	05/06/21 14:19	1
Silver	ND		0.00040	0.000025	mg/L		05/05/21 16:05	05/06/21 14:19	1
Zinc	0.00141	J	0.0070	0.00093	mg/L		05/05/21 16:05	05/06/21 14:19	1

Lab Sample ID: LCS 580-355883/16-A
Matrix: Water
Analysis Batch: 355993

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 355883

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	
							Limits	RPD
Antimony	1.00	1.02		mg/L		102	80 - 120	
Arsenic	1.00	1.05		mg/L		105	80 - 120	
Cadmium	1.00	1.02		mg/L		102	80 - 120	
Chromium	1.00	1.06		mg/L		106	80 - 120	
Copper	1.00	1.06		mg/L		106	80 - 120	
Lead	1.00	1.04		mg/L		104	80 - 120	
Nickel	1.00	1.05		mg/L		105	80 - 120	
Selenium	1.00	1.05		mg/L		105	80 - 120	
Silver	1.00	1.03		mg/L		103	80 - 120	
Zinc	1.00	1.06		mg/L		106	80 - 120	

Lab Sample ID: LCSD 580-355883/17-A
Matrix: Water
Analysis Batch: 355993

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 355883

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.		Limit
							Limits	RPD	
Antimony	1.00	1.02		mg/L		102	80 - 120	0	20

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QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 6020B - Metals (ICP/MS) (Continued)

Lab Sample ID: LCSD 580-355883/17-A
Matrix: Water
Analysis Batch: 355993

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 355883

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Arsenic	1.00	1.05		mg/L		105	80 - 120	0	20
Cadmium	1.00	1.02		mg/L		102	80 - 120	0	20
Chromium	1.00	1.06		mg/L		106	80 - 120	0	20
Copper	1.00	1.06		mg/L		106	80 - 120	0	20
Lead	1.00	1.03		mg/L		103	80 - 120	0	20
Nickel	1.00	1.04		mg/L		104	80 - 120	0	20
Selenium	1.00	1.04		mg/L		104	80 - 120	1	20
Silver	1.00	1.03		mg/L		103	80 - 120	0	20
Zinc	1.00	1.04		mg/L		104	80 - 120	2	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 580-355850/20-A
Matrix: Water
Analysis Batch: 355904

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 355850

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.000152	J	0.00030	0.00015	mg/L		05/05/21 11:25	05/05/21 15:51	1

Lab Sample ID: LCS 580-355850/21-A
Matrix: Water
Analysis Batch: 355904

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 355850

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00200	0.00226		mg/L		113	80 - 120

Lab Sample ID: LCSD 580-355850/22-A
Matrix: Water
Analysis Batch: 355904

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 355850

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.00200	0.00226		mg/L		113	80 - 120	0	20

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 580-356408/22-A
Matrix: Solid
Analysis Batch: 356491

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 356408

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.018	0.0054	mg/Kg		05/12/21 14:54	05/12/21 16:57	1

Lab Sample ID: LCS 580-356408/23-A
Matrix: Solid
Analysis Batch: 356491

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 356408

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.100	0.101		mg/Kg		101	80 - 120

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: LCSD 580-356408/24-A
Matrix: Solid
Analysis Batch: 356491

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 356408

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.100	0.106		mg/Kg		106	80 - 120	5	20

Lab Sample ID: 580-102849-8 MS
Matrix: Solid
Analysis Batch: 356491

Client Sample ID: DWP-SB-3-0
Prep Type: Total/NA
Prep Batch: 356408

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.10		0.180	0.290		mg/Kg	☼	104	80 - 120

Lab Sample ID: 580-102849-8 MSD
Matrix: Solid
Analysis Batch: 356491

Client Sample ID: DWP-SB-3-0
Prep Type: Total/NA
Prep Batch: 356408

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.10		0.174	0.282		mg/Kg	☼	103	80 - 120	3	20

Lab Sample ID: 580-102849-8 DU
Matrix: Solid
Analysis Batch: 356491

Client Sample ID: DWP-SB-3-0
Prep Type: Total/NA
Prep Batch: 356408

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.10			0.102		mg/Kg	☼			0.6	20

Lab Sample ID: MB 580-356573/22-A
Matrix: Solid
Analysis Batch: 356707

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 356573

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.018	0.0054	mg/Kg		05/14/21 11:36	05/14/21 15:43	1

Lab Sample ID: LCS 580-356573/23-A
Matrix: Solid
Analysis Batch: 356707

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 356573

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.100	0.107		mg/Kg		107	80 - 120

Lab Sample ID: LCSD 580-356573/24-A
Matrix: Solid
Analysis Batch: 356707

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 356573

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.100	0.101		mg/Kg		101	80 - 120	6	20

Lab Sample ID: 580-102849-10 MS
Matrix: Solid
Analysis Batch: 356707

Client Sample ID: DWP-SB-3-2
Prep Type: Total/NA
Prep Batch: 356573

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.084	F1 F2	0.141	0.252		mg/Kg	☼	119	80 - 120

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QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 7471A - Mercury (CVAA)

Lab Sample ID: 580-102849-10 MSD
Matrix: Solid
Analysis Batch: 356707

Client Sample ID: DWP-SB-3-2
Prep Type: Total/NA
Prep Batch: 356573

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.084	F1 F2	0.150	0.342	F1 F2	mg/Kg	☼	172	80 - 120	30	20

Lab Sample ID: 580-102849-10 DU
Matrix: Solid
Analysis Batch: 356707

Client Sample ID: DWP-SB-3-2
Prep Type: Total/NA
Prep Batch: 356573

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	0.084	F1 F2	0.0769		mg/Kg	☼	8	20

Method: 9060A - Organic Carbon, Total (TOC)

Lab Sample ID: MB 580-356302/5
Matrix: Solid
Analysis Batch: 356302

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	97	mg/Kg			05/11/21 12:27	1

Lab Sample ID: LCS 580-356302/6
Matrix: Solid
Analysis Batch: 356302

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average Dup	120000	119000		mg/Kg		99	80 - 120

Lab Sample ID: LCSD 580-356302/7
Matrix: Solid
Analysis Batch: 356302

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average Dup	120000	119000		mg/Kg		99	80 - 120	0	20

Lab Sample ID: 580-102849-8 MS
Matrix: Solid
Analysis Batch: 356302

Client Sample ID: DWP-SB-3-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average Dup	20000		120000	141000		mg/Kg		101	75 - 125

Lab Sample ID: 580-102849-8 MSD
Matrix: Solid
Analysis Batch: 356302

Client Sample ID: DWP-SB-3-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average Dup	20000		120000	147000		mg/Kg		106	75 - 125	4	20

QC Sample Results

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Method: 9060A - Organic Carbon, Total (TOC) (Continued)

Lab Sample ID: 580-102849-8 DU
Matrix: Solid
Analysis Batch: 356302

Client Sample ID: DWP-SB-3-0
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon - Average Dup	20000		22400		mg/Kg		11	20

Lab Sample ID: MB 580-356389/5
Matrix: Solid
Analysis Batch: 356389

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon - Average Dup	ND		2000	97	mg/Kg			05/11/21 17:32	1

Lab Sample ID: LCS 580-356389/6
Matrix: Solid
Analysis Batch: 356389

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average Dup	120000	118000		mg/Kg		99	80 - 120

Lab Sample ID: LCSD 580-356389/7
Matrix: Solid
Analysis Batch: 356389

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average Dup	120000	118000		mg/Kg		98	80 - 120	1	20

Lab Sample ID: 580-102849-15 MS
Matrix: Solid
Analysis Batch: 356389

Client Sample ID: DWP-SB-5-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon - Average Dup	8900		120000	124000		mg/Kg		96	75 - 125

Lab Sample ID: 580-102849-15 MSD
Matrix: Solid
Analysis Batch: 356389

Client Sample ID: DWP-SB-5-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon - Average Dup	8900		120000	129000		mg/Kg		100	75 - 125	4	20

Lab Sample ID: 580-102849-15 DU
Matrix: Solid
Analysis Batch: 356389

Client Sample ID: DWP-SB-5-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon - Average Dup	8900		8890		mg/Kg		0.2	20

QC Association Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

GC/MS Semi VOA

Prep Batch: 355848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-22	ER-1-042921	Total/NA	Water	3510C	
MB 580-355848/1-A	Method Blank	Total/NA	Water	3510C	
LCS 580-355848/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 580-355848/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 355915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-22	ER-1-042921	Total/NA	Water	8270E	355848
MB 580-355848/1-A	Method Blank	Total/NA	Water	8270E	355848
LCS 580-355848/2-A	Lab Control Sample	Total/NA	Water	8270E	355848
LCSD 580-355848/3-A	Lab Control Sample Dup	Total/NA	Water	8270E	355848

Prep Batch: 356370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-1	DWP-SB-1-0	Total/NA	Solid	3546	
580-102849-2	DWP-SB-1-0-D	Total/NA	Solid	3546	
580-102849-3	DWP-SB-1-1	Total/NA	Solid	3546	
580-102849-4	DWP-SB-2-0	Total/NA	Solid	3546	
580-102849-5	DWP-SB-2-1	Total/NA	Solid	3546	
580-102849-7	DWP-SB-2-3	Total/NA	Solid	3546	
580-102849-8	DWP-SB-3-0	Total/NA	Solid	3546	
580-102849-9	DWP-SB-3-1	Total/NA	Solid	3546	
580-102849-10	DWP-SB-3-2	Total/NA	Solid	3546	
580-102849-11	DWP-SB-4-0	Total/NA	Solid	3546	
580-102849-12	DWP-SB-4-1	Total/NA	Solid	3546	
MB 580-356370/1-A	Method Blank	Total/NA	Solid	3546	
LCS 580-356370/2-A - RA	Lab Control Sample	Total/NA	Solid	3546	
LCS 580-356370/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 580-356370/3-A - RA	Lab Control Sample Dup	Total/NA	Solid	3546	
LCSD 580-356370/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
580-102849-8 MS	DWP-SB-3-0	Total/NA	Solid	3546	
580-102849-8 MSD	DWP-SB-3-0	Total/NA	Solid	3546	

