PHASE II ENVIRONMENTAL SITE ASSESSMENT

POULSBO RV PROPERTY

23051 Military Road South
Kent, Washington 98032

EHSI Project #11361-04

Prepared for:
Washington State Department of Transportation
P.O. Box 47323
Olympia, Washington 98504

Prepared by:
EHS–International, Inc.
1011 SW Klickitat Way, Suite 104
Seattle, Washington 98134

April 2020

- Environmental Consulting
- Hazardous Materials Management
- Industrial Hygiene Services
- Construction Management
- Indoor Air Quality

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ACRONYMS & ABBREVIATIONS

AST.....aboveground storage tank
bgs .....below ground surface
BTEX.....benzene, toluene, ethylbenzene, and total xylenes
CUL.....cleanup level
Ecology.....Washington State Department of Ecology
EHSI.....EHS-International, Inc.
EPA.....US Environmental Protection Agency
ESA.....Environmental Site Assessment
FBI.....Friedman & Bruya, Inc.
Holt.....Holt Drilling, Inc.
LSIA.....LSI Adapt
MTCA.....Washington State Model Toxics Control Act
mL.....milliliter
PCB.....polychlorinated biphenyl
PID .....photoionization detector
the Property .....23051 Military Road South in Kent, Washington
RCRA.....Resource Conservation and Recovery Act
RV.....recreational vehicle
SVOC.....semivolatile organic compound
TPH .....total petroleum hydrocarbons
µg/L.....micrograms per liter
US.....United States
UST.....underground storage tank
VCP.....Voluntary Cleanup Program
VOC.....volatile organic compound
WSDOT.....Washington State Department of Transportation

1.0 INTRODUCTION

On behalf of Washington State Department of Transportation (WSDOT), EHS-International, Inc. (EHSI) completed a Phase II Environmental Site Assessment (ESA) at the Poulsbo RV property located at 23051 Military Road South in Kent, Washington (the Property) for the purpose of identifying subsurface environmental conditions regarding a future building project. The fieldwork for the Phase II ESA took place between February 24 and March 5, 2020.

The Property is identified by the King County Assessor-Treasurer's records as parcel numbers 1522049027 and 7260200060. The site is known as the Washington State Department of Ecology (Ecology) Cleanup Site identification number 6674 and Ecology Voluntary Cleanup Program (VCP) number NW1486. The property was removed from the VCP upon the issue of a "no further action" letter provided by Ecology dated November 16, 2006.

The Property is developed with a 21,300-square-foot vehicle sales and service building with parking lots to the north and south (Figure 1). The Property is bordered by Military Road South to the east and by Interstate 5 (I-5) northbound on-ramp to the west (Figure 2). The Property is served by Puget Sound Energy for electricity, Highline Water District for drinking water, and City of Kent for sanitary sewer services.

1.1 Detailed Scope of Services

The scope of this ESA included drilling one soil boring and installing four monitoring wells, collecting soil and groundwater samples from the five drilling sites, and submitting the samples laboratory analysis.

1.2 Background

Two Phase I ESAs have been completed on the Property: LSI Adapt (LSIA; LSIA 2004a) and Environmental Associates, Inc. (Environmental Associates 2015). The research from the Phase I ESAs is summarized below:

- The Property was historically used for residential purposes until 1973 when the current office building was constructed.
- A second building was completed on the Property in 1980.
- The commercial occupants appear to have consisted of several glass/window businesses, "Valley Garages," a construction staging yard, and recreational vehicle (RV) sales and repair.
- Five underground storage tanks (USTs) were removed from the site in 1983.
- One 10,000-gallon UST was removed from the site by Enviros in September 1991, and three confirmation soil samples were collected following the removal. Ethylbenzene and xylenes were detected in the samples but at concentrations below Washington State Model Toxics Control Act (MTCA) Method A cleanup levels (CULs) for unrestricted land use criteria (Enviros 1991).
- Two 2,000-gallon gasoline USTs and one 1,000-gallon waste oil UST were removed from the site in 1998 by Sound Environmental Consulting. Approximately seven cubic yards of contaminated soil was excavated and disposed of off-site (Sound Environmental Consulting 1998).

LSIA completed a series of nine environmental borings (LSIA 2004b) that were drilled to evaluate subsurface soil conditions. Groundwater was not encountered at or above 30 feet below ground surface (bgs) during the investigation. A supplemental Limited Phase II ESA (LSIA 2005) was conducted that consisted of three additional borings. The Phase II ESA and supplemental investigation detected gasoline-range petroleum hydrocarbons, benzene, and xylenes in concentrations above MTCA Method A CULs in soil. The source of the release appears to have been the decommissioned 2,000-gallon UST located at the southeast corner of the southern building.

On November 16, 2006, Ecology granted a No Further Action determination letter that included a Restrictive Covenant due to soil remaining in place below the southern building.

On March 25, 2019, WSDOT collected two groundwater samples from the Property (locations and depths were not provided to EHSI). These groundwater samples were analyzed for the following: gasoline; diesel; heavy oils; benzene, toluene, ethylbenzene, total xylenes (BTEX); volatile organic compounds (VOCs); and metals. No exceedances of MTCA Method A CULs were found in the samples (OnSite Environmental, Inc. 2019).

2.0 PROJECT OBJECTIVES

Project objectives were as follows:

- Notify the Underground Utilities Locating Center of the planned underground work and request that public utility services be located and marked.
- Conduct a survey of underground utilities at the proposed soil drilling locations.
- Drill one soil boring and install four monitoring wells, as well as collect soil and groundwater samples for laboratory analysis.
- Develop soil cleanup cost estimate for soil removal.
- Prepare a final written report of the Phase II ESA field activities and sampling and testing results.

3.0 REGIONAL AND SITE HYDROGEOLOGY

The topography of the Property is relatively flat but slightly trends to the southeast with an elevation of approximately 340 feet above sea level. The area to the east the Property slopes easterly towards the Green River. Soils near the Property are mapped as the Alderwood Gravelly Sandy Loam and Arents, Alderwood Material by the US Department of Agriculture (1974). These soils are moderately drained and have slow to moderate infiltration rates. Booth and Waldron (2004) mapped the surface geology of the Property as Quaternary Vashon till (Qvt) deposits. The till is composed of moderately to highly compacted sand and gravel within a silt and clay matrix. Weathered or coarser lenses of the till can contain perched groundwater. Woodward and others (1995) mapped the thickness of Qvt to be 40 to 140 feet thick near the Property.

4.0 FIELD INVESTIGATION

4.1 Utility Locate Survey

On February 21, 2020, EHSI met Applied Professional Services, Inc. to locate and mark conductible utilities at the Property prior to drilling. The utility clearance survey did not identify buried utilities at the proposed soil boring locations.

4.2 Soil Borings

Boring B-1 and wells MW-1 through MW-4 were drilled and installed between February 24 and 26, 2020, by Holt Drilling, Inc. (Holt) using a hollow-stem auger drill rig. The locations are shown on Figure 2. The boring and wells were drilled to a depth of 35 feet bgs. Discrete samples were collected at 5-foot depth intervals from each boring and logged by a staff geologist, who assigned a Unified Soil Classification System group symbol to each soil sample description. Each sample interval was field screened using a photoionization detector (PID) and checked for odor, staining, and hydrocarbon sheen. Soil descriptions are included in the boring and well logs provided in Appendix A.

The locations are shown on Figure 2 and are detailed below:

- Boring B1 was advanced to the north of the northeast corner of the southern building to assess environmental conditions near a former aboveground storage tank (AST) storage area.
- Well MW-1 was advanced to the east of the northeast corner of the southern building to assess environmental conditions near the UST removal site to the south of the building.

- Well MW-2 was advanced along the eastern property boundary east of the southern building to assess environmental conditions along property boundary and to assess contamination (if any) possibly migrating off-site.
- Well MW-3 was advanced to the east of the southern building in the area of the former UST (removed) to assess the conditions adjacent to the former UST to the south of the building.
- Well MW-4 was advanced to the south of the southern building to assess the environmental condition of the area adjacent to a former fuel AST.

Each of the four monitoring wells was constructed with 15 feet of 2-inch-diameter, 0.020-slot PVC screen from approximately 20 to 35 feet bgs. The well was packed with 10x20 Colorado silica sand from the bottom of the well up to 3 feet above the top of the screen (17 feet bgs). The well was then sealed with hydrated 3/4-inch bentonite chips up to 2 feet bgs and finished with a flush mount steel monument in cement.

Soil cores, well development water, purge water, and decontamination water were contained in 55-gallon steel drums and are temporarily stored at the WSDOT staging site (adjacent to the Property). The drum removal will be coordinated by EHSI. Used nitrile gloves, other disposable personal protective gear, and disposable sampling equipment were placed in a garbage bag and disposed of as solid waste.

4.3 Soil Sampling

Soil samples were collected at 5-foot intervals. The glassware for each soil sample consisted of US Environmental Protection Agency (EPA) Method 5035 VOC sampling kits and 4-ounce glassware provided by the laboratory.

4.4 Groundwater Sampling

Prior to sampling, the four monitoring wells were developed by Holt on Friday, February 28, 2020. Approximately 10 to 15 gallons of water were purged from each of the wells using a submersible 1.5-inch-diameter pump. Following purge development, the water from the wells was mostly clear of particles and had a low turbidity. The water level sounder and submersible pump were decontaminated between wells.

On March 5, 2020, EHSI mobilized to the Property to collect groundwater samples from the installed monitoring wells. Prior to sampling, the four groundwater monitoring wells were opened and allowed to equilibrate to atmospheric pressure. The depth to groundwater was then measured at each well using an electronic water level sounder. Water levels were measured from a permanent mark the north side of the top of casing, and the bottom of the wells were sounded and measured for depth to water. Depths to groundwater were between 17.94 and 21.05 feet bgs.

On March 6, 2020, following collection of static water levels, the wells were sampled using a bladder pump and new polyethylene tubing. The polyethylene tubing was replaced, and the pump head was decontaminated between wells.

Prior to sample collection, each well was purged with a flow-through cell and water quality meter. Water quality parameters of temperature, conductivity, dissolved oxygen, pH, and oxidation-reduction potential were measured during purging using a YSI Pro Plus water quality meter prior to sampling. Water samples were collected following achievement of stabilization of the water quality parameters.

EHSI collected groundwater samples from each well. Samples were collected in three 40-milliliter (mL) volatile organic analysis vials, two 250 mL polyethylene bottles, one 500 mL amber bottle, and two 1-liter amber bottles and were filled from each boring.

The samples were placed in an iced cooler and kept at temperatures below 4 degrees Celsius until delivery to Friedman & Bruya, Inc. (FBI) analytical laboratory.