Prep Batch: 356379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-6	DWP-SB-2-2	Total/NA	Solid	3546	
580-102849-13	DWP-SB-4-2	Total/NA	Solid	3546	
580-102849-14	DWP-SB-5-0	Total/NA	Solid	3546	
580-102849-15	DWP-SB-5-1	Total/NA	Solid	3546	
580-102849-16	DWP-SB-5-2	Total/NA	Solid	3546	
580-102849-17	DWP-SB-5-3	Total/NA	Solid	3546	
580-102849-18	DWP-SB-6-0	Total/NA	Solid	3546	
580-102849-19	DWP-SB-6-1	Total/NA	Solid	3546	
580-102849-20	DWP-SB-6-2	Total/NA	Solid	3546	
580-102849-21	DWP-SB-6-3	Total/NA	Solid	3546	
MB 580-356379/1-A	Method Blank	Total/NA	Solid	3546	
LCS 580-356379/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 580-356379/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
580-102849-13 MS	DWP-SB-4-2	Total/NA	Solid	3546	
580-102849-13 MSD	DWP-SB-4-2	Total/NA	Solid	3546	

Eurofins FGS, Seattle

QC Association Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

GC/MS Semi VOA

Analysis Batch: 356466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-1	DWP-SB-1-0	Total/NA	Solid	8270E	356370
580-102849-2	DWP-SB-1-0-D	Total/NA	Solid	8270E	356370
580-102849-3	DWP-SB-1-1	Total/NA	Solid	8270E	356370
580-102849-4	DWP-SB-2-0	Total/NA	Solid	8270E	356370
580-102849-5	DWP-SB-2-1	Total/NA	Solid	8270E	356370
580-102849-7	DWP-SB-2-3	Total/NA	Solid	8270E	356370
MB 580-356370/1-A	Method Blank	Total/NA	Solid	8270E	356370
LCS 580-356370/2-A	Lab Control Sample	Total/NA	Solid	8270E	356370
LCSD 580-356370/3-A	Lab Control Sample Dup	Total/NA	Solid	8270E	356370

Analysis Batch: 356541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-6	DWP-SB-2-2	Total/NA	Solid	8270E	356379
580-102849-8	DWP-SB-3-0	Total/NA	Solid	8270E	356370
580-102849-9	DWP-SB-3-1	Total/NA	Solid	8270E	356370
580-102849-10	DWP-SB-3-2	Total/NA	Solid	8270E	356370
580-102849-11	DWP-SB-4-0	Total/NA	Solid	8270E	356370
580-102849-12	DWP-SB-4-1	Total/NA	Solid	8270E	356370
580-102849-13	DWP-SB-4-2	Total/NA	Solid	8270E	356379
580-102849-14	DWP-SB-5-0	Total/NA	Solid	8270E	356379
580-102849-15	DWP-SB-5-1	Total/NA	Solid	8270E	356379
580-102849-16	DWP-SB-5-2	Total/NA	Solid	8270E	356379
580-102849-17	DWP-SB-5-3	Total/NA	Solid	8270E	356379
580-102849-18	DWP-SB-6-0	Total/NA	Solid	8270E	356379
580-102849-19	DWP-SB-6-1	Total/NA	Solid	8270E	356379
580-102849-20	DWP-SB-6-2	Total/NA	Solid	8270E	356379
580-102849-21	DWP-SB-6-3	Total/NA	Solid	8270E	356379
MB 580-356379/1-A	Method Blank	Total/NA	Solid	8270E	356379
LCS 580-356379/2-A	Lab Control Sample	Total/NA	Solid	8270E	356379
LCSD 580-356379/3-A	Lab Control Sample Dup	Total/NA	Solid	8270E	356379
580-102849-8 MS	DWP-SB-3-0	Total/NA	Solid	8270E	356370
580-102849-8 MSD	DWP-SB-3-0	Total/NA	Solid	8270E	356370
580-102849-13 MS	DWP-SB-4-2	Total/NA	Solid	8270E	356379
580-102849-13 MSD	DWP-SB-4-2	Total/NA	Solid	8270E	356379

Analysis Batch: 356704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 580-356370/2-A - RA	Lab Control Sample	Total/NA	Solid	8270E	356370
LCSD 580-356370/3-A - RA	Lab Control Sample Dup	Total/NA	Solid	8270E	356370

GC Semi VOA

Prep Batch: 355853

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-22	ER-1-042921	Total/NA	Water	3510C	
MB 580-355853/1-A	Method Blank	Total/NA	Water	3510C	
LCS 580-355853/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 580-355853/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Eurofins FGS, Seattle

QC Association Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

GC Semi VOA

Prep Batch: 355875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-9	DWP-SB-3-1	Total/NA	Solid	3546	
580-102849-10	DWP-SB-3-2	Total/NA	Solid	3546	
580-102849-11	DWP-SB-4-0	Total/NA	Solid	3546	
580-102849-12	DWP-SB-4-1	Total/NA	Solid	3546	
580-102849-13	DWP-SB-4-2	Total/NA	Solid	3546	
580-102849-14	DWP-SB-5-0	Total/NA	Solid	3546	
580-102849-15	DWP-SB-5-1	Total/NA	Solid	3546	
580-102849-16	DWP-SB-5-2	Total/NA	Solid	3546	
580-102849-17	DWP-SB-5-3	Total/NA	Solid	3546	
580-102849-18	DWP-SB-6-0	Total/NA	Solid	3546	
580-102849-19	DWP-SB-6-1	Total/NA	Solid	3546	
580-102849-20	DWP-SB-6-2	Total/NA	Solid	3546	
580-102849-21	DWP-SB-6-3	Total/NA	Solid	3546	
MB 580-355875/1-A	Method Blank	Total/NA	Solid	3546	
LCS 580-355875/2-A	Lab Control Sample	Total/NA	Solid	3546	

Prep Batch: 355879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-1	DWP-SB-1-0	Total/NA	Solid	3546	
580-102849-2	DWP-SB-1-0-D	Total/NA	Solid	3546	
580-102849-3	DWP-SB-1-1	Total/NA	Solid	3546	
580-102849-4	DWP-SB-2-0	Total/NA	Solid	3546	
580-102849-5	DWP-SB-2-1	Total/NA	Solid	3546	
580-102849-6	DWP-SB-2-2	Total/NA	Solid	3546	
580-102849-7	DWP-SB-2-3	Total/NA	Solid	3546	
580-102849-8	DWP-SB-3-0	Total/NA	Solid	3546	
580-102849-9	DWP-SB-3-1	Total/NA	Solid	3546	
580-102849-10	DWP-SB-3-2	Total/NA	Solid	3546	
580-102849-11	DWP-SB-4-0	Total/NA	Solid	3546	
580-102849-12	DWP-SB-4-1	Total/NA	Solid	3546	
580-102849-13	DWP-SB-4-2	Total/NA	Solid	3546	
580-102849-14	DWP-SB-5-0	Total/NA	Solid	3546	
580-102849-15	DWP-SB-5-1	Total/NA	Solid	3546	
580-102849-16	DWP-SB-5-2	Total/NA	Solid	3546	
MB 580-355879/1-A	Method Blank	Total/NA	Solid	3546	
LCS 580-355879/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 580-355879/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
580-102849-8 MS	DWP-SB-3-0	Total/NA	Solid	3546	
580-102849-8 MSD	DWP-SB-3-0	Total/NA	Solid	3546	
580-102849-1 DU	DWP-SB-1-0	Total/NA	Solid	3546	
580-102849-11 DU	DWP-SB-4-0	Total/NA	Solid	3546	

Prep Batch: 355928

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-22	ER-1-042921	Total/NA	Water	3510C	
MB 580-355928/1-A	Method Blank	Total/NA	Water	3510C	
LCS 580-355928/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 580-355928/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

QC Association Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

GC Semi VOA

Analysis Batch: 355978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-9	DWP-SB-3-1	Total/NA	Solid	8082A	355875
580-102849-10	DWP-SB-3-2	Total/NA	Solid	8082A	355875
580-102849-11	DWP-SB-4-0	Total/NA	Solid	8082A	355875
580-102849-12	DWP-SB-4-1	Total/NA	Solid	8082A	355875
580-102849-13	DWP-SB-4-2	Total/NA	Solid	8082A	355875
580-102849-14	DWP-SB-5-0	Total/NA	Solid	8082A	355875
580-102849-15	DWP-SB-5-1	Total/NA	Solid	8082A	355875
580-102849-16	DWP-SB-5-2	Total/NA	Solid	8082A	355875
580-102849-17	DWP-SB-5-3	Total/NA	Solid	8082A	355875
580-102849-18	DWP-SB-6-0	Total/NA	Solid	8082A	355875
580-102849-19	DWP-SB-6-1	Total/NA	Solid	8082A	355875
580-102849-20	DWP-SB-6-2	Total/NA	Solid	8082A	355875
580-102849-21	DWP-SB-6-3	Total/NA	Solid	8082A	355875

Analysis Batch: 356024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 580-355875/1-A	Method Blank	Total/NA	Solid	8082A	355875
LCS 580-355875/2-A	Lab Control Sample	Total/NA	Solid	8082A	355875

Analysis Batch: 356093

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-22	ER-1-042921	Total/NA	Water	8082A	355853

Analysis Batch: 356184

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 580-355853/1-A	Method Blank	Total/NA	Water	8082A	355853
LCS 580-355853/4-A	Lab Control Sample	Total/NA	Water	8082A	355853
LCS 580-355853/5-A	Lab Control Sample Dup	Total/NA	Water	8082A	355853