The groundwater samples data sheets are included in Appendix B.

4.5 Sampling Documentation

EHSI documented all field activities associated with soil and groundwater sampling. Documentation included a comprehensive discussion of field observations, such as field parameter measurements, and documentation of any problems encountered. All sample containers were labeled with the following information:

- EHSI project identification number;
- Sample date;
- Sampler's name; and
- Sample identification number.

Each soil sample collected was given a unique identification number as described below:

Soil boring/sample depth: For example, sample B1-15 is a sample collected from soil boring B1 (B1) at the sample interval depth of 15.0 feet bgs (15).

Each water sample collected was given a unique identification number as described below:

Well number: For example, sample MW1-1 is the groundwater sample collected from monitoring well MW-1.

In addition, the sample chain-of-custody forms were completed with EHSI project identification number, the sampler's name, date, and sample identification codes, number of containers, and date and time the sample was collected. The chain-of-custody form was included with samples transported to the analytical laboratory.

4.6 Decontamination Procedures and Waste Management

All non-disposable sampling equipment was decontaminated prior to and after each sampling operation. The specific steps used for decontamination of the equipment are as follows:

- Rinse and pre-clean equipment in potable water;
- Wash and scrub equipment with non-phosphate-based detergent and potable water;
- Rinse with potable water;
- Rinse in deionized water; and
- Air-dry and store in clean plastic bags (or Visqueen sheet) between samplings.

Investigation-derived wastes, such as drill cuttings and decontamination water, were stored temporarily on the adjacent WSDOT property in US Department of Transportation-approved, 55-gallon drums, pending the receipt of laboratory analytical results.

4.7 Sample Handling and Shipping

EHSI field personnel checked all sample containers for completeness and cap tightness. The sealed sample containers were then placed upright in a cooler and chilled with cold packs. The sample cooler was then placed in a field vehicle to await transportation to the analytical laboratory. All samples collected were transported, under chain-of-custody protocols to the FBI laboratory in Seattle, Washington, for analysis.

4.8 Laboratory Analyses

EHSI selected two soil samples from each location and groundwater samples from each well for laboratory analysis. No collectable groundwater was present within the temporary boring (B1). FBI analyzed the soil and groundwater samples for the following chemicals of concern:

- Gasoline-range TPH (total petroleum hydrocarbons) using Ecology Method NWTPH-Gx,

- Diesel- and oil-range TPH by Ecology Method NWTPH-Dx,
- Benzene, toluene, ethylbenzene, and total xylenes by EPA Method 8260D,
- VOCs by EPA Method 8260D,
- Polychlorinated biphenyls (PCBs) by EPA Method 8082A,
- Resource Conservation and Recovery Act (RCRA) 8 metals by EPA Method 6020B,
- Polycyclic aromatic hydrocarbons by EPA Method 8270E,
- One duplicate groundwater sample analyzed for VOCs by EPA Method 8260D, and
- Two duplicate soil samples analyzed for all of the above analytes and one for gasoline and VOCs.

5.0 INVESTIGATION RESULTS

5.1 Field Observations

No outward indications of contamination, such as elevated PID readings, unusual odors, or soil discoloration, were observed in the soil samples collected from the soil borings. PID readings were 0.0 parts per million for all of the recovered soil samples.

5.2 Soil Conditions

The Property is underlain by mostly medium to fine silty sands with gravel to a depth of approximately 35 feet bgs. The materials were consistent with glacial till deposits. Due to the nature of the soils, soil sample recovery volumes ranged from 0 to 90 percent. Details on the subsurface geology and sampling are documented on the boring and well logs in Appendix A.

5.3 Groundwater Conditions

Groundwater was encountered at approximately 27 to 32 feet bgs at the time of drilling. Groundwater depth measurements taken after the wells were installed and developed (March 5, 2020) were between 17.94 and 21.05 feet bgs. The direction of shallow groundwater flow is not clear on this relatively flat-lying upland area; surface topography slopes downhill generally to the southeast and regionally to the east. It can be assumed to flow in an east/southeasterly direction following local topography. EHSI did not determine the groundwater flow direction and groundwater gradient at the Property via a survey because WSDOT did not provide well elevation survey data as planned.

5.4 Analytical Results

5.4.1 Soil

In the absence of any outward indications of contamination, EHSI prioritized analysis of soil samples collected from either just above the apparent groundwater table, which was at approximately 25.0 feet bgs, or within the water table if no shallower samples were recovered. The soil analytical results are summarized below:

- Gasoline-, diesel, and oil-range TPH compounds were not detected in any of the soil samples;
- VOC and semivolatile organic compounds (SVOCs) were not detected in the soil samples at concentrations above laboratory reporting limits;
- RCRA 8 metals were detected, including arsenic, barium, chromium, and lead, in all analyzed soil samples. All concentrations of RCRA 8 metals were below applicable MCTA CULs; and
- PCB were not detected in soil samples.

Summaries of the soil analytical data are presented in Tables 3, 5, 7, 9, and 11. The analytical laboratory report is provided in Appendix C.

5.4.2 Groundwater

Groundwater samples were collected from the monitoring wells utilizing a bladder pump. The groundwater analytical results are summarized below:

- Diesel was detected in one sample (MW2-1) at 170 micrograms per liter (µg/L), well below the MTCA CUL of 500 µg/L. This result was also flagged by the laboratory as not matching the fuel quantitation standard.
- Gasoline- and oil-range TPH compounds were not detected in any of the groundwater samples at concentrations above laboratory reporting limits.
- VOCs and SVOCs were not detected in the groundwater samples at concentrations above laboratory reporting limits.
- RCRA 8 metals were detected in the groundwater samples; however, the concentrations were below applicable MCTA CULs.
- PCBs were not detected in groundwater samples at concentrations above laboratory reporting limits.

Summaries of the groundwater analytical data are presented in Tables 4, 6, 8, and 10. Copies of the analytical reports are included in Appendix C.

6.0 DATA QUALIFICATION

EHSI reviewed the lab reports and data qualifications as summarized below. EHSI determined that all of the data are acceptable for use in this Phase II ESA report.

- Three duplicate soil samples (MW-2-22.5, MW-3-15, and B1-30) were analyzed for TPH, VOCs, and metals, as part of the quality assurance/quality control process. Arsenic, barium, chromium, and lead present in both the sample and duplicate are approximately the same concentration and all below MTCA compliance levels. TPH and VOCs were not detected in the sample or the duplicate sample. One duplicate groundwater sample (MW-2-1) was analyzed for VOCs. VOCs were not detected in the sample or the duplicate sample. Relative percent difference between the two samples could not be calculated for undetected concentration values.
- The laboratory flagged the diesel result “x” for groundwater sample MW-2-1 because it did not match the fuel quantitation standard. This result was below MTCA CULs.

7.0 REGULATORY REVIEW

No MTCA exceedances in either soil or groundwater were detected in the samples collected from boring B1 or wells MW-1 through MW-4.

8.0 CONCLUSIONS

Based upon the results of soil and groundwater sampling and testing at the Property, environmental conditions in the areas sampled for this study were not adversely impacted by past releases at the locations and depths sampled.

The 55-gallon drums of soil cuttings and purge water are temporarily stored at a property adjacent to the north and may be disposed of as non-hazardous waste.

9.0 RECOMMENDATIONS

9.1 Current Assessment

Based on the information presented in this report, EHSI recommends no further action at this time.

9.2 Cost Estimate for Removal of Previously Detected Soil Contamination (2004)

In estimating the volume of petroleum- and BTEX-contaminated soil detected in the 2004 Adapt report at HB-1, the results from the soil samples at well boring MW-3 (current study), and soil boring GB-1 (Adapt 2004) were taken into consideration. Both of these sample locations were approximately 15 to 20 feet away from HB-1 in opposite directions and in assumed upgradient and downgradient relative positions (GB-1 up and MW-3 down) to the contaminated soil sample at HB-1. The petroleum and BTEX contaminants of concern were not detected in the surrounding soil samples from GB-1 or MW-3. Also, since groundwater in MW-3 did not show signs of contamination, considering its proximity to HB-1, it is reasonable to assume that contamination did not reach the groundwater in this area. The volume of contaminated soil to be removed and disposed of is based upon a body approximately 20 feet long, 20 feet wide, and 10 feet deep, which results in a total of 147 cubic yards. With these factors, we estimate the weight of contaminated soil needing to be excavated and disposed of at approximately 257 tons based upon a weight of 1.75 tons per cubic yard, which is typical for till soils. At an assumed cost of $72 per ton for the contaminated soil to be excavated, shipped, and disposed of, the cleanup cost is estimated at approximately $18,504. Combining additional costs associated with the removal (i.e., confirmation soil sampling, testing, and reporting) of about $5,000, the total estimated cost of contaminated soil removal would be approximately $23,504.

10.0 REFERENCES

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LSI Adapt, 2004b, Limited Phase II ESA of Kent - Poulsbo RV Site. Prepared for U.S. Bancorp.

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OnSite Environmental Inc., 2019, Analytical Data for Project SR509 Poulsbo, Laboratory Reference No. 1903-238.

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11.0 SIGNATURES

This Phase II ESA Report was prepared by the undersigned.

4/20/2020

Ryan Opitz — Date
Staff Geologist

4/20/2020

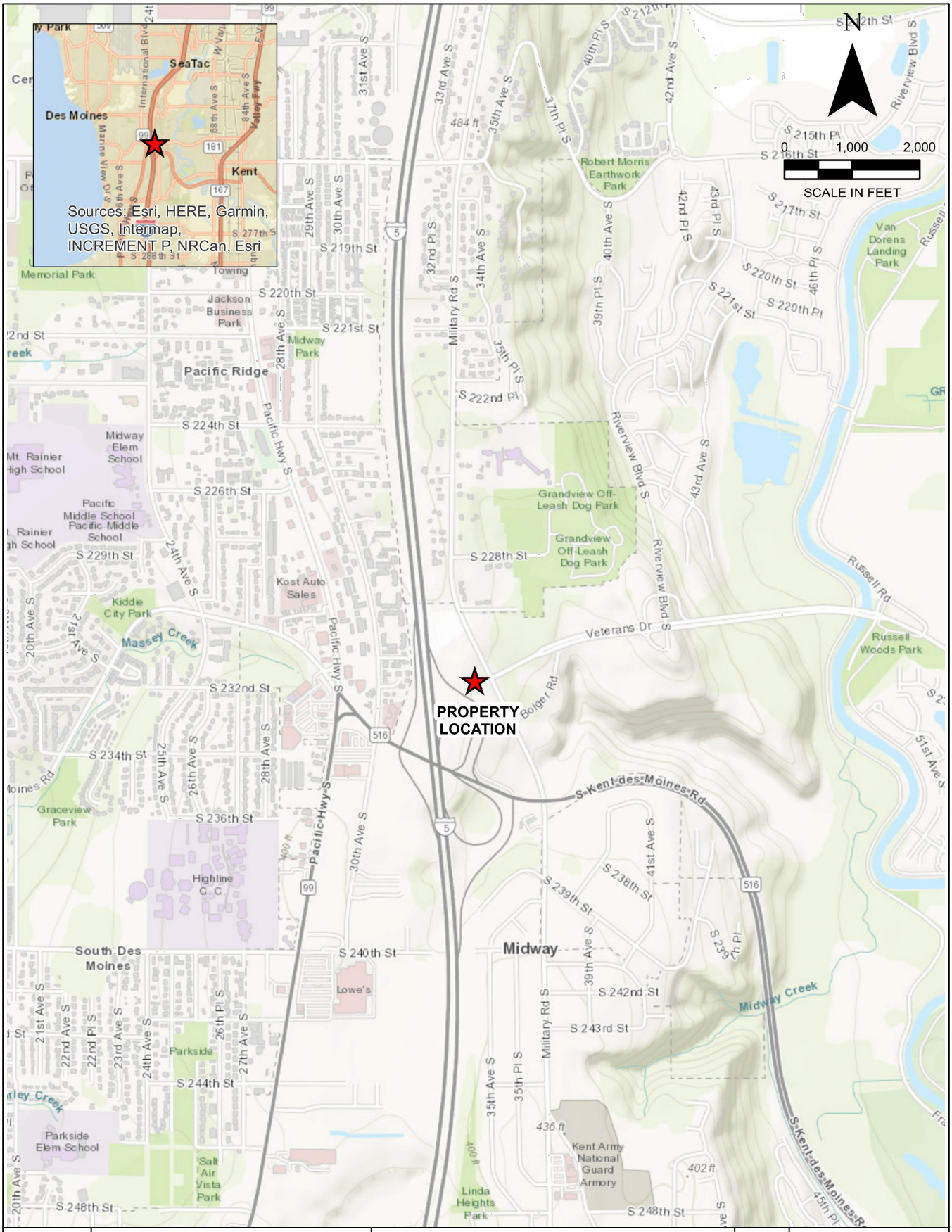
Jason Cass, L.G. — Date
Washington Licensed Geologist; License #2562.

12.0 PROJECT LIMITATIONS

The conclusions presented in report are professional opinions based upon our visual observations and physical testing. This report is intended exclusively for the purpose outline herein and at the site location and project indicated. This report is for the sole use of our client, WSDOT. Opinions and conclusions presented herein apply to site conditions existing at the time of execution of our Phase II ESA do not necessarily apply to future changes or other prior conditions at the site of which EHSI is not aware and has not had the opportunity to evaluate. The scope of services performed in execution of this Phase II ESA may not be appropriate to satisfy the needs of other users, and any use or reuse of the document or the findings, conclusions, or recommendations presented is at the sole risk of the said user.

EHSI's objective is to perform our work with care, exercising the customary thoroughness and competence of environmental consulting professionals in the relevant disciplines. Furthermore, we carried out our services in accordance with the standard for professional services by a consulting firm at the time those services were rendered. It is important to recognize that even the most comprehensive scope of services may fail to detect environmental liability on a particular site. Therefore, EHSI cannot act as insures and cannot "certify or underwrite" that a site is totally free of environmental liability. In addition, no expressed or implied representation or warranty is included or intended in our report except that our work was performed within the limits prescribed by our client, and with the customary thoroughness and competence of our profession.

FIGURES

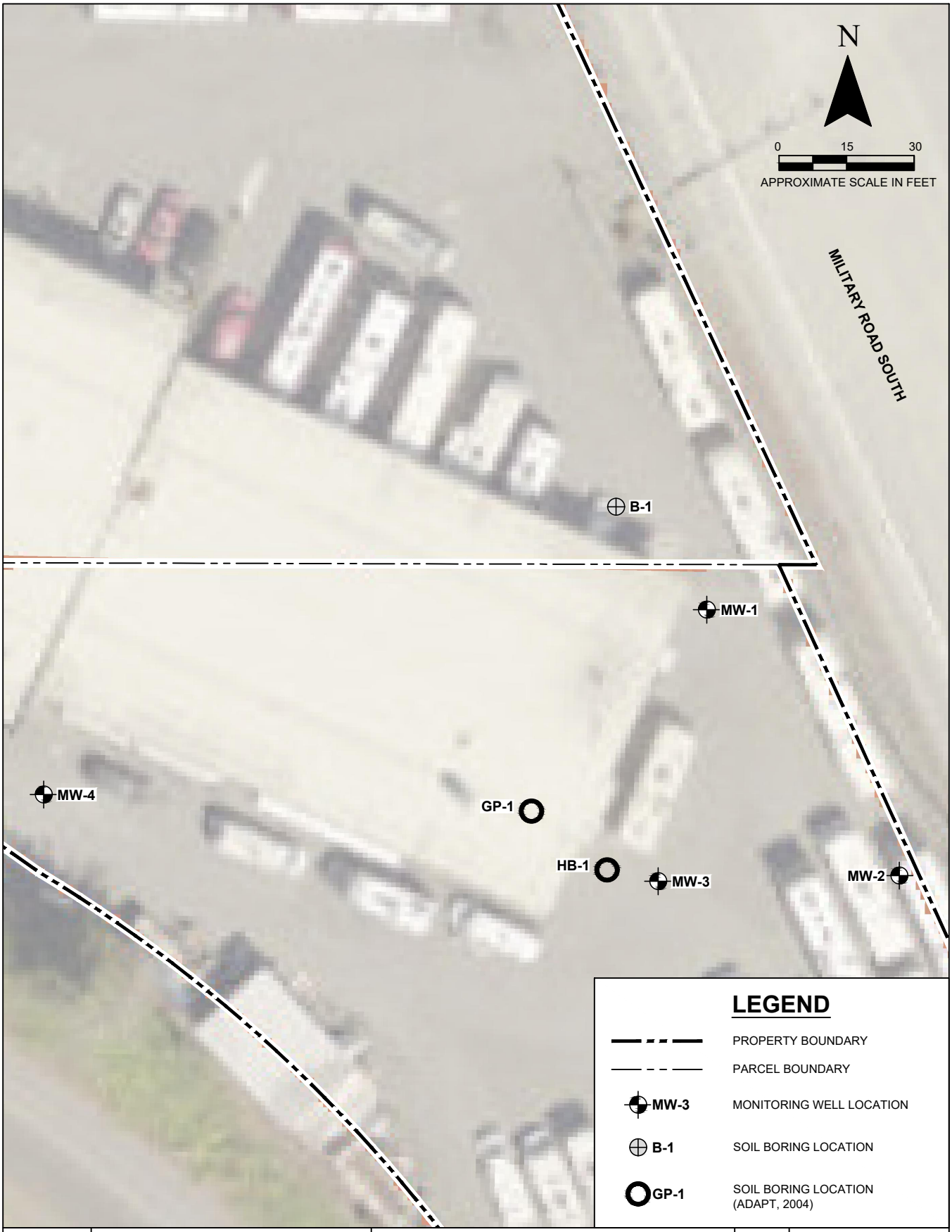


SHEET/FIGURE		
1	PROJECT MANAGER:	R. OPITZ
	EHSI PROJECT #:	11361
	PREPARED BY:	E. MONTIEL F.
	ISSUE DATE:	03/27/20
	SCALE:	SHOWN

POULSBO RV PROPERTY
PHASE II ENVIRONMENTAL SITE ASSESSMENT
23051 MILITARY ROAD SOUTH
KENT, WASHINGTON

PROPERTY LOCATION MAP

EHS-International, Inc.
1011 SW Klickitat Way, Suite 104
Seattle, Washington 98134
Ph: 206.381.1128
Fax: 206.254.4279



SHEET/FIGURE	PROJECT MANAGER:	R. OPITZ
2	EHSI PROJECT #:	11361
	PREPARED BY:	E. MONTIEL F.
	ISSUE DATE:	03/27/20
	SCALE:	SHOWN

POULSBO RV PROPERTY
PHASE II ENVIRONMENTAL SITE ASSESSMENT
23051 MILITARY ROAD SOUTH
KENT, WASHINGTON

SITE SAMPLING PLAN

ehsi
EHS-International, Inc.
1011 SW Klickitat Way, Suite 104
Seattle, Washington 98134
Ph: 206.381.1128
Fax: 206.254.4279

TABLES

TABLE 1: SOIL SAMPLE SOURCE INFORMATION Poulsbo RV PHASE II ESA, 23051 Military Road South, Kent, WA EHSI PROJECT #11361-04	
SOIL SAMPLE IDENTIFICATION	**SAMPLE LOCATION AND DEPTH**
MW-1-20	MW-1 at 20 feet bgs (east of the northeast corner of the southern building)
MW-1-30	MW-1 at 30 feet bgs
MW-2-22.5	MW-2 at 22.5 feet bgs (along the eastern property boundary east of the southern building)
MW-2-22.5 Dup	MW-2 at 22.5 feet bgs
MW-2-30	MW-2 at 30 feet bgs
MW-3-15	MW-3 at 15 feet bgs (east of the southern building in the area of the former UST)
MW-3-15 Dup	MW-3 at 15 feet bgs
MW-4-25	MW-4 at 25 feet bgs (south of the southern building)
MW-4-30	MW-4 at 30 feet bgs
B1-20	B1 at 20 feet bgs (north of the northeast corner of the southern building)
B1-30	B1 at 30 feet bgs
B1-30-Dup	B1 at 30 feet bgs

TABLE 2: GROUNDWATER SAMPLE SOURCE INFORMATION Poulsbo RV PHASE II ESA, 23051 Military Road South, Kent, WA EHSI PROJECT #11361-04	
GROUNDWATER SAMPLE IDENTIFICATION	**SAMPLE LOCATION**
MW1-1	MW-1 (east of the northeast corner of the southern building)
MW2-1	MW-2 (along the eastern property boundary east of the southern building)
MW2-1-DUP	MW-2 (east of the southern building in the area of the former UST)
MW3-1	MW-3 (south of the southern building)
MW$-1	MW-4 (north of the northeast corner of the southern building)

Table 3
Soil Analytical Results for TPH and BTEX
POULSBO RV PROPERTY
23051 Military Road South
Kent, Washington 98032