Analysis Batch: 356218

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-22	ER-1-042921	Total/NA	Water	NWTPH-Dx	355928
MB 580-355928/1-A	Method Blank	Total/NA	Water	NWTPH-Dx	355928
LCS 580-355928/2-A	Lab Control Sample	Total/NA	Water	NWTPH-Dx	355928
LCS 580-355928/3-A	Lab Control Sample Dup	Total/NA	Water	NWTPH-Dx	355928

Analysis Batch: 356321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-1	DWP-SB-1-0	Total/NA	Solid	NWTPH-Dx	355879
580-102849-2	DWP-SB-1-0-D	Total/NA	Solid	NWTPH-Dx	355879
580-102849-3	DWP-SB-1-1	Total/NA	Solid	NWTPH-Dx	355879
580-102849-4	DWP-SB-2-0	Total/NA	Solid	NWTPH-Dx	355879
580-102849-5	DWP-SB-2-1	Total/NA	Solid	NWTPH-Dx	355879
580-102849-6	DWP-SB-2-2	Total/NA	Solid	NWTPH-Dx	355879
580-102849-7	DWP-SB-2-3	Total/NA	Solid	NWTPH-Dx	355879
580-102849-8	DWP-SB-3-0	Total/NA	Solid	NWTPH-Dx	355879
580-102849-9	DWP-SB-3-1	Total/NA	Solid	NWTPH-Dx	355879
580-102849-10	DWP-SB-3-2	Total/NA	Solid	NWTPH-Dx	355879
580-102849-11	DWP-SB-4-0	Total/NA	Solid	NWTPH-Dx	355879
580-102849-12	DWP-SB-4-1	Total/NA	Solid	NWTPH-Dx	355879
580-102849-13	DWP-SB-4-2	Total/NA	Solid	NWTPH-Dx	355879

Eurofins FGS, Seattle

QC Association Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

GC Semi VOA (Continued)

Analysis Batch: 356321 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-14	DWP-SB-5-0	Total/NA	Solid	NWTPH-Dx	355879
580-102849-15	DWP-SB-5-1	Total/NA	Solid	NWTPH-Dx	355879
580-102849-16	DWP-SB-5-2	Total/NA	Solid	NWTPH-Dx	355879
MB 580-355879/1-A	Method Blank	Total/NA	Solid	NWTPH-Dx	355879
LCS 580-355879/2-A	Lab Control Sample	Total/NA	Solid	NWTPH-Dx	355879
LCSD 580-355879/3-A	Lab Control Sample Dup	Total/NA	Solid	NWTPH-Dx	355879
580-102849-8 MS	DWP-SB-3-0	Total/NA	Solid	NWTPH-Dx	355879
580-102849-8 MSD	DWP-SB-3-0	Total/NA	Solid	NWTPH-Dx	355879
580-102849-1 DU	DWP-SB-1-0	Total/NA	Solid	NWTPH-Dx	355879
580-102849-11 DU	DWP-SB-4-0	Total/NA	Solid	NWTPH-Dx	355879

Prep Batch: 356325

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-22 - RE	ER-1-042921	Total/NA	Water	3510C	
MB 580-356325/1-A	Method Blank	Total/NA	Water	3510C	
LCS 580-356325/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 580-356325/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 356354

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-22 - RE	ER-1-042921	Total/NA	Water	8082A	356325
MB 580-356325/1-A	Method Blank	Total/NA	Water	8082A	356325
LCS 580-356325/2-A	Lab Control Sample	Total/NA	Water	8082A	356325
LCSD 580-356325/3-A	Lab Control Sample Dup	Total/NA	Water	8082A	356325

Prep Batch: 356391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-1	DWP-SB-1-0	Total/NA	Solid	3546	
580-102849-2	DWP-SB-1-0-D	Total/NA	Solid	3546	
580-102849-3	DWP-SB-1-1	Total/NA	Solid	3546	
580-102849-4	DWP-SB-2-0	Total/NA	Solid	3546	
580-102849-5	DWP-SB-2-1	Total/NA	Solid	3546	
580-102849-6	DWP-SB-2-2	Total/NA	Solid	3546	
580-102849-7	DWP-SB-2-3	Total/NA	Solid	3546	
580-102849-8	DWP-SB-3-0	Total/NA	Solid	3546	
MB 580-356391/1-A	Method Blank	Total/NA	Solid	3546	
LCS 580-356391/2-A	Lab Control Sample	Total/NA	Solid	3546	
580-102849-8 MS	DWP-SB-3-0	Total/NA	Solid	3546	
580-102849-8 MSD	DWP-SB-3-0	Total/NA	Solid	3546	

Prep Batch: 356426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-17	DWP-SB-5-3	Total/NA	Solid	3546	
580-102849-18	DWP-SB-6-0	Total/NA	Solid	3546	
580-102849-19	DWP-SB-6-1	Total/NA	Solid	3546	
580-102849-20	DWP-SB-6-2	Total/NA	Solid	3546	
580-102849-21	DWP-SB-6-3	Total/NA	Solid	3546	
MB 580-356426/1-A	Method Blank	Total/NA	Solid	3546	
LCS 580-356426/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 580-356426/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	
580-102849-17 DU	DWP-SB-5-3	Total/NA	Solid	3546	

Eurofins FGS, Seattle

QC Association Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

GC Semi VOA (Continued)

Prep Batch: 356426 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-18 DU	DWP-SB-6-0	Total/NA	Solid	3546	

Analysis Batch: 356563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-17	DWP-SB-5-3	Total/NA	Solid	NWTPH-Dx	356426
580-102849-18	DWP-SB-6-0	Total/NA	Solid	NWTPH-Dx	356426
580-102849-19	DWP-SB-6-1	Total/NA	Solid	NWTPH-Dx	356426
580-102849-20	DWP-SB-6-2	Total/NA	Solid	NWTPH-Dx	356426
580-102849-21	DWP-SB-6-3	Total/NA	Solid	NWTPH-Dx	356426
MB 580-356426/1-A	Method Blank	Total/NA	Solid	NWTPH-Dx	356426
LCS 580-356426/2-A	Lab Control Sample	Total/NA	Solid	NWTPH-Dx	356426
580-102849-17 DU	DWP-SB-5-3	Total/NA	Solid	NWTPH-Dx	356426
580-102849-18 DU	DWP-SB-6-0	Total/NA	Solid	NWTPH-Dx	356426

Analysis Batch: 356688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 580-356426/3-A	Lab Control Sample Dup	Total/NA	Solid	NWTPH-Dx	356426

Analysis Batch: 356799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-1	DWP-SB-1-0	Total/NA	Solid	8082A	356391
580-102849-2	DWP-SB-1-0-D	Total/NA	Solid	8082A	356391
580-102849-3	DWP-SB-1-1	Total/NA	Solid	8082A	356391
580-102849-4	DWP-SB-2-0	Total/NA	Solid	8082A	356391
580-102849-5	DWP-SB-2-1	Total/NA	Solid	8082A	356391
580-102849-6	DWP-SB-2-2	Total/NA	Solid	8082A	356391
580-102849-7	DWP-SB-2-3	Total/NA	Solid	8082A	356391
580-102849-8	DWP-SB-3-0	Total/NA	Solid	8082A	356391
MB 580-356391/1-A	Method Blank	Total/NA	Solid	8082A	356391
LCS 580-356391/2-A	Lab Control Sample	Total/NA	Solid	8082A	356391
580-102849-8 MS	DWP-SB-3-0	Total/NA	Solid	8082A	356391
580-102849-8 MSD	DWP-SB-3-0	Total/NA	Solid	8082A	356391

Metals

Prep Batch: 355850

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-22	ER-1-042921	Total/NA	Water	7470A	
MB 580-355850/20-A	Method Blank	Total/NA	Water	7470A	
LCS 580-355850/21-A	Lab Control Sample	Total/NA	Water	7470A	
LCSD 580-355850/22-A	Lab Control Sample Dup	Total/NA	Water	7470A	

Prep Batch: 355883

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-22	ER-1-042921	Total Recoverable	Water	3005A	
MB 580-355883/15-A	Method Blank	Total Recoverable	Water	3005A	
LCS 580-355883/16-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCSD 580-355883/17-A	Lab Control Sample Dup	Total Recoverable	Water	3005A	

QC Association Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Metals

Analysis Batch: 355904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-22	ER-1-042921	Total/NA	Water	7470A	355850
MB 580-355850/20-A	Method Blank	Total/NA	Water	7470A	355850
LCS 580-355850/21-A	Lab Control Sample	Total/NA	Water	7470A	355850
LCSD 580-355850/22-A	Lab Control Sample Dup	Total/NA	Water	7470A	355850

Prep Batch: 355949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-8	DWP-SB-3-0	Total/NA	Solid	3050B	
580-102849-9	DWP-SB-3-1	Total/NA	Solid	3050B	
580-102849-10	DWP-SB-3-2	Total/NA	Solid	3050B	
580-102849-11	DWP-SB-4-0	Total/NA	Solid	3050B	
580-102849-12	DWP-SB-4-1	Total/NA	Solid	3050B	
580-102849-13	DWP-SB-4-2	Total/NA	Solid	3050B	
580-102849-14	DWP-SB-5-0	Total/NA	Solid	3050B	
580-102849-15	DWP-SB-5-1	Total/NA	Solid	3050B	
580-102849-16	DWP-SB-5-2	Total/NA	Solid	3050B	
580-102849-17	DWP-SB-5-3	Total/NA	Solid	3050B	
580-102849-18	DWP-SB-6-0	Total/NA	Solid	3050B	
580-102849-19	DWP-SB-6-1	Total/NA	Solid	3050B	
580-102849-20	DWP-SB-6-2	Total/NA	Solid	3050B	
580-102849-21	DWP-SB-6-3	Total/NA	Solid	3050B	
MB 580-355949/22-A	Method Blank	Total/NA	Solid	3050B	
LCS 580-355949/23-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 580-355949/24-A	Lab Control Sample Dup	Total/NA	Solid	3050B	
580-102849-8 MS	DWP-SB-3-0	Total/NA	Solid	3050B	
580-102849-8 MSD	DWP-SB-3-0	Total/NA	Solid	3050B	
580-102849-8 DU	DWP-SB-3-0	Total/NA	Solid	3050B	