Well/Boring ID	Sample ID	Sampled By	Date Sampled	Depth (feet bgs)	Analytical Results (milligrams per kilogram)						
					GRPH[1]	DRPH[2]	ORPH[2]	Benzene[3]	Toluene[3]	Ethylbenzene[3]	Total Xylenes[3]
MW-1	MW-1-20	Ryan Opitz	2/25/2020	20	<5	<50	<250	<0.03	<0.05	<0.05	<0.2
	MW-1-30	Ryan Opitz	2/25/2020	30	<5	<50	<250	<0.03	<0.05	<0.05	<0.2
MW-2	MW-2-22.5	Ryan Opitz	2/24/2020	22.5	<5	<50	<250	<0.03	<0.05	<0.05	<0.2
	MW-2-22.5 Dup.	Ryan Opitz	2/24/2020	22.5	<5	<50	<250	<0.03	<0.05	<0.05	<0.2
	MW-2-30	Ryan Opitz	2/24/2020	30	<5	<50	<250	<0.03	<0.05	<0.05	<0.2
MW-3	MW-3-15	Ryan Opitz	2/25/2020	15	<5	<50	<250	<0.03	<0.05	<0.05	<0.2
	MW-3-15-Dup.	Ryan Opitz	2/25/2020	15	<5	<50	<250	<0.03	<0.05	<0.05	<0.2
	MW-3-30	Ryan Opitz	2/25/2020	30	<5	<50	<250	<0.03	<0.05	<0.05	<0.2
MW-4	MW-4-25	Ryan Opitz	2/26/2020	25	<5	<50	<250	<0.03	<0.05	<0.05	<0.2
	MW-4-30	Ryan Opitz	2/26/2020	30	<5	<50	<250	<0.03	<0.05	<0.05	<0.2
B1	B1-20	Ryan Opitz	2/27/2020	20	<5	<50	<250	<0.03	<0.05	<0.05	<0.2
	B1-30	Ryan Opitz	2/27/2020	30	<5	<50	<250	<0.03	<0.05	<0.05	<0.2
	B1-30-Dup.	Ryan Opitz	2/27/2020	30	<5	<50	<250	<0.03	<0.05	<0.05	<0.2
MTCA Cleanup Level for Soil[4]					**30**	**2,000**	**2,000**	**0.03**	**7**	**6**	**9**

NOTES:

Sample analyses conducted by Friedman & Bruya, Inc. in Seattle, Washington.

[1]Analyzed by Ecology Method NWTPH-Gx.

[2]Analyzed by Ecology Method NWTPH-Dx.

[3]Analyzed by EPA Method 8260D.

[4]MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 740-1 Method A Cleanup Levels for Soil, Unrestricted Land Uses, revised November 2007.

< = not detected at a concentration exceeding the laboratory reporting limit

bgs = below ground surface

BTEX = benzene, toluene, ethylbenzene, and total xylenes

DRPH = diesel-range petroleum hydrocarbons

Ecology = Washington State Department of Ecology

EPA = US Environmental Protection Agency

GRPH = gasoline-range petroleum hydrocarbons

MTCA = Washington State Model Toxics Control Act

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = oil-range petroleum hydrocarbons

TPH = total petroleum hydrocarbons

WAC = Washington Administrative Code

Table 4
Groundwater Analytical Results for TPH and BTEX
POULSBO RV PROPERTY
23051 Military Road South
Kent, Washington 98032

Well ID	Sample ID	Sampled By	Date Sampled	Analytical Results (micrograms per liter)						
				GRPH[1]	DRPH[2]	ORPH[2]	Benzene[3]	Toluene[3]	Ethylbenzene[3]	Total Xylenes[3]
MW-1	MW1-1	Jason Cass	3/5/2020	<100	<50	<250	<0.35	<1	<1	<3
MW-2	MW2-1	Jason Cass	3/5/2020	<100	<50	<250	<0.35	<1	<1	<3
MW-3	MW3-1	Jason Cass	3/5/2020	<100	170[x]	<250	<0.35	<1	<1	<3
MW-4	MW4-1	Jason Cass	3/5/2020	<100	<50	<250	<0.35	<1	<1	<3
MW-2	MW2-1 Dup.	Jason Cass	3/5/2020	--	--	--	<0.35	<1	<1	<3
MTCA Cleanup Level for Groundwater[4]				**800**	**500**	**500**	**5**	**1,000**	**700**	**1,000**

NOTES:

Red denotes concentration exceeds MTCA cleanup level for groundwater.

Sample analyses conducted by Friedman & Bruya, Inc. in Seattle, Washington.

[1]Analyzed by Ecology Method NWTPH-Gx.

[2]Analyzed by Ecology Method NWTPH-Dx.

[3]Analyzed by EPA Method 8260D.

[4]MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 720-1 Method A Cleanup Levels for Groundwater, revised November 2007.

Laboratory Note:

[x]The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

-- = not analyzed/not applicable

< = not detected at a concentration exceeding the laboratory reporting limit

BTEX = benzene, toluene, ethylbenzene, and total xylenes

DRPH = diesel-range petroleum hydrocarbons

Ecology = Washington State Department of Ecology

EPA = US Environmental Protection Agency

GRPH = gasoline-range petroleum hydrocarbons

MTCA = Washington State Model Toxics Control Act

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = oil-range petroleum hydrocarbons

TPH = total petroleum hydrocarbons

WAC = Washington Administrative Code

Table 5
Soil Analytical Results for Chlorinated VOCs
POULSBO RV PROPERTY
23051 Military Road South
Kent, Washington 98032

Well/Boring ID	Sample ID	Sampled By	Date Sampled	Depth (feet bgs)	Analytical Results[1] (milligrams per kilogram)					
					Tetrachloroethene	Trichloroethene	Cis-1,2-Dichloroethene	Trans-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride
MW-1	MW-1-20	Ryan Opitz	2/25/2020	20	<0.025	<0.02	<0.05	<0.05	<0.05	<0.05
	MW-1-30	Ryan Opitz	2/25/2020	30	<0.025	<0.02	<0.05	<0.05	<0.05	<0.05
MW-2	MW-2-22.5	Ryan Opitz	2/24/2020	22.5	<0.025	<0.02	<0.05	<0.05	<0.05	<0.05
	MW-2-22.5 Dup.	Ryan Opitz	2/24/2020	22.5	<0.025	<0.02	<0.05	<0.05	<0.05	<0.05
	MW-2-30	Ryan Opitz	2/24/2020	30	<0.025	<0.02	<0.05	<0.05	<0.05	<0.05
MW-3	MW-3-15	Ryan Opitz	2/25/2020	15	<0.025	<0.02	<0.05	<0.05	<0.05	<0.05
	MW-3-15-Dup.	Ryan Opitz	2/25/2020	15	<0.025	<0.02	<0.05	<0.05	<0.05	<0.05
	MW-3-30	Ryan Opitz	2/25/2020	30	<0.025	<0.02	<0.05	<0.05	<0.05	<0.05
MW-4	MW-4-25	Ryan Opitz	2/26/2020	25	<0.025	<0.02	<0.05	<0.05	<0.05	<0.05
	MW-4-30	Ryan Opitz	2/26/2020	30	<0.025	<0.02	<0.05	<0.05	<0.05	<0.05
B1	B1-20	Ryan Opitz	2/27/2020	20	<0.025	<0.02	<0.05	<0.05	<0.05	<0.05
	B1-30	Ryan Opitz	2/27/2020	30	<0.025	<0.02	<0.05	<0.05	<0.05	<0.05
	B1-30-Dup.	Ryan Opitz	2/27/2020	30	<0.025	<0.02	<0.05	<0.05	<0.05	<0.05
MTCA Cleanup Level for Soil					**0.05**[2]	**0.03**[2]	**160**[3]	**1,600**[3]	**4,000**[3]	**0.67**[4]

NOTES:

Sample analyses conducted by Friedman & Bruya, Inc. in Seattle, Washington.

[1]Samples analyzed by EPA Method 8260D.

[2]MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 740-1 Method A Cleanup Levels for Soil, Unrestricted Land Uses, revised November 2007.

[3]MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Soil, Method B, Noncancer, Direct Contact, CLARC Website <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

[4]MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Soil, Method B, Cancer, Direct Contact, CLARC Website <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

< = not detected at a concentration exceeding the laboratory reporting limit

bgs = below ground surface

CLARC = Cleanup Levels and Risk Calculations

EPA = US Environmental Protection Agency

MTCA = Washington State Model Toxics Control Act

VOC = volatile organic compound

WAC = Washington Administrative Code

Table 6
Groundwater Analytical Results for Chlorinated VOCs
POULSBO RV PROPERTY
23051 Military Road South
Kent, Washington 98032

Well ID	Sample ID	Sampled By	Date Sampled	Analytical Results[1] (micrograms per liter)					
				Tetrachloroethene	Trichloroethene	Cis-1,2-Dichloroethene	Trans-1,2-Dichloroethene	1,1-Dichloroethene	Vinyl Chloride
MW-1	MW1-1	Jason Cass	3/5/2020	<1	<1	<1	<1	<1	<0.2
MW-2	MW2-1	Jason Cass	3/5/2020	<1	<1	<1	<1	<1	<0.2
MW-3	MW3-1	Jason Cass	3/5/2020	<1	<1	<1	<1	<1	<0.2
MW-4	MW4-1	Jason Cass	3/5/2020	<1	<1	<1	<1	<1	<0.2
MW-2	MW2-1 Dup.	Jason Cass	3/5/2020	<1	<1	<1	<1	<1	<0.2
MTCA Cleanup Level for Groundwater				**5**[2]	**5**[2]	**16**[3]	**160**[3]	**400**[3]	**0.2**[2]

NOTES:

Sample analyses conducted by Friedman & Bruya, Inc. in Seattle, Washington.

[1]Samples analyzed by EPA Method 8260D.

[2]MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 720-1 Method A Cleanup Levels for Groundwater, revised November 2007.

[3]MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Groundwater, Method B Standard Formula, Non cancer, CLARC Website <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

< = not detected at a concentration exceeding the laboratory reporting limit

CLARC = Cleanup Levels and Risk Calculations

EPA = US Environmental Protection Agency

MTCA = Washington State Model Toxics Control Act

VOC = volatile organic compound

WAC = Washington Administrative Code

Table 7
Soil Analytical Results for RCRA 8 Metals
POULSBO RV PROPERTY
23051 Military Road South
Kent, Washington 98032

Well/Boring ID	Sample ID	Date Sampled	Depth (feet bgs)	Analytical Results[1] (milligrams per kilogram)							
				Arsenic	Barium	Cadmium	Chromium	Lead	Mercury	Selenium	Silver
MW-1	MW-1-20	2/25/2020	20	1.59	39.8	<1	15.6	1.40	<1	<1	<1
	MW-1-30	2/25/2020	30	1.67	26.1	<1	14.7	1.13	<1	<1	<1
MW-2	MW-2-22.5	2/24/2020	22.5	1.45	48.1	<1	11.0	1.60	<1	<1	<1
	MW-2-22.5 Dup.	2/24/2020	22.5	--	--	--	--	--	--	--	--
	MW-2-30	2/24/2020	30	3.00	41.2	<1	16.7	2.20	<1	<1	<1
MW-3	MW-3-15	2/25/2020	15	1.65	48.6	<1	12.2	2.22	<1	<1	<1
	MW-3-15-Dup.	2/25/2020	15	1.88	58.2	<1	13.5	2.10	<1	<1	<1
	MW-3-30	2/25/2020	30	1.52	34.7	<1	14.4	1.51	<1	<1	<1
MW-4	MW-4-25	2/26/2020	25	3.01	54.3	<1	14.1	2.09	<1	<1	<1
	MW-4-30	2/26/2020	30	2.88	61.4	<1	21.4	2.03	<1	<1	<1
B1	B1-20	2/27/2020	20	1.51	31.8	<1	11.5	1.21	<1	<1	<1
	B1-30	2/27/2020	30	1.98	37.7	<1	17.8	1.52	<1	<1	<1
	B1-30-Dup.	2/27/2020	30	1.75	36.8	<1	27.7	1.55	<1	<1	<1
MTCA Cleanup Level for Soil				**20**[2]	**16,000**[3]	**2**[2]	**2,000**[2]	**250**[2]	**2**[2]	**400**[3]	**400**[3]

NOTES:

Sample analyses conducted by Friedman & Bruya, Inc. in Seattle, Washington.

[1]Samples analyzed by EPA Method 6020B.

[2]MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 740-1 Method A Cleanup Levels for Soil, Unrestricted Land Uses, revised November 2007.

[3]MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Soil, Method B, Noncancer, Direct Contact, CLARC Website <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

-- = not analyzed/not applicable

< = not detected at a concentration exceeding the laboratory reporting limit

bgs = below ground surface

CLARC = Cleanup Levels and Risk Calculations

EPA = US Environmental Protection Agency

MTCA = Washington State Model Toxics Control Act

RCRA = Resource Conservation and Recovery Act

WAC = Washington Administrative Code

Table 8
Groundwater Analytical Results for RCRA 8 Metals
POULSBO RV PROPERTY
23051 Military Road South
Kent, Washington 98032

Well ID	Sample ID	Date Sampled	Analytical Results[(1)] (micrograms per liter)															
			Arsenic		Barium		Cadmium		Chromium		Lead		Mercury		Selenium		Silver	
			Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved	Total	Dissolved
MW-1	MW1-1	3/5/2020	<1	<1[f]	33.8	33.5[f]	<1	<1[f]	<1	<1[f]	<1	<1[f]	<1	<1[f]	1.27	1.26[f]	<1	<1[f]
MW-2	MW2-1	3/5/2020	<1	<1[f]	12.0	10.3[f]	<1	<1[f]	<1	<1[f]	<1	<1[f]	<1	<1[f]	<1	<1[f]	<1	<1[f]
MW-3	MW3-1	3/5/2020	<1	<1[f]	10.4	9.81[f]	<1	<1[f]	<1	<1[f]	<1	<1[f]	<1	<1[f]	<1	<1[f]	<1	<1[f]
MW-4	MW4-1	3/5/2020	<1	<1[f]	6.92	7.37[f]	<1	<1[f]	<1	<1[f]	<1	<1[f]	<1	<1[f]	<1	<1[f]	<1	<1[f]
MW-2	MW2-1 Dup.	3/5/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MTCA Cleanup Level for Groundwater			**5[(2)]**		**3,200[(3)]**		**5[(2)]**		**50[(2)]**		**15[(2)]**		**2[(2)]**		**80[(3)]**		**80[(3)]**	

NOTES:

Sample analyses conducted by Friedman & Bruya, Inc. in Seattle, Washington.

[(1)]Samples analyzed by EPA Method 6020B.

[(2)]MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 720-1 Method A Cleanup Levels for Groundwater, revised November 2007.

[(3)]MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Groundwater, Method B, Noncancer, CLARC Website <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

Laboratory Note:

[f]The sample was laboratory filtered prior to analysis.

-- = not analyzed/not applicable

< = not detected at a concentration exceeding the laboratory reporting limit

CLARC = Cleanup Levels and Risk Calculations

EPA = US Environmental Protection Agency

MTCA = Washington State Model Toxics Control Act

RCRA = Resource Conservation and Recovery Act

WAC = Washington Administrative Code

Table 9
Soil Analytical Results for PAHs
POULSBO RV PROPERTY
23051 Military Road South
Kent, Washington 98032

Well/Boring ID	Sample ID	Date Sampled	Analytical Results (milligrams per kilogram)											cPAHs Toxicity Equivalency[1] (milligrams per kilogram)														TEQ[1] (milligrams per kilogram)
			Naphthalene	1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(g,h,i)- perylene	Benzo(a)- anthracene	TEF: 0.1	Chrysene	TEF: 0.01	Benzo(a)pyrene	TEF: 1	Benzo(b)- fluoranthene	TEF: 0.1	Benzo(k)- fluoranthene	TEF: 0.1	Indeno(1,2,3-cd)- pyrene	TEF: 0.1	Dibenz(a,h)- anthracene	TEF: 0.1	
MW-1	MW-1-20	2/25/2020	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		0.000
	MW-1-30	2/25/2020	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		0.000
MW-2	MW-2-22.5	2/24/2020	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		<0.002		0.000
	MW-2-22.5 Dup.	2/24/2020	<0.002	--	--	--	--	--	--	--	--	--	--	--		--		--		--		--		--		--		--
	MW-2-30	2/24/2020	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		0.000
MW-3	MW-3-15	2/25/2020	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		0.000
	MW-3-15-Dup.	2/25/2020	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		0.000
	MW-3-30	2/25/2020	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		0.000
MW-4	MW-4-25	2/26/2020	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		0.000
	MW-4-30	2/26/2020	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		0.000
B1	B1-20	2/27/2020	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		0.000
	B1-30	2/27/2020	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		0.000
	B1-30-Dup.	2/27/2020	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		<0.01		0.000
MTCA Cleanup Level for Soil			**5**[2]	**34.5**[3]	**320**[4]	**4,800**[4]	**NE**	**3,200**[4]	**NE**	**24,000**[4]	**3,200**[4]	**2,400**[4]	**NE**	**NE**		**NE**		**0.1**[2]		**NE**		**NE**		**NE**		**NE**		**0.1**[2]

NOTES:

Sample analyses conducted by Friedman & Bruya, Inc. in Seattle, Washington.

Samples analyzed by EPA Method 8270E.

[1]Analytical result for each individual cPAH is multiplied by the TEF and all seven cPAH values are added. When analytical results are reported as less than the LRL, one-half of the LRL is multiplied by the TEF to calculate the TEQ.

[2]MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 740-1 Method A Cleanup Levels for Soil, Unrestricted Land Uses, revised November 2007.

[3]MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Soil, Method B, Cancer, Direct Contact, CLARC Website <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

[4]MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Soil, Method B, Noncancer, Direct Contact, CLARC Website <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

-- = not analyzed/not applicable

< = not detected at a concentration exceeding the laboratory reporting limit

CLARC = Cleanup Levels and Risk Calculations

cPAH = carcinogenic polycyclic aromatic hydrocarbon

EPA = US Environmental Protection Agency

LRL = laboratory reporting limit

MTCA = Washington State Model Toxics Control Act

NE = not established

PAH = polycyclic aromatic hydrocarbon

TEF = toxicity equivalency factor

TEQ = toxicity equivalent

WAC = Washington Administrative Code

Table 10
Groundwater Analytical Results for PAHs
POULSBO RV PROPERTY
23051 Military Road South
Kent, Washington 98032

Well ID	Sample ID	Date Sampled	Analytical Results (micrograms per liter)											cPAHs Toxicity Equivalency[1] (micrograms per liter)														TEQ[1] (micrograms per liter)
			Naphthalene	1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo(g,h,i)-perylene	Benzo(a)-anthracene	TEF: 0.1	Chrysene	TEF: 0.01	Benzo(a)pyrene	TEF: 1	Benzo(b)-fluoranthene	TEF: 0.1	Benzo(k)-fluoranthene	TEF: 0.1	Indeno(1,2,3-cd)-pyrene	TEF: 0.1	Dibenz(a,h)-anthracene	TEF: 0.1	
MW-1	MW1-1	3/5/2020	<0.2	<0.2	<0.2	<0.02	<0.02	<0.02	<0.2	<0.02	<0.02	<0.02	<0.04	<0.02	0.000	<0.02	0.000	<0.02	0.000	<0.02	0.000	<0.02	0.000	<0.02	0.000	<0.02	0.000	0.000
MW-2	MW2-1	3/5/2020	<0.2	<0.2	<0.2	<0.02	<0.02	<0.02	<0.2	<0.02	<0.02	<0.02	<0.04	<0.02	0.000	<0.02	0.000	<0.02	0.000	<0.02	0.000	<0.02	0.000	<0.02	0.000	<0.02	0.000	0.000
MW-3	MW3-1	3/5/2020	<0.2	<0.2	<0.2	<0.02	<0.02	<0.02	<0.2	<0.02	<0.02	<0.02	<0.04	<0.02	0.000	<0.02	0.000	<0.02	0.000	<0.02	0.000	<0.02	0.000	<0.02	0.000	<0.02	0.000	0.000
MW-4	MW4-1	3/5/2020	<0.2	<0.2	<0.2	<0.02	<0.02	<0.02	<0.2	<0.02	<0.02	<0.02	<0.04	<0.02	0.000	<0.02	0.000	<0.02	0.000	<0.02	0.000	<0.02	0.000	<0.02	0.000	<0.02	0.000	0.000
MW-2	MW2-1 Dup.	3/5/2020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MTCA Cleanup Level for Groundwater			**160**[2]	**1.51**[3]	**32**[4]	**960**[4]	**NE**	**640**[4]	**NE**	**4,800**[4]	**640**[4]	**480**[4]	**NE**	**NE**		**NE**		**0.1**[2]		**NE**		**NE**		**NE**		**NE**		**0.1**[2]

NOTES:

Sample analyses conducted by Friedman & Bruya, Inc. in Seattle, Washington.

Samples analyzed by EPA Method 8270E.

[1]Analytical result for each individual cPAH is multiplied by the TEF and all seven cPAH values are added. When analytical results are reported as less than the LRL, one-half of the LRL is multiplied by the TEF to calculate the TEQ.

[2]MTCA Cleanup Regulation, Chapter 173-340-900 of WAC, Table 720-1 Method A Cleanup Levels for Groundwater, revised November 2007.