Analysis Batch: 355993

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-22	ER-1-042921	Total Recoverable	Water	6020B	355883
MB 580-355883/15-A	Method Blank	Total Recoverable	Water	6020B	355883
LCS 580-355883/16-A	Lab Control Sample	Total Recoverable	Water	6020B	355883
LCSD 580-355883/17-A	Lab Control Sample Dup	Total Recoverable	Water	6020B	355883

Prep Batch: 356096

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-1	DWP-SB-1-0	Total/NA	Solid	3050B	
580-102849-2	DWP-SB-1-0-D	Total/NA	Solid	3050B	
580-102849-3	DWP-SB-1-1	Total/NA	Solid	3050B	
580-102849-4	DWP-SB-2-0	Total/NA	Solid	3050B	
580-102849-5	DWP-SB-2-1	Total/NA	Solid	3050B	
580-102849-6	DWP-SB-2-2	Total/NA	Solid	3050B	
580-102849-7	DWP-SB-2-3	Total/NA	Solid	3050B	
MB 580-356096/22-A	Method Blank	Total/NA	Solid	3050B	
LCS 580-356096/23-A	Lab Control Sample	Total/NA	Solid	3050B	
LCSD 580-356096/24-A	Lab Control Sample Dup	Total/NA	Solid	3050B	

Analysis Batch: 356151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-8	DWP-SB-3-0	Total/NA	Solid	6020B	355949

QC Association Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Metals (Continued)

Analysis Batch: 356151 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-9	DWP-SB-3-1	Total/NA	Solid	6020B	355949
580-102849-10	DWP-SB-3-2	Total/NA	Solid	6020B	355949
580-102849-11	DWP-SB-4-0	Total/NA	Solid	6020B	355949
580-102849-12	DWP-SB-4-1	Total/NA	Solid	6020B	355949
580-102849-13	DWP-SB-4-2	Total/NA	Solid	6020B	355949
580-102849-14	DWP-SB-5-0	Total/NA	Solid	6020B	355949
580-102849-15	DWP-SB-5-1	Total/NA	Solid	6020B	355949
580-102849-16	DWP-SB-5-2	Total/NA	Solid	6020B	355949
580-102849-17	DWP-SB-5-3	Total/NA	Solid	6020B	355949
580-102849-18	DWP-SB-6-0	Total/NA	Solid	6020B	355949
580-102849-19	DWP-SB-6-1	Total/NA	Solid	6020B	355949
580-102849-20	DWP-SB-6-2	Total/NA	Solid	6020B	355949
580-102849-21	DWP-SB-6-3	Total/NA	Solid	6020B	355949
MB 580-355949/22-A	Method Blank	Total/NA	Solid	6020B	355949
LCS 580-355949/23-A	Lab Control Sample	Total/NA	Solid	6020B	355949
LCSD 580-355949/24-A	Lab Control Sample Dup	Total/NA	Solid	6020B	355949
580-102849-8 MS	DWP-SB-3-0	Total/NA	Solid	6020B	355949
580-102849-8 MSD	DWP-SB-3-0	Total/NA	Solid	6020B	355949
580-102849-8 DU	DWP-SB-3-0	Total/NA	Solid	6020B	355949

Analysis Batch: 356264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-1	DWP-SB-1-0	Total/NA	Solid	6020B	356096
580-102849-2	DWP-SB-1-0-D	Total/NA	Solid	6020B	356096
580-102849-3	DWP-SB-1-1	Total/NA	Solid	6020B	356096
580-102849-4	DWP-SB-2-0	Total/NA	Solid	6020B	356096
580-102849-5	DWP-SB-2-1	Total/NA	Solid	6020B	356096
580-102849-6	DWP-SB-2-2	Total/NA	Solid	6020B	356096
580-102849-7	DWP-SB-2-3	Total/NA	Solid	6020B	356096
MB 580-356096/22-A	Method Blank	Total/NA	Solid	6020B	356096
LCS 580-356096/23-A	Lab Control Sample	Total/NA	Solid	6020B	356096
LCSD 580-356096/24-A	Lab Control Sample Dup	Total/NA	Solid	6020B	356096

Prep Batch: 356408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-1	DWP-SB-1-0	Total/NA	Solid	7471A	
580-102849-2	DWP-SB-1-0-D	Total/NA	Solid	7471A	
580-102849-3	DWP-SB-1-1	Total/NA	Solid	7471A	
580-102849-4	DWP-SB-2-0	Total/NA	Solid	7471A	
580-102849-5	DWP-SB-2-1	Total/NA	Solid	7471A	
580-102849-6	DWP-SB-2-2	Total/NA	Solid	7471A	
580-102849-7	DWP-SB-2-3	Total/NA	Solid	7471A	
580-102849-8	DWP-SB-3-0	Total/NA	Solid	7471A	
580-102849-9	DWP-SB-3-1	Total/NA	Solid	7471A	
MB 580-356408/22-A	Method Blank	Total/NA	Solid	7471A	
LCS 580-356408/23-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 580-356408/24-A	Lab Control Sample Dup	Total/NA	Solid	7471A	
580-102849-8 MS	DWP-SB-3-0	Total/NA	Solid	7471A	
580-102849-8 MSD	DWP-SB-3-0	Total/NA	Solid	7471A	
580-102849-8 DU	DWP-SB-3-0	Total/NA	Solid	7471A	

QC Association Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Metals

Analysis Batch: 356491

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-1	DWP-SB-1-0	Total/NA	Solid	7471A	356408
580-102849-2	DWP-SB-1-0-D	Total/NA	Solid	7471A	356408
580-102849-3	DWP-SB-1-1	Total/NA	Solid	7471A	356408
580-102849-4	DWP-SB-2-0	Total/NA	Solid	7471A	356408
580-102849-5	DWP-SB-2-1	Total/NA	Solid	7471A	356408
580-102849-6	DWP-SB-2-2	Total/NA	Solid	7471A	356408
580-102849-7	DWP-SB-2-3	Total/NA	Solid	7471A	356408
580-102849-8	DWP-SB-3-0	Total/NA	Solid	7471A	356408
580-102849-9	DWP-SB-3-1	Total/NA	Solid	7471A	356408
MB 580-356408/22-A	Method Blank	Total/NA	Solid	7471A	356408
LCS 580-356408/23-A	Lab Control Sample	Total/NA	Solid	7471A	356408
LCSD 580-356408/24-A	Lab Control Sample Dup	Total/NA	Solid	7471A	356408
580-102849-8 MS	DWP-SB-3-0	Total/NA	Solid	7471A	356408
580-102849-8 MSD	DWP-SB-3-0	Total/NA	Solid	7471A	356408
580-102849-8 DU	DWP-SB-3-0	Total/NA	Solid	7471A	356408

Prep Batch: 356573

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-10	DWP-SB-3-2	Total/NA	Solid	7471A	
580-102849-11	DWP-SB-4-0	Total/NA	Solid	7471A	
580-102849-12	DWP-SB-4-1	Total/NA	Solid	7471A	
580-102849-13	DWP-SB-4-2	Total/NA	Solid	7471A	
580-102849-14	DWP-SB-5-0	Total/NA	Solid	7471A	
580-102849-15	DWP-SB-5-1	Total/NA	Solid	7471A	
580-102849-16	DWP-SB-5-2	Total/NA	Solid	7471A	
580-102849-17	DWP-SB-5-3	Total/NA	Solid	7471A	
580-102849-18	DWP-SB-6-0	Total/NA	Solid	7471A	
580-102849-19	DWP-SB-6-1	Total/NA	Solid	7471A	
580-102849-20	DWP-SB-6-2	Total/NA	Solid	7471A	
580-102849-21	DWP-SB-6-3	Total/NA	Solid	7471A	
MB 580-356573/22-A	Method Blank	Total/NA	Solid	7471A	
LCS 580-356573/23-A	Lab Control Sample	Total/NA	Solid	7471A	
LCSD 580-356573/24-A	Lab Control Sample Dup	Total/NA	Solid	7471A	
580-102849-10 MS	DWP-SB-3-2	Total/NA	Solid	7471A	
580-102849-10 MSD	DWP-SB-3-2	Total/NA	Solid	7471A	
580-102849-10 DU	DWP-SB-3-2	Total/NA	Solid	7471A	

Analysis Batch: 356707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-10	DWP-SB-3-2	Total/NA	Solid	7471A	356573
580-102849-11	DWP-SB-4-0	Total/NA	Solid	7471A	356573
580-102849-12	DWP-SB-4-1	Total/NA	Solid	7471A	356573
580-102849-13	DWP-SB-4-2	Total/NA	Solid	7471A	356573
580-102849-14	DWP-SB-5-0	Total/NA	Solid	7471A	356573
580-102849-15	DWP-SB-5-1	Total/NA	Solid	7471A	356573
580-102849-16	DWP-SB-5-2	Total/NA	Solid	7471A	356573
580-102849-17	DWP-SB-5-3	Total/NA	Solid	7471A	356573
580-102849-18	DWP-SB-6-0	Total/NA	Solid	7471A	356573
580-102849-19	DWP-SB-6-1	Total/NA	Solid	7471A	356573
580-102849-20	DWP-SB-6-2	Total/NA	Solid	7471A	356573
580-102849-21	DWP-SB-6-3	Total/NA	Solid	7471A	356573

Eurofins FGS, Seattle

QC Association Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Metals (Continued)

Analysis Batch: 356707 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 580-356573/22-A	Method Blank	Total/NA	Solid	7471A	356573
LCS 580-356573/23-A	Lab Control Sample	Total/NA	Solid	7471A	356573
LCSD 580-356573/24-A	Lab Control Sample Dup	Total/NA	Solid	7471A	356573
580-102849-10 MS	DWP-SB-3-2	Total/NA	Solid	7471A	356573
580-102849-10 MSD	DWP-SB-3-2	Total/NA	Solid	7471A	356573
580-102849-10 DU	DWP-SB-3-2	Total/NA	Solid	7471A	356573