[3]MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Groundwater, Method B, Cancer, CLARC Website <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

[4]MTCA Cleanup Regulation, Chapter 173-340 of WAC, CLARC, Groundwater, Method B, Noncancer, CLARC Website <https://fortress.wa.gov/ecy/clarc/CLARCHome.aspx>.

-- = not analyzed/not applicable

< = not detected at a concentration exceeding the laboratory reporting limit

CLARC = Cleanup Levels and Risk Calculations

cPAH = carcinogenic polycyclic aromatic hydrocarbon

EPA = US Environmental Protection Agency

LRL = laboratory reporting limit

MTCA = Washington State Model Toxics Control Act

NE = not established

PAH = polycyclic aromatic hydrocarbon

TEF = toxicity equivalency factor

TEQ = toxicity equivalent

WAC = Washington Administrative Code

Table 11
Soil Analytical Results for PCB Mixtures
POULSBO RV PROPERTY
23051 Military Road South
Kent, Washington 98032

Well/Boring ID	Sample ID	Date Sampled	Depth (feet bgs)	Analytical Results[(1)] (milligrams per kilogram)									
				Aroclor 1221	Aroclor 1232	Aroclor 1016	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Total Value[(1)]
MW-1	MW-1-20	2/25/2020	20	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0
	MW-1-30	2/25/2020	30	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0
MW-2	MW-2-22.5	2/24/2020	22.5	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0
	MW-2-22.5 Dup.	2/24/2020	22.5	--	--	--	--	--	--	--	--	--	0
	MW-2-30	2/24/2020	30	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0
MW-3	MW-3-15	2/25/2020	15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0
	MW-3-15-Dup.	2/25/2020	15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0
	MW-3-30	2/25/2020	30	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0
MW-4	MW-4-25	2/26/2020	25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0
	MW-4-30	2/26/2020	30	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0
B1	B1-20	2/27/2020	20	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0
	B1-30	2/27/2020	30	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0
	B1-30-Dup.	2/27/2020	30	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0
MTCA Cleanup Level for Soil for Unrestricted Properties[(2)]													**1**
MTCA Cleanup Level for Soil for Industrial Properties[(3)]													**10**

NOTES:

Sample analyses conducted by Friedman & Bruya, Inc. in Seattle, Washington.

Samples analyzed for PCBs by EPA Method 8082A.

[(1)]All nine PCB values are added. When analytical results are reported as less than the LRL, one-half of the LRL is used.

[(2)]Cleanup level is a total value for all PCBs, Chapter 173-340-900 of WAC, Table 740-1 Method A Cleanup Levels for Unrestricted Land Uses, Footnote P.

[(3)]Cleanup level is a total value of all PCBs, Chapter 173-340-900 of WAC, Table 745-1 Method A Soil Cleanup Levels for Industrial Properties, Footnote P.

-- = not analyzed/not applicable

< = not detected at a concentration exceeding the laboratory reporting limit

bgs = below ground surface

EPA = US Environmental Protection Agency

LRL = laboratory reporting limit

MTCA = Washington State Model Toxics Control Act

PCB = polychlorinated biphenyl

WAC = Washington Administrative Code

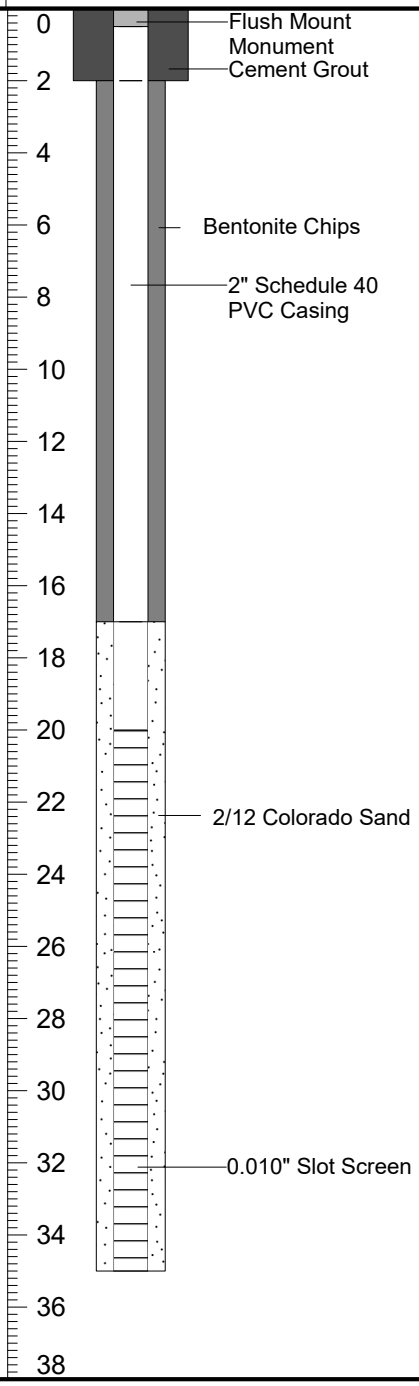
APPENDIX A

BORING AND WELL LOGS

EHS–International, Inc.
1011 SW Klickitat Way, Suite 104
Seattle, Washington 98134
Ph: 206.381.1128
Fax: 206.254.4279

PROJECT: **Poulsbo RV**		PROJECT NUMBER: **11361-02**	
LOCATION: **West of NEC of southern building**		WELL ID: **MW-1**	
DRILLING CONTRACTOR: **Holt Services**		NORTHING:	EASTING:
DRILLING EQUIPMENT: **Mobile B-58**		GROUNDWATER ELEV.:	TOC ELEVATION:
DRILLING METHOD: **Hollow-Stem Auger**		TOTAL DEPTH: **35'**	DEPTH TO WATER: **21.05**
LOGGED BY: **RO**	SAMPLING METHOD: **Discrete**	DATE STARTED: **2/25/2020**	DATE COMPLETED: **2/25/2020**

Depth (feet)	Groundwater Depth	USCS	Soil / Lithologic Description	Sample ID	PID Reading (ppm)
0–8		SM	Medium to fine silty sand with minor gravel, light brown, dry.		
8–12		SM	Fine silty sand with minor gravel, brown, dry.		
12–18		SM	Fine silty sand with minor gravel, brown, dry.		
18–20				MW-1-20	0
20–22	▼	SM	Medium to fine silty sand with minor gravel, brown to gray, moist.		
22–24		GM	Silty gravel, brown to gray, moist.		
24–28			No recovery.		
28–30	▽			MW-1-30	0
30–34		SM	Medium to fine silty sand with minor gravel, brown to gray, wet.		
34–38		SP	Coarse to medium sand, brown, wet.		



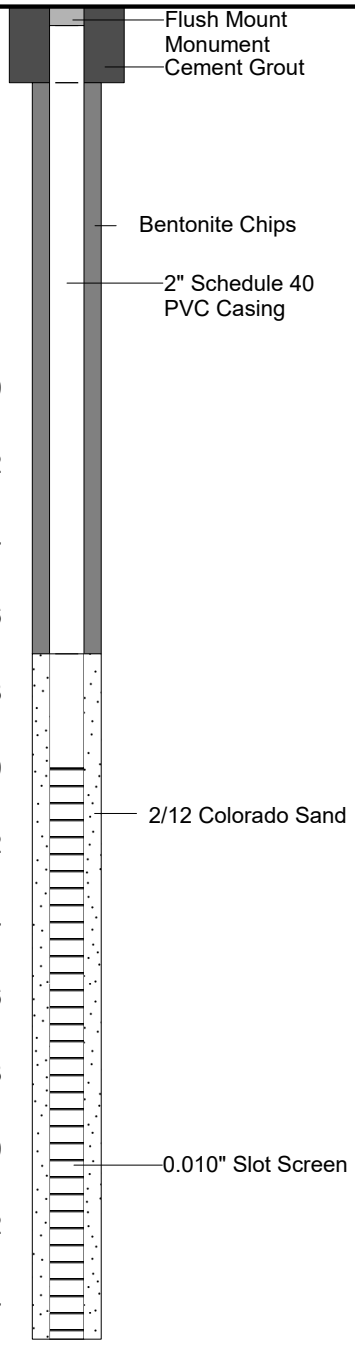
NOTES:
▽ Water Level at Time of Drilling: February 25, 2020
▼ Measured Water Level: March 3, 2020

EHS–International, Inc.
1011 SW Klickitat Way, Suite 104
Seattle, Washington 98134
Ph: 206.381.1128
Fax: 206.254.4279

PROJECT: **Poulsbo RV**		PROJECT NUMBER: **11361-02**	
LOCATION: **Eastern boundary of work area.**		WELL ID: **MW-2**	
DRILLING CONTRACTOR: **Holt Services**		NORTHING:	EASTING:
DRILLING EQUIPMENT: **Mobile B-58**		GROUNDWATER ELEV.:	TOC ELEVATION:
DRILLING METHOD: **Hollow-Stem Auger**		TOTAL DEPTH: **35'**	DEPTH TO WATER: **20.69**
LOGGED BY: **RO**	SAMPLING METHOD: **Discrete**	DATE STARTED: **2/24/2020**	DATE COMPLETED: **2/24/2020**

Depth (feet)	Groundwater Depth	USCS	Soil / Lithologic Description	Sample ID	PID Reading (ppm)
0–8		SM	Medium to fine silty sand with minor gravel, brown to gray, dry.		
8–12		SM	Medium to fine silty sand with minor gravel, light brown, dry.		
12–18		SM	Medium to fine silty sand with minor gravel, light gray, dry.		
18–20	▼				
20–22		SM	Medium to fine silty sand with minor gravel, light gray, dry.		
22–24		GM	Silty gravel, brown to gray, moist.	MW-2-22.5	0
24–28		SM	Medium to fine silty sand with minor gravel, dry.		
28–32	▽	SM	Medium to fine silty sand with minor gravel, light brown, moist.	MW-2-30	0
32–36		SM	Medium to fine silty sand with minor gravel, light		

Well Installation Data

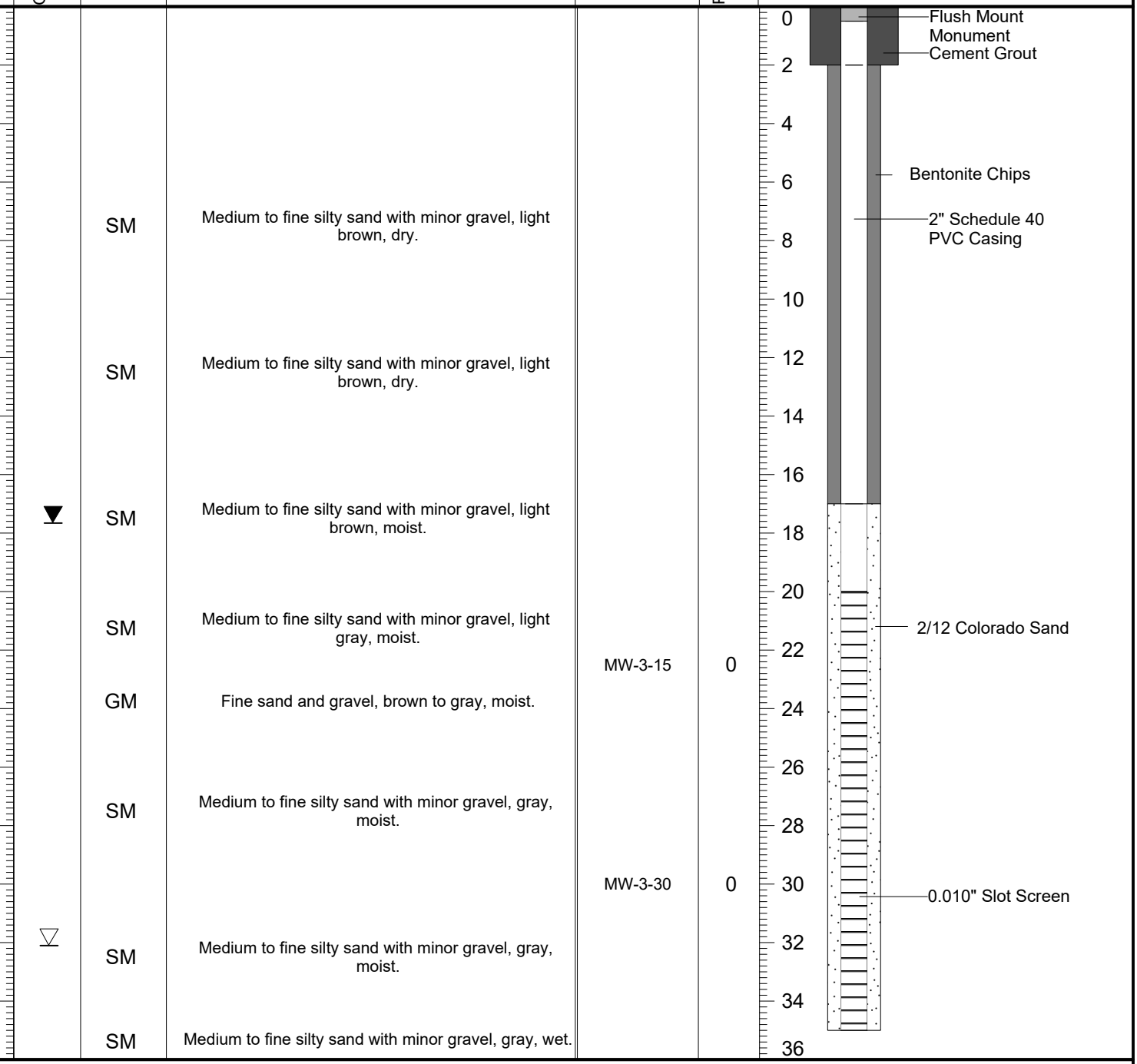


NOTES:
▽ Water Level at Time of Drilling: February 24, 2020
▼ Measured Water Level: March 3, 2020

EHS–International, Inc.
1011 SW Klickitat Way, Suite 104
Seattle, Washington 98134
Ph: 206.381.1128
Fax: 206.254.4279

PROJECT: **Poulsbo RV**		PROJECT NUMBER: **11361-02**	
LOCATION: **East of southern building.**		WELL ID: **MW-3**	
DRILLING CONTRACTOR: **Holt Services**		NORTHING:	EASTING:
DRILLING EQUIPMENT: **Mobile B-58**		GROUNDWATER ELEV.:	TOC ELEVATION:
DRILLING METHOD: **Hollow-Stem Auger**		TOTAL DEPTH: **35'**	DEPTH TO WATER: **17.94**
LOGGED BY: **RO**	SAMPLING METHOD: **Discrete**	DATE STARTED: **2/25/2020**	DATE COMPLETED: **2/25/2020**

Depth (feet)	Groundwater Depth	USCS	Soil / Lithologic Description	Sample ID	PID Reading (ppm)
0–8		SM	Medium to fine silty sand with minor gravel, light brown, dry.		
8–12		SM	Medium to fine silty sand with minor gravel, light brown, dry.		
12–18	▼	SM	Medium to fine silty sand with minor gravel, light brown, moist.		
18–22		SM	Medium to fine silty sand with minor gravel, light gray, moist.		
22–24		GM	Fine sand and gravel, brown to gray, moist.	MW-3-15	0
24–28		SM	Medium to fine silty sand with minor gravel, gray, moist.		
28–32	▽	SM	Medium to fine silty sand with minor gravel, gray, moist.	MW-3-30	0
32–36		SM	Medium to fine silty sand with minor gravel, gray, wet.		

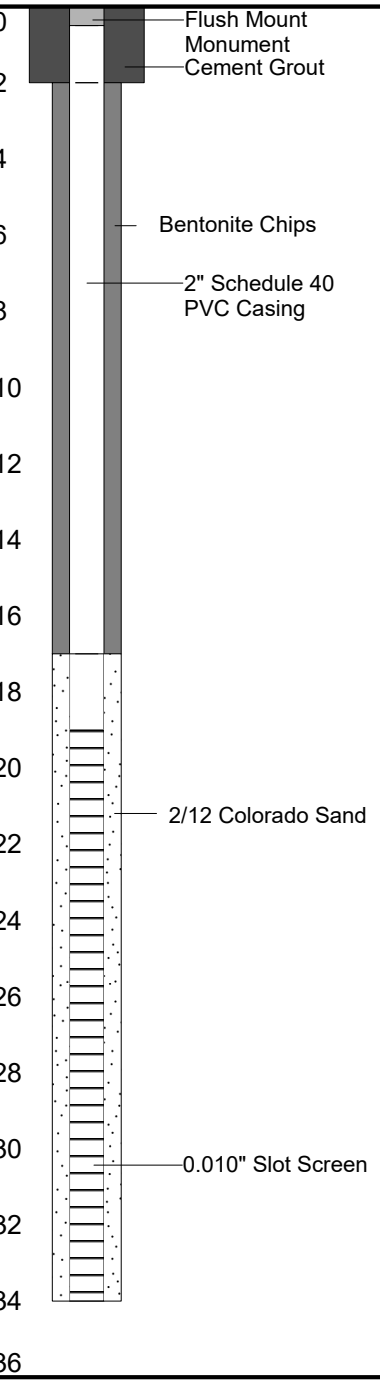


NOTES:
▽ Water Level at Time of Drilling: February 25, 2020
▼ Measured Water Level: March 4, 2020

EHS–International, Inc.
1011 SW Klickitat Way, Suite 104
Seattle, Washington 98134
Ph: 206.381.1128
Fax: 206.254.4279

PROJECT: **Poulsbo RV**		PROJECT NUMBER: **11361-02**	
LOCATION: **South of southern building.**		WELL ID: **MW-4**	
DRILLING CONTRACTOR: **Holt Services**		NORTHING:	EASTING:
DRILLING EQUIPMENT: **Mobile B-58**		GROUNDWATER ELEV.:	TOC ELEVATION:
DRILLING METHOD: **Hollow-Stem Auger**		TOTAL DEPTH: **35'**	DEPTH TO WATER: **18.17**
LOGGED BY: **RO**	SAMPLING METHOD: **Discrete**	DATE STARTED: **2/25/2020**	DATE COMPLETED: **2/25/2020**

Depth (feet)	Groundwater Depth	USCS	Soil / Lithologic Description	Sample ID	PID Reading (ppm)
0–8		SM	Coarse to fine silty sand with minor gravel, brown, dry.		
8–12		SM	Medium to fine silty sand with minor gravel, brown to gray, dry.		
12–18	▼	SM	Medium to fine silty sand with minor gravel, brown to gray, moist.		
18–22		SM	Medium to fine silty sand with minor gravel, brown to gray, dry.		
22–24				MW-4-25	0
24–26	▽	SM	Medium to fine silty sand with minor gravel, brown to gray, moist.		
26–30		SP	Coarse to fine sand with minor gravel, brown, wet.	MW-4-30	0
30–36		SM	Coarse to medium sand with minor gravel, brown to gray, wet.		



NOTES:
▽ Water Level at Time of Drilling: February 25, 2020
▼ Measured Water Level: March 4, 2020

ehsi
EHS–International, Inc.
1011 SW Klickitat Way, Suite 104
Seattle, Washington 98134
Ph: 206.381.1128
Fax: 206.254.4279

PROJECT: **Poulbos RV**	PROJECT NUMBER: **11361-04**	
LOCATION: **North of NEC of building.**	BOREHOLE ID: **B-1**	
DRILLING CONTRACTOR: **Holt Services**	CORE SIZE: **2-inch**	HAMMER DATA: **140 lb.**
DRILLING EQUIPMENT: **Mobile B-58**	GROUND SURFACE ELEV.:	BOREHOLE BACKFILL: **Bentonite**
DRILLING METHOD: **Hollow-stem Auger**	TOTAL DEPTH: **35'**	DEPTH TO WATER: **Not Encountered**
LOGGED BY: **RO**	SAMPLING METHOD: **Discrete**	DATE STARTED: **2/26/20** / DATE COMPLETED: **2/26/20**

Depth (feet)	Groundwater Depth	USCS	Lithologic / Soil Description	Sample ID	PID Reading (ppm)	Blows / foot	% Recovery
4							
6		SM	Medium to fine silty sand, light brown, dry.		0.0		
8							
10						16, 31, 27	80
12		SM	Medium to fine silty sand with minor gravel, light brown, dry.		0.0		
14						16, 34, 50	50
16		SM	Medium to fine sand with minor gravel, light brown, dry.	B-1-20	0.0		
18							
20		SM	Medium to fine sand with minor gravel, light brown, moist.		0.0	20, 32, 39	90
22		SM	Medium to fine sand with minor gravel, light brown, moist.		0.0	50(6)	90
24						10, 45, 50	90
26			No recovery.				
28							
30						50(6)	0
32		SM	Fine silty sand with minor gravel, brown, moist.	B-1-30	0.0		
34						27, 50(6)	50
36							

NOTES:

APPENDIX B

GROUNDWATER SAMPLE DATA SHEETS

ehsi
EHS-International, Inc.