General Chemistry

Analysis Batch: 356302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-1	DWP-SB-1-0	Total/NA	Solid	9060A	
580-102849-2	DWP-SB-1-0-D	Total/NA	Solid	9060A	
580-102849-3	DWP-SB-1-1	Total/NA	Solid	9060A	
580-102849-4	DWP-SB-2-0	Total/NA	Solid	9060A	
580-102849-5	DWP-SB-2-1	Total/NA	Solid	9060A	
580-102849-6	DWP-SB-2-2	Total/NA	Solid	9060A	
580-102849-7	DWP-SB-2-3	Total/NA	Solid	9060A	
580-102849-8	DWP-SB-3-0	Total/NA	Solid	9060A	
580-102849-9	DWP-SB-3-1	Total/NA	Solid	9060A	
580-102849-10	DWP-SB-3-2	Total/NA	Solid	9060A	
580-102849-11	DWP-SB-4-0	Total/NA	Solid	9060A	
580-102849-12	DWP-SB-4-1	Total/NA	Solid	9060A	
580-102849-13	DWP-SB-4-2	Total/NA	Solid	9060A	
580-102849-14	DWP-SB-5-0	Total/NA	Solid	9060A	
MB 580-356302/5	Method Blank	Total/NA	Solid	9060A	
LCS 580-356302/6	Lab Control Sample	Total/NA	Solid	9060A	
LCSD 580-356302/7	Lab Control Sample Dup	Total/NA	Solid	9060A	
580-102849-8 MS	DWP-SB-3-0	Total/NA	Solid	9060A	
580-102849-8 MSD	DWP-SB-3-0	Total/NA	Solid	9060A	
580-102849-8 DU	DWP-SB-3-0	Total/NA	Solid	9060A	

Analysis Batch: 356389

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-15	DWP-SB-5-1	Total/NA	Solid	9060A	
580-102849-16	DWP-SB-5-2	Total/NA	Solid	9060A	
580-102849-17	DWP-SB-5-3	Total/NA	Solid	9060A	
580-102849-18	DWP-SB-6-0	Total/NA	Solid	9060A	
580-102849-19	DWP-SB-6-1	Total/NA	Solid	9060A	
580-102849-20	DWP-SB-6-2	Total/NA	Solid	9060A	
580-102849-21	DWP-SB-6-3	Total/NA	Solid	9060A	
MB 580-356389/5	Method Blank	Total/NA	Solid	9060A	
LCS 580-356389/6	Lab Control Sample	Total/NA	Solid	9060A	
LCSD 580-356389/7	Lab Control Sample Dup	Total/NA	Solid	9060A	
580-102849-15 MS	DWP-SB-5-1	Total/NA	Solid	9060A	
580-102849-15 MSD	DWP-SB-5-1	Total/NA	Solid	9060A	
580-102849-15 DU	DWP-SB-5-1	Total/NA	Solid	9060A	

Analysis Batch: 356410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-4	DWP-SB-2-0	Total/NA	Solid	2540G	

Eurofins FGS, Seattle

QC Association Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

General Chemistry (Continued)

Analysis Batch: 356410 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-5	DWP-SB-2-1	Total/NA	Solid	2540G	
580-102849-6	DWP-SB-2-2	Total/NA	Solid	2540G	
580-102849-7	DWP-SB-2-3	Total/NA	Solid	2540G	
580-102849-8	DWP-SB-3-0	Total/NA	Solid	2540G	
580-102849-9	DWP-SB-3-1	Total/NA	Solid	2540G	
580-102849-10	DWP-SB-3-2	Total/NA	Solid	2540G	
580-102849-11	DWP-SB-4-0	Total/NA	Solid	2540G	
580-102849-12	DWP-SB-4-1	Total/NA	Solid	2540G	
580-102849-13	DWP-SB-4-2	Total/NA	Solid	2540G	
580-102849-14	DWP-SB-5-0	Total/NA	Solid	2540G	
580-102849-15	DWP-SB-5-1	Total/NA	Solid	2540G	
580-102849-16	DWP-SB-5-2	Total/NA	Solid	2540G	
580-102849-17	DWP-SB-5-3	Total/NA	Solid	2540G	

Analysis Batch: 356494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
580-102849-1	DWP-SB-1-0	Total/NA	Solid	2540G	
580-102849-2	DWP-SB-1-0-D	Total/NA	Solid	2540G	
580-102849-3	DWP-SB-1-1	Total/NA	Solid	2540G	
580-102849-18	DWP-SB-6-0	Total/NA	Solid	2540G	
580-102849-19	DWP-SB-6-1	Total/NA	Solid	2540G	
580-102849-20	DWP-SB-6-2	Total/NA	Solid	2540G	
580-102849-21	DWP-SB-6-3	Total/NA	Solid	2540G	
580-102849-3 DU	DWP-SB-1-1	Total/NA	Solid	2540G	

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-1-0

Lab Sample ID: 580-102849-1

Date Collected: 04/29/21 09:30

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356494	05/13/21 12:24	RJL	FGS SEA
Total/NA	Analysis	9060A		1	356302	05/11/21 13:49	FCG	FGS SEA

Client Sample ID: DWP-SB-1-0

Lab Sample ID: 580-102849-1

Date Collected: 04/29/21 09:30

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 86.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356370	05/12/21 09:26	ABP	FGS SEA
Total/NA	Analysis	8270E		5	356466	05/13/21 23:44	W1T	FGS SEA
Total/NA	Prep	3546			356391	05/12/21 11:42	ABP	FGS SEA
Total/NA	Analysis	8082A		1	356799	05/18/21 13:06	T1L	FGS SEA

Client Sample ID: DWP-SB-1-0

Lab Sample ID: 580-102849-1

Date Collected: 04/29/21 09:30

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 86.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			355879	05/05/21 15:19	RJL	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356321	05/12/21 05:27	T1W	FGS SEA
Total/NA	Prep	3050B			356096	05/08/21 09:29	JCP	FGS SEA
Total/NA	Analysis	6020B		5	356264	05/10/21 18:39	FCW	FGS SEA
Total/NA	Prep	7471A			356408	05/12/21 14:54	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356491	05/12/21 17:21	C1K	FGS SEA

Client Sample ID: DWP-SB-1-0-D

Lab Sample ID: 580-102849-2

Date Collected: 04/29/21 09:32

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356494	05/13/21 12:27	RJL	FGS SEA
Total/NA	Analysis	9060A		1	356302	05/11/21 13:54	FCG	FGS SEA

Client Sample ID: DWP-SB-1-0-D

Lab Sample ID: 580-102849-2

Date Collected: 04/29/21 09:32

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 79.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			355879	05/05/21 15:19	RJL	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356321	05/12/21 06:27	T1W	FGS SEA
Total/NA	Prep	3050B			356096	05/08/21 09:29	JCP	FGS SEA
Total/NA	Analysis	6020B		5	356264	05/10/21 18:43	FCW	FGS SEA

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-1-0-D

Lab Sample ID: 580-102849-2

Date Collected: 04/29/21 09:32

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 86.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356370	05/12/21 09:26	ABP	FGS SEA
Total/NA	Analysis	8270E		5	356466	05/14/21 00:08	W1T	FGS SEA
Total/NA	Prep	3546			356391	05/12/21 11:42	ABP	FGS SEA
Total/NA	Analysis	8082A		1	356799	05/18/21 13:24	T1L	FGS SEA
Total/NA	Prep	7471A			356408	05/12/21 14:54	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356491	05/12/21 17:24	C1K	FGS SEA

Client Sample ID: DWP-SB-1-1

Lab Sample ID: 580-102849-3

Date Collected: 04/29/21 09:45

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356494	05/13/21 12:27	RJL	FGS SEA
Total/NA	Analysis	9060A		1	356302	05/11/21 13:59	FCG	FGS SEA

Client Sample ID: DWP-SB-1-1

Lab Sample ID: 580-102849-3

Date Collected: 04/29/21 09:45

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 79.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356370	05/12/21 09:26	ABP	FGS SEA
Total/NA	Analysis	8270E		5	356466	05/14/21 00:31	W1T	FGS SEA
Total/NA	Prep	3546			356391	05/12/21 11:42	ABP	FGS SEA
Total/NA	Analysis	8082A		1	356799	05/18/21 13:42	T1L	FGS SEA
Total/NA	Prep	3546			355879	05/05/21 15:19	RJL	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356321	05/12/21 06:46	T1W	FGS SEA
Total/NA	Prep	3050B			356096	05/08/21 09:29	JCP	FGS SEA
Total/NA	Analysis	6020B		5	356264	05/10/21 18:47	FCW	FGS SEA
Total/NA	Prep	7471A			356408	05/12/21 14:54	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356491	05/12/21 17:26	C1K	FGS SEA

Client Sample ID: DWP-SB-2-0

Lab Sample ID: 580-102849-4

Date Collected: 04/29/21 10:14

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356410	05/12/21 15:17	FCG	FGS SEA
Total/NA	Analysis	9060A		1	356302	05/11/21 14:04	FCG	FGS SEA

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-2-0

Lab Sample ID: 580-102849-4

Date Collected: 04/29/21 10:14

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 91.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356370	05/12/21 09:26	ABP	FGS SEA
Total/NA	Analysis	8270E		5	356466	05/14/21 00:55	W1T	FGS SEA
Total/NA	Prep	3546			356391	05/12/21 11:42	ABP	FGS SEA
Total/NA	Analysis	8082A		1	356799	05/18/21 13:59	T1L	FGS SEA
Total/NA	Prep	3546			355879	05/05/21 15:19	RJL	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356321	05/12/21 07:06	T1W	FGS SEA
Total/NA	Prep	3050B			356096	05/08/21 09:29	JCP	FGS SEA
Total/NA	Analysis	6020B		5	356264	05/10/21 18:51	FCW	FGS SEA
Total/NA	Prep	7471A			356408	05/12/21 14:54	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356491	05/12/21 17:29	C1K	FGS SEA

Client Sample ID: DWP-SB-2-1

Lab Sample ID: 580-102849-5

Date Collected: 04/29/21 10:25

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356410	05/12/21 15:17	FCG	FGS SEA
Total/NA	Analysis	9060A		1	356302	05/11/21 14:08	FCG	FGS SEA

Client Sample ID: DWP-SB-2-1

Lab Sample ID: 580-102849-5

Date Collected: 04/29/21 10:25

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 87.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356370	05/12/21 09:26	ABP	FGS SEA
Total/NA	Analysis	8270E		5	356466	05/14/21 01:18	W1T	FGS SEA
Total/NA	Prep	3546			356391	05/12/21 11:42	ABP	FGS SEA
Total/NA	Analysis	8082A		1	356799	05/18/21 14:17	T1L	FGS SEA
Total/NA	Prep	3546			355879	05/05/21 15:19	RJL	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356321	05/12/21 07:26	T1W	FGS SEA
Total/NA	Prep	3050B			356096	05/08/21 09:29	JCP	FGS SEA
Total/NA	Analysis	6020B		5	356264	05/10/21 18:55	FCW	FGS SEA
Total/NA	Prep	7471A			356408	05/12/21 14:54	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356491	05/12/21 17:31	C1K	FGS SEA

Client Sample ID: DWP-SB-2-2

Lab Sample ID: 580-102849-6

Date Collected: 04/29/21 10:35

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356410	05/12/21 15:17	FCG	FGS SEA
Total/NA	Analysis	9060A		1	356302	05/11/21 14:13	FCG	FGS SEA

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-2-2

Lab Sample ID: 580-102849-6

Date Collected: 04/29/21 10:35

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 88.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356379	05/12/21 09:53	ABP	FGS SEA
Total/NA	Analysis	8270E		5	356541	05/14/21 20:11	E1L	FGS SEA
Total/NA	Prep	3546			356391	05/12/21 11:42	ABP	FGS SEA
Total/NA	Analysis	8082A		1	356799	05/18/21 14:35	T1L	FGS SEA
Total/NA	Prep	3546			355879	05/05/21 15:19	RJL	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356321	05/12/21 07:45	T1W	FGS SEA
Total/NA	Prep	3050B			356096	05/08/21 09:29	JCP	FGS SEA
Total/NA	Analysis	6020B		5	356264	05/10/21 18:59	FCW	FGS SEA
Total/NA	Prep	7471A			356408	05/12/21 14:54	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356491	05/12/21 17:33	C1K	FGS SEA

Client Sample ID: DWP-SB-2-3

Lab Sample ID: 580-102849-7

Date Collected: 04/29/21 11:05

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356410	05/12/21 15:17	FCG	FGS SEA
Total/NA	Analysis	9060A		1	356302	05/11/21 14:18	FCG	FGS SEA

Client Sample ID: DWP-SB-2-3

Lab Sample ID: 580-102849-7

Date Collected: 04/29/21 11:05

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 91.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356370	05/12/21 09:26	ABP	FGS SEA
Total/NA	Analysis	8270E		5	356466	05/14/21 01:42	W1T	FGS SEA
Total/NA	Prep	3546			356391	05/12/21 11:42	ABP	FGS SEA
Total/NA	Analysis	8082A		1	356799	05/18/21 14:53	T1L	FGS SEA
Total/NA	Prep	3546			355879	05/05/21 15:19	RJL	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356321	05/12/21 08:05	T1W	FGS SEA
Total/NA	Prep	3050B			356096	05/08/21 09:29	JCP	FGS SEA
Total/NA	Analysis	6020B		5	356264	05/10/21 19:02	FCW	FGS SEA
Total/NA	Prep	7471A			356408	05/12/21 14:54	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356491	05/12/21 17:35	C1K	FGS SEA

Client Sample ID: DWP-SB-3-0

Lab Sample ID: 580-102849-8

Date Collected: 04/29/21 11:25

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356410	05/12/21 15:17	FCG	FGS SEA
Total/NA	Analysis	9060A		1	356302	05/11/21 14:28	FCG	FGS SEA

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-3-0

Lab Sample ID: 580-102849-8

Date Collected: 04/29/21 11:25

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 89.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356370	05/12/21 09:26	ABP	FGS SEA
Total/NA	Analysis	8270E		10	356541	05/14/21 12:40	E1L	FGS SEA
Total/NA	Prep	3546			356391	05/12/21 11:42	ABP	FGS SEA
Total/NA	Analysis	8082A		1	356799	05/18/21 15:11	T1L	FGS SEA
Total/NA	Prep	3546			355879	05/05/21 15:19	RJL	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356321	05/12/21 08:25	T1W	FGS SEA
Total/NA	Prep	3050B			355949	05/06/21 14:10	C1K	FGS SEA
Total/NA	Analysis	6020B		5	356151	05/07/21 11:56	FCW	FGS SEA
Total/NA	Prep	7471A			356408	05/12/21 14:54	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356491	05/12/21 17:03	C1K	FGS SEA

Client Sample ID: DWP-SB-3-1

Lab Sample ID: 580-102849-9

Date Collected: 04/29/21 11:45

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356410	05/12/21 15:17	FCG	FGS SEA
Total/NA	Analysis	9060A		1	356302	05/11/21 14:42	FCG	FGS SEA

Client Sample ID: DWP-SB-3-1

Lab Sample ID: 580-102849-9

Date Collected: 04/29/21 11:45

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 88.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356370	05/12/21 09:26	ABP	FGS SEA
Total/NA	Analysis	8270E		5	356541	05/14/21 13:51	E1L	FGS SEA
Total/NA	Prep	3546			355875	05/05/21 15:06	ABP	FGS SEA
Total/NA	Analysis	8082A		1	355978	05/06/21 21:58	ADB	FGS SEA
Total/NA	Prep	3546			355879	05/05/21 15:19	RJL	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356321	05/12/21 09:24	T1W	FGS SEA
Total/NA	Prep	3050B			355949	05/06/21 14:10	C1K	FGS SEA
Total/NA	Analysis	6020B		5	356151	05/07/21 12:38	FCW	FGS SEA
Total/NA	Prep	7471A			356408	05/12/21 14:54	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356491	05/12/21 17:44	C1K	FGS SEA

Client Sample ID: DWP-SB-3-2

Lab Sample ID: 580-102849-10

Date Collected: 04/29/21 12:20

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356410	05/12/21 15:17	FCG	FGS SEA
Total/NA	Analysis	9060A		1	356302	05/11/21 14:47	FCG	FGS SEA

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-3-2

Lab Sample ID: 580-102849-10

Date Collected: 04/29/21 12:20

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 86.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356370	05/12/21 09:26	ABP	FGS SEA
Total/NA	Analysis	8270E		5	356541	05/14/21 14:15	E1L	FGS SEA
Total/NA	Prep	3546			355875	05/05/21 15:06	ABP	FGS SEA
Total/NA	Analysis	8082A		1	355978	05/06/21 22:16	ADB	FGS SEA
Total/NA	Prep	3546			355879	05/05/21 15:19	RJL	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356321	05/12/21 10:04	T1W	FGS SEA
Total/NA	Prep	3050B			355949	05/06/21 14:10	C1K	FGS SEA
Total/NA	Analysis	6020B		5	356151	05/07/21 12:42	FCW	FGS SEA
Total/NA	Prep	7471A			356573	05/14/21 11:36	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356707	05/14/21 16:04	C1K	FGS SEA

Client Sample ID: DWP-SB-4-0

Lab Sample ID: 580-102849-11

Date Collected: 04/29/21 13:35

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356410	05/12/21 15:17	FCG	FGS SEA
Total/NA	Analysis	9060A		1	356302	05/11/21 14:52	FCG	FGS SEA

Client Sample ID: DWP-SB-4-0

Lab Sample ID: 580-102849-11

Date Collected: 04/29/21 13:35

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 95.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356370	05/12/21 09:26	ABP	FGS SEA
Total/NA	Analysis	8270E		20	356541	05/14/21 14:39	E1L	FGS SEA
Total/NA	Prep	3546			355875	05/05/21 15:06	ABP	FGS SEA
Total/NA	Analysis	8082A		1	355978	05/06/21 22:34	ADB	FGS SEA
Total/NA	Prep	3546			355879	05/05/21 15:19	RJL	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356321	05/12/21 10:24	T1W	FGS SEA
Total/NA	Prep	3050B			355949	05/06/21 14:10	C1K	FGS SEA
Total/NA	Analysis	6020B		5	356151	05/07/21 12:46	FCW	FGS SEA
Total/NA	Prep	7471A			356573	05/14/21 11:36	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356707	05/14/21 16:13	C1K	FGS SEA

Client Sample ID: DWP-SB-4-1

Lab Sample ID: 580-102849-12

Date Collected: 04/29/21 13:45

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356410	05/12/21 15:17	FCG	FGS SEA
Total/NA	Analysis	9060A		1	356302	05/11/21 14:56	FCG	FGS SEA

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-4-1

Lab Sample ID: 580-102849-12

Date Collected: 04/29/21 13:45

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 94.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356370	05/12/21 09:26	ABP	FGS SEA
Total/NA	Analysis	8270E		20	356541	05/14/21 15:03	E1L	FGS SEA
Total/NA	Prep	3546			355875	05/05/21 15:06	ABP	FGS SEA
Total/NA	Analysis	8082A		1	355978	05/06/21 22:51	ADB	FGS SEA
Total/NA	Prep	3546			355879	05/05/21 15:19	RJL	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356321	05/12/21 11:03	T1W	FGS SEA
Total/NA	Prep	3050B			355949	05/06/21 14:10	C1K	FGS SEA
Total/NA	Analysis	6020B		5	356151	05/07/21 12:50	FCW	FGS SEA
Total/NA	Prep	7471A			356573	05/14/21 11:36	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356707	05/14/21 16:16	C1K	FGS SEA

Client Sample ID: DWP-SB-4-2

Lab Sample ID: 580-102849-13

Date Collected: 04/29/21 14:00

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356410	05/12/21 15:17	FCG	FGS SEA
Total/NA	Analysis	9060A		1	356302	05/11/21 15:01	FCG	FGS SEA

Client Sample ID: DWP-SB-4-2

Lab Sample ID: 580-102849-13

Date Collected: 04/29/21 14:00

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 91.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356379	05/12/21 09:53	ABP	FGS SEA
Total/NA	Analysis	8270E		10	356541	05/14/21 15:27	E1L	FGS SEA
Total/NA	Prep	3546			355875	05/05/21 15:06	ABP	FGS SEA
Total/NA	Analysis	8082A		1	355978	05/06/21 23:09	ADB	FGS SEA
Total/NA	Prep	3546			355879	05/05/21 15:19	RJL	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356321	05/12/21 11:23	T1W	FGS SEA
Total/NA	Prep	3050B			355949	05/06/21 14:10	C1K	FGS SEA
Total/NA	Analysis	6020B		5	356151	05/07/21 12:53	FCW	FGS SEA
Total/NA	Prep	7471A			356573	05/14/21 11:36	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356707	05/14/21 16:18	C1K	FGS SEA

Client Sample ID: DWP-SB-5-0

Lab Sample ID: 580-102849-14

Date Collected: 04/29/21 14:15

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356410	05/12/21 15:17	FCG	FGS SEA
Total/NA	Analysis	9060A		1	356302	05/11/21 15:06	FCG	FGS SEA

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-5-0

Lab Sample ID: 580-102849-14

Date Collected: 04/29/21 14:15

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356379	05/12/21 09:53	ABP	FGS SEA
Total/NA	Analysis	8270E		5	356541	05/14/21 17:00	E1L	FGS SEA
Total/NA	Prep	3546			355875	05/05/21 15:06	ABP	FGS SEA
Total/NA	Analysis	8082A		1	355978	05/06/21 23:26	ADB	FGS SEA
Total/NA	Prep	3546			355879	05/05/21 15:19	RJL	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356321	05/12/21 11:43	T1W	FGS SEA
Total/NA	Prep	3050B			355949	05/06/21 14:10	C1K	FGS SEA
Total/NA	Analysis	6020B		5	356151	05/07/21 12:57	FCW	FGS SEA
Total/NA	Prep	7471A			356573	05/14/21 11:36	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356707	05/14/21 16:21	C1K	FGS SEA

Client Sample ID: DWP-SB-5-1

Lab Sample ID: 580-102849-15

Date Collected: 04/29/21 14:30

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356410	05/12/21 15:17	FCG	FGS SEA
Total/NA	Analysis	9060A		1	356389	05/11/21 17:40	FCG	FGS SEA

Client Sample ID: DWP-SB-5-1

Lab Sample ID: 580-102849-15

Date Collected: 04/29/21 14:30

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 92.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356379	05/12/21 09:53	ABP	FGS SEA
Total/NA	Analysis	8270E		5	356541	05/14/21 17:24	E1L	FGS SEA
Total/NA	Prep	3546			355875	05/05/21 15:06	ABP	FGS SEA
Total/NA	Analysis	8082A		1	355978	05/06/21 23:44	ADB	FGS SEA
Total/NA	Prep	3546			355879	05/05/21 15:33	RJL	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356321	05/12/21 12:02	T1W	FGS SEA
Total/NA	Prep	3050B			355949	05/06/21 14:10	C1K	FGS SEA
Total/NA	Analysis	6020B		5	356151	05/07/21 13:01	FCW	FGS SEA
Total/NA	Prep	7471A			356573	05/14/21 11:36	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356707	05/14/21 16:23	C1K	FGS SEA

Client Sample ID: DWP-SB-5-2

Lab Sample ID: 580-102849-16

Date Collected: 04/29/21 14:50

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356410	05/12/21 15:17	FCG	FGS SEA
Total/NA	Analysis	9060A		1	356389	05/11/21 17:55	FCG	FGS SEA

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-5-2

Lab Sample ID: 580-102849-16

Date Collected: 04/29/21 14:50

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 90.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356379	05/12/21 09:53	ABP	FGS SEA
Total/NA	Analysis	8270E		5	356541	05/14/21 17:48	E1L	FGS SEA
Total/NA	Prep	3546			355875	05/05/21 15:06	ABP	FGS SEA
Total/NA	Analysis	8082A		1	355978	05/07/21 00:02	ADB	FGS SEA
Total/NA	Prep	3546			355879	05/05/21 15:33	RJL	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356321	05/12/21 12:22	T1W	FGS SEA
Total/NA	Prep	3050B			355949	05/06/21 14:10	C1K	FGS SEA
Total/NA	Analysis	6020B		5	356151	05/07/21 13:05	FCW	FGS SEA
Total/NA	Prep	7471A			356573	05/14/21 11:36	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356707	05/14/21 16:25	C1K	FGS SEA

Client Sample ID: DWP-SB-5-3

Lab Sample ID: 580-102849-17

Date Collected: 04/29/21 15:00

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356410	05/12/21 15:17	FCG	FGS SEA
Total/NA	Analysis	9060A		1	356389	05/11/21 18:00	FCG	FGS SEA

Client Sample ID: DWP-SB-5-3

Lab Sample ID: 580-102849-17

Date Collected: 04/29/21 15:00

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 90.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356379	05/12/21 09:53	ABP	FGS SEA
Total/NA	Analysis	8270E		5	356541	05/14/21 18:11	E1L	FGS SEA
Total/NA	Prep	3546			355875	05/05/21 15:06	ABP	FGS SEA
Total/NA	Analysis	8082A		1	355978	05/07/21 00:19	ADB	FGS SEA
Total/NA	Prep	3546			356426	05/12/21 16:07	ABP	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356563	05/14/21 19:00	JKM	FGS SEA
Total/NA	Prep	3050B			355949	05/06/21 14:10	C1K	FGS SEA
Total/NA	Analysis	6020B		5	356151	05/07/21 13:09	FCW	FGS SEA
Total/NA	Prep	7471A			356573	05/14/21 11:36	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356707	05/14/21 16:33	C1K	FGS SEA

Client Sample ID: DWP-SB-6-0

Lab Sample ID: 580-102849-18

Date Collected: 04/29/21 15:15

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356494	05/13/21 12:12	RJL	FGS SEA
Total/NA	Analysis	9060A		1	356389	05/11/21 18:05	FCG	FGS SEA

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-6-0

Lab Sample ID: 580-102849-18

Date Collected: 04/29/21 15:15

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 85.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356379	05/12/21 09:53	ABP	FGS SEA
Total/NA	Analysis	8270E		10	356541	05/14/21 18:35	E1L	FGS SEA
Total/NA	Prep	3546			355875	05/05/21 15:06	ABP	FGS SEA
Total/NA	Analysis	8082A		1	355978	05/07/21 00:37	ADB	FGS SEA
Total/NA	Prep	3546			356426	05/12/21 16:07	ABP	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356563	05/14/21 19:40	JKM	FGS SEA
Total/NA	Prep	3050B			355949	05/06/21 14:10	C1K	FGS SEA
Total/NA	Analysis	6020B		5	356151	05/07/21 13:32	FCW	FGS SEA
Total/NA	Prep	7471A			356573	05/14/21 11:36	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356707	05/14/21 16:35	C1K	FGS SEA

Client Sample ID: DWP-SB-6-1

Lab Sample ID: 580-102849-19

Date Collected: 04/29/21 15:30

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356494	05/13/21 12:12	RJL	FGS SEA
Total/NA	Analysis	9060A		1	356389	05/11/21 18:14	FCG	FGS SEA

Client Sample ID: DWP-SB-6-1

Lab Sample ID: 580-102849-19

Date Collected: 04/29/21 15:30

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 85.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356379	05/12/21 09:53	ABP	FGS SEA
Total/NA	Analysis	8270E		10	356541	05/14/21 18:59	E1L	FGS SEA
Total/NA	Prep	3546			355875	05/05/21 15:06	ABP	FGS SEA
Total/NA	Analysis	8082A		1	355978	05/07/21 00:55	ADB	FGS SEA
Total/NA	Prep	3546			356426	05/12/21 16:07	ABP	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356563	05/14/21 20:21	JKM	FGS SEA
Total/NA	Prep	3050B			355949	05/06/21 14:10	C1K	FGS SEA
Total/NA	Analysis	6020B		5	356151	05/07/21 13:35	FCW	FGS SEA
Total/NA	Prep	7471A			356573	05/14/21 11:36	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356707	05/14/21 16:37	C1K	FGS SEA

Client Sample ID: DWP-SB-6-2

Lab Sample ID: 580-102849-20

Date Collected: 04/29/21 15:40

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356494	05/13/21 12:12	RJL	FGS SEA
Total/NA	Analysis	9060A		1	356389	05/11/21 18:19	FCG	FGS SEA

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: DWP-SB-6-2

Lab Sample ID: 580-102849-20

Date Collected: 04/29/21 15:40

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 87.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356379	05/12/21 09:53	ABP	FGS SEA
Total/NA	Analysis	8270E		5	356541	05/14/21 19:23	E1L	FGS SEA
Total/NA	Prep	3546			355875	05/05/21 15:06	ABP	FGS SEA
Total/NA	Analysis	8082A		1	355978	05/07/21 01:12	ADB	FGS SEA
Total/NA	Prep	3546			356426	05/12/21 16:07	ABP	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356563	05/14/21 20:40	JKM	FGS SEA
Total/NA	Prep	3050B			355949	05/06/21 14:10	C1K	FGS SEA
Total/NA	Analysis	6020B		5	356151	05/07/21 13:39	FCW	FGS SEA
Total/NA	Prep	7471A			356573	05/14/21 11:36	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356707	05/14/21 16:40	C1K	FGS SEA

Client Sample ID: DWP-SB-6-3

Lab Sample ID: 580-102849-21

Date Collected: 04/29/21 15:45

Matrix: Solid

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	2540G		1	356494	05/13/21 12:12	RJL	FGS SEA
Total/NA	Analysis	9060A		1	356389	05/11/21 18:24	FCG	FGS SEA

Client Sample ID: DWP-SB-6-3

Lab Sample ID: 580-102849-21

Date Collected: 04/29/21 15:45

Matrix: Solid

Date Received: 05/04/21 12:00

Percent Solids: 88.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			356379	05/12/21 09:53	ABP	FGS SEA
Total/NA	Analysis	8270E		10	356541	05/14/21 19:47	E1L	FGS SEA
Total/NA	Prep	3546			355875	05/05/21 15:06	ABP	FGS SEA
Total/NA	Analysis	8082A		1	355978	05/07/21 01:30	ADB	FGS SEA
Total/NA	Prep	3546			356426	05/12/21 16:07	ABP	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356563	05/14/21 21:00	JKM	FGS SEA
Total/NA	Prep	3050B			355949	05/06/21 14:10	C1K	FGS SEA
Total/NA	Analysis	6020B		5	356151	05/07/21 13:43	FCW	FGS SEA
Total/NA	Prep	7471A			356573	05/14/21 11:36	C1K	FGS SEA
Total/NA	Analysis	7471A		1	356707	05/14/21 16:42	C1K	FGS SEA

Client Sample ID: ER-1-042921

Lab Sample ID: 580-102849-22

Date Collected: 04/29/21 06:00

Matrix: Water

Date Received: 05/04/21 12:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			355848	05/05/21 11:19	PMS	FGS SEA
Total/NA	Analysis	8270E		1	355915	05/06/21 13:44	W1T	FGS SEA
Total/NA	Prep	3510C			355853	05/05/21 12:10	JBT	FGS SEA
Total/NA	Analysis	8082A		1	356093	05/08/21 07:47	JKM	FGS SEA

Lab Chronicle

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Client Sample ID: ER-1-042921

Lab Sample ID: 580-102849-22

Date Collected: 04/29/21 06:00

Matrix: Water

Date Received: 05/04/21 12:00

<u>Prep Type</u>	<u>Batch Type</u>	<u>Batch Method</u>	<u>Run</u>	<u>Dilution Factor</u>	<u>Batch Number</u>	<u>Prepared or Analyzed</u>	<u>Analyst</u>	<u>Lab</u>
Total/NA	Prep	3510C	RE		356325	05/11/21 17:45	JBT	FGS SEA
Total/NA	Analysis	8082A	RE	1	356354	05/12/21 14:28	JKM	FGS SEA
Total/NA	Prep	3510C			355928	05/06/21 11:41	JBT	FGS SEA
Total/NA	Analysis	NWTPH-Dx		1	356218	05/10/21 22:42	JKM	FGS SEA
Total Recoverable	Prep	3005A			355883	05/05/21 16:03	C1K	FGS SEA
Total Recoverable	Analysis	6020B		1	355993	05/06/21 14:23	FCW	FGS SEA
Total/NA	Prep	7470A			355850	05/05/21 11:25	C1K	FGS SEA
Total/NA	Analysis	7470A		1	355904	05/05/21 17:53	C1K	FGS SEA

Laboratory References:

FGS SEA = Eurofins FGS, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Accreditation/Certification Summary

Client: Leidos, Inc.

Job ID: 580-102849-1

Project/Site: Duwamish Waterway Park

Laboratory: Eurofins FGS, Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

<u>Authority</u>	<u>Program</u>	<u>Identification Number</u>	<u>Expiration Date</u>
Washington	State	C788	07-13-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

<u>Analysis Method</u>	<u>Prep Method</u>	<u>Matrix</u>	<u>Analyte</u>
2540G		Solid	Percent Moisture
2540G		Solid	Percent Solids
8082A	3546	Solid	Polychlorinated biphenyls, Total
8270E	3510C	Water	Benzofluoranthene
8270E	3546	Solid	Benzofluoranthene
9060A		Solid	Total Organic Carbon - Average Dup

Method Summary

Client: Leidos, Inc.

Job ID: 580-102849-1

Project/Site: Duwamish Waterway Park

Method	Method Description	Protocol	Laboratory
8270E	Semivolatile Organic Compounds (GC/MS)	SW846	FGS SEA
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	FGS SEA
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	FGS SEA
6020B	Metals (ICP/MS)	SW846	FGS SEA
7470A	Mercury (CVAA)	SW846	FGS SEA
7471A	Mercury (CVAA)	SW846	FGS SEA
2540G	SM 2540G	SM22	FGS SEA
9060A	Organic Carbon, Total (TOC)	SW846	FGS SEA
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	FGS SEA
3050B	Preparation, Metals	SW846	FGS SEA
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	FGS SEA
3546	Microwave Extraction	SW846	FGS SEA
3665A	Sulfuric Acid/Permanganate Cleanup	SW846	FGS SEA
7470A	Preparation, Mercury	SW846	FGS SEA
7471A	Preparation, Mercury	SW846	FGS SEA

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

SM22 = Standard Methods For The Examination Of Water And Wastewater, 22nd Edition

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

FGS SEA = Eurofins FGS, Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

Sample Summary

Client: Leidos, Inc.
Project/Site: Duwamish Waterway Park

Job ID: 580-102849-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-102849-1	DWP-SB-1-0	Solid	04/29/21 09:30	05/04/21 12:00
580-102849-2	DWP-SB-1-0-D	Solid	04/29/21 09:32	05/04/21 12:00
580-102849-3	DWP-SB-1-1	Solid	04/29/21 09:45	05/04/21 12:00
580-102849-4	DWP-SB-2-0	Solid	04/29/21 10:14	05/04/21 12:00
580-102849-5	DWP-SB-2-1	Solid	04/29/21 10:25	05/04/21 12:00
580-102849-6	DWP-SB-2-2	Solid	04/29/21 10:35	05/04/21 12:00
580-102849-7	DWP-SB-2-3	Solid	04/29/21 11:05	05/04/21 12:00
580-102849-8	DWP-SB-3-0	Solid	04/29/21 11:25	05/04/21 12:00
580-102849-8 MS	DWP-SB-3-0	Solid	04/29/21 11:25	05/04/21 12:00
580-102849-8 MSD	DWP-SB-3-0	Solid	04/29/21 11:25	05/04/21 12:00
580-102849-9	DWP-SB-3-1	Solid	04/29/21 11:45	05/04/21 12:00
580-102849-10	DWP-SB-3-2	Solid	04/29/21 12:20	05/04/21 12:00
580-102849-11	DWP-SB-4-0	Solid	04/29/21 13:35	05/04/21 12:00
580-102849-12	DWP-SB-4-1	Solid	04/29/21 13:45	05/04/21 12:00
580-102849-13	DWP-SB-4-2	Solid	04/29/21 14:00	05/04/21 12:00
580-102849-14	DWP-SB-5-0	Solid	04/29/21 14:15	05/04/21 12:00
580-102849-15	DWP-SB-5-1	Solid	04/29/21 14:30	05/04/21 12:00
580-102849-16	DWP-SB-5-2	Solid	04/29/21 14:50	05/04/21 12:00
580-102849-17	DWP-SB-5-3	Solid	04/29/21 15:00	05/04/21 12:00
580-102849-18	DWP-SB-6-0	Solid	04/29/21 15:15	05/04/21 12:00
580-102849-19	DWP-SB-6-1	Solid	04/29/21 15:30	05/04/21 12:00
580-102849-20	DWP-SB-6-2	Solid	04/29/21 15:40	05/04/21 12:00
580-102849-21	DWP-SB-6-3	Solid	04/29/21 15:45	05/04/21 12:00
580-102849-22	ER-1-042921	Water	04/29/21 06:00	05/04/21 12:00

Chain of Custody Record 431491 eurofins

Environment Testing
TestAmerica

Address: _____
 Regulatory Program: DW NPDES RCRA Other: MTCA/SMS
 Project Manager: Tom Dubé Date: _____
 Tell/Email: dubet@leidos.com Carrier: _____

TAL-8210
 COC No: 580-43136-3788 of 2 COCs
 Sampler: SM
 For Lab Use Only:
 Walk-in Client:
 Lab Sampling:
 Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)										Sample Specific Notes:							
						Metals 6020B-LL	Hg 7471A	PCBS 8082A-LL	SVOCs 8270E-LL DMP	NMTPH-D x DEC/ORD	TOC 9060A	Moisture 2540G	Perform MS / MSD (Y/N)	Perchlorate	Chloride		Sulfate	Ammonia					
DWP-SB-1-0	4-29-21	0930	G	Soil	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DWP-SB-1-0-D		0932	G		2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DWP-SB-1-1		0945	G		2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DWP-SB-2-0		1014	G		2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DWP-SB-2-1		1025	G		2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DWP-SB-2-2		1035	G		2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DWP-SB-2-3		1105	G		2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DWP-SB-3-0		1125	G		6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	MS/MSD
DWP-SB-3-1		1145	G		2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DWP-SB-3-2		1220	G		2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DWP-SB-4-0		1335	G		2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DWP-SB-4-1		1345	G		2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other
 Possible Hazard Identification:
 Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
 Non-Hazard Flammable Skin Irritant Poison B Unknown
 Return to Client Disposal by Lab Archive for _____ Months

Special Instructions/QC Requirements & Comments:
 • All analytes expected to be low concentration. No need to dilute samples. • Report all "J" values. • Level IV Deliverables
 Custody Seal No.: _____
 Relinquished by: Tom Dubé Date/Time: 5/4/21 12:00
 Relinquished by: Leidos Date/Time: _____
 Relinquished by: _____ Date/Time: _____
 Received by: JM Date/Time: 5/4/21 12:00
 Received by: EFG Date/Time: _____
 Received in Laboratory by: _____ Date/Time: _____