Groundwater Sampling Field Data Sheet

Well # MW-1
Sample ID MW-1

Project Number: 1136/-01
Project Name: Poulsbo RV
Project Address:
Client Name: WSDOT
Casing Diameter: (2") 4"
Screen Interval Feet Bgs:

Date: 3/5/20
Location: East side of
Sampled By:
Purged By: Sunny
6" Other
Total Well Depth (Feet):

Purge Volume Measurement Method:
Date Purged: 3/5/20
Purge Time (From/to):

Sampling Method / Pump Type
Purge Volume Calculation (if peristaltic)

TIME	CUMULATIVE VOLUME	Temp. (Celsius)	Dissolved oxygen (mg/L)	Ec (µmhos/cm 25° c)	pH (units)	ORP (mv)	OTHER
12:00	0.1	14	52.1	0.572	6.03	207.0	
12:05	0.3	13.9	51.6	0.571	6.11	190.8	
12:10	0.75	14.1	46.2	0.572	6.12	183.3	
12:15	1.2	14.1	49.0	0.570	6.13	174.7	
12:20	2.0	14.1	53.0	0.569	6.14	163.0	

Water quality meter: YSI
Sampling Equipment: Bladder pump

Depth to Water (feet):
Depth to Well (feet):
Laboratory: FBI
Reference Point (Surveyors notch, etc.):
Chain of Custody (yes/no)
Date/Time Sampled: 3/5/20
Shipment Method:
Date Sent to Lab:
Field QC Sample Number:
Split with (name(s)/organization(s):

Well Integrity:
Remarks: 3 x VOA, 2 x 1 Liter, 1 x 500mL, 2 x 250 mL poly

Signature: Jason Cass

ehsi
EHS-International, Inc.

Groundwater Sampling Field Data Sheet

Project Number:	11361-03	Well Identification:	MW-2
Project Name:	Poulsbo RV	Ecology Tag ID :	
Project Address:		EHSI Personnel:	JC B Sunny
Client Name:	WSDOT	Date sampled:	3/5/20

Depth to Water (feet):	btoc	Date Measured:	3/3/20
Total Well Depth (feet):	btoc	Time Measured.:	
Reference Point (Surveyors notch, etc.):	North	Notes:	
Sampling Method / Pump Type:	(Stabilization Parameters / or 3 well vol. / peristaltic	Water Quality Meter:	YSI Pro
Volume of Water in Well:		3 well Volumes:	

Purging Data:

Time	t	gallons	Temp.	DO	Sp. Cond.	pH	ORP	Notes
14:15		0.1	13.7	59.9	0.322	6.92	202.8	
14:20		0.5	13.6	55.7	0.323	6.93	199.0	
14:28		0.8	13.6	41.0	0.322	6.91	191.7	
14:34		1.2	13.9	40.9	0.323	6.92	184.2	
14:40		1.5	13.4	38.7	0.320	6.86	178.0	
14:45		2.0	13.5	33.2	0.323	6.89	170.4	
14:50								Sample

Laboratory: Friedman and Bruya, Inc.	Date delivered to lab
Well integrity comments: Good	
Signature: Jason Cass	

14:50 3 x VOA, 2 x 1 Liter
1 x 500 mL, 2 x 250 mL poly
2 x VOA DUP

ehsi
EHS–International, Inc.

Groundwater Sampling Field Data Sheet

Project Number:	11361-03	Well Identification:	MW-3
Project Name:	Poulsbo RV	Ecology Tag ID :	
Project Address:		EHSI Personnel:	JZ
Client Name:	WSDOT	Date sampled:	3/5/20

Depth to Water (feet):	btoc	Date Measured:	3/3/20
Total Well Depth (feet):	btoc	Time Measured.:	
Reference Point (Surveyors notch, etc.):	North	Notes:	
Sampling Method / Pump Type:	Stabilization Parameters or 3 well vol. / peristaltic	Water Quality Meter:	
Volume of Water in Well:		3 well Volumes:	

Purging Data:

Time	t	gallons	Temp.	DO	Sp. Cond.	pH	ORP	Notes
16:00		0.2	14.4	64.4	0.409	6.25	214.9	
16:05		0.5	14.4	65.0	0.409	6.30	205.9	
16:10		1.0	14.4	69.5	0.408	6.34	191.9	
16:15		1.25	14.4	76.6	0.409	6.38	181.0	
16:20		1.75	14.4	76.4	0.409	6.43	170.0	
16:25		2.1	14.4	79.9	0.411	6.45	168.2	
16:30								Sample

Laboratory: Friedman and Bruya, Inc.	Date delivered to lab
Well integrity comments:	
Signature: Jason Cass	

16:30 Sample MW3-1
3x VOA, 2x 1 Liter
1x 500 mL, 2x 250 mL poly

ehsi
EHS-International, Inc.

Groundwater Sampling Field Data Sheet

Project Number:	11361-03	Well Identification:	MW-4
Project Name:	Pools to RV	Ecology Tag ID :	
Project Address:		EHSI Personnel:	JL
Client Name:	WSDOT	Date sampled:	3/5/20

Depth to Water (feet):	btoc	Date Measured:	3/3/20
Total Well Depth (feet):	btoc	Time Measured.:	
Reference Point (Surveyors notch, etc.):	North	Notes:	
Sampling Method / Pump Type:	Stabilization Parameters or 3 well vol. / peristaltic	Water Quality Meter:	YSI Pro
Volume of Water in Well:		3 well Volumes:	

Purging Data:

Time	t	gallons	Temp.	DO	Sp. Cond.	pH	ORP	Notes
17:10		0.1	12.6	52.5	0.250	6.49	173.7	
17:15		0.5	12.5	66.0	0.239	6.67	153.0	
17:20		0.75	12.4	67.2	0.234	6.55	140.5	
17:25		1.2	12.4	66.3	0.227	6.42	128.4	
17:30		1.5	12.4	67.4	0.225	6.41	126.0	
17:35								Sample

Laboratory: Friedman and Bruya, Inc.	Date delivered to lab
Well integrity comments:	
Signature: Jason Cass	

APPENDIX C

LABORATORY ANALYTICAL REPORTS

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

March 17, 2020

Jason Cass, Project Manager
EHSI
1011 SW Klickitat Way, Suite 104
Seattle, WA 98134

Dear Mr Cass:

Included are the results from the testing of material submitted on March 6, 2020 from the Poulsbo RV 11361-03, F&BI 003109 project. There are 38 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: EHSI A/P
EHS0317R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on March 6, 2020 by Friedman & Bruya, Inc. from the EHSI Poulsbo RV 11361-03, F&BI 003109 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	EHSI
003109 -01	MW1-1
003109 -02	MW2-1
003109 -03	MW3-1
003109 -04	MW2-1 Dup.
003109 -05	MW4-1

The dissolved metals samples were filtered at Friedman and Bruya on March 06, 2020 at 09:40. The data were flagged accordingly.

The 8270E calibration standard failed the acceptance criteria for several analytes. In addition, several compounds in the laboratory control sample and laboratory control sample duplicate failed the acceptance criteria. The data were flagged accordingly.

The 8082A laboratory control sample and laboratory control sample duplicate failed the relative percent difference for Aroclor 1260. The analyte was not detected in the samples therefore the data were acceptable.

All other quality control requirements were acceptable.

Date of Report: 03/17/20
Date Received: 03/06/20
Project: Poulsbo RV 11361-03, F&BI 003109
Date Extracted: 03/12/20
Date Analyzed: 03/12/20

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
MW1-1 003109-01	<100	87
MW2-1 003109-02	<100	87
MW3-1 003109-03	<100	85
MW4-1 003109-05	<100	87
Method Blank 00-553 MB	<100	89

Date of Report: 03/17/20
Date Received: 03/06/20
Project: Poulsbo RV 11361-03, F&BI 003109
Date Extracted: 03/06/20
Date Analyzed: 03/06/20

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
MW1-1 003109-01	<50	<250	118
MW2-1 003109-02	<50	<250	131
MW3-1 003109-03	170 x	<250	137
MW4-1 003109-05	<50	<250	118
Method Blank 00-584 MB	<50	<250	126

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	MW1-1 f	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/06/20	Lab ID:	003109-01
Date Analyzed:	03/09/20	Data File:	003109-01.031
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	33.5
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	1.26
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	MW2-1 f	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/06/20	Lab ID:	003109-02
Date Analyzed:	03/09/20	Data File:	003109-02.032
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	10.3
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	MW3-1 f	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/06/20	Lab ID:	003109-03
Date Analyzed:	03/09/20	Data File:	003109-03.033
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	9.81
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	MW4-1 f	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/06/20	Lab ID:	003109-05
Date Analyzed:	03/09/20	Data File:	003109-05.034
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	7.37
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Dissolved Metals By EPA Method 6020B

Client ID:	Method Blank f	Client:	EHSI
Date Received:	NA	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/06/20	Lab ID:	I0-140 mb2
Date Analyzed:	03/09/20	Data File:	I0-140 mb2.030
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	MW1-1	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/06/20	Lab ID:	003109-01
Date Analyzed:	03/09/20	Data File:	003109-01.044
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	33.8
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	1.27
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	MW2-1	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/06/20	Lab ID:	003109-02
Date Analyzed:	03/09/20	Data File:	003109-02.051
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	12.0
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	MW3-1	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/06/20	Lab ID:	003109-03
Date Analyzed:	03/10/20	Data File:	003109-03.083
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	10.4
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	MW4-1	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/06/20	Lab ID:	003109-05
Date Analyzed:	03/10/20	Data File:	003109-05.084
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	6.92
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	EHSI
Date Received:	NA	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/06/20	Lab ID:	I0-138 mb2
Date Analyzed:	03/09/20	Data File:	I0-138 mb2.043
Matrix:	Water	Instrument:	ICPMS2
Units:	ug/L (ppb)	Operator:	SP

Analyte:	Concentration ug/L (ppb)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW1-1	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/10/20	Lab ID:	003109-01
Date Analyzed:	03/10/20	Data File:	031011.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	12 ip	15	99
Phenol-d6	14	11	65
Nitrobenzene-d5	89	50	150
2-Fluorobiphenyl	92	50	150
2,4,6-Tribromophenol	32 ip	34	132
Terphenyl-d14	90	45	138

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<2	2,6-Dinitrotoluene	<1
Bis(2-chloroethyl) ether	<0.2	3-Nitroaniline	<20
2-Chlorophenol	<2 jl	Acenaphthene	<0.02
1,3-Dichlorobenzene	<0.2	2,4-Dinitrophenol	<6 ca jl
1,4-Dichlorobenzene	<0.2	Dibenzofuran	<0.2
1,2-Dichlorobenzene	<0.2	2,4-Dinitrotoluene	<1
Benzyl alcohol	<2	4-Nitrophenol	<6
2,2'-Oxybis(1-chloropropane)	<0.2	Diethyl phthalate	<2
2-Methylphenol	<2	Fluorene	<0.02
Hexachloroethane	<0.2	4-Chlorophenyl phenyl ether	<0.2
N-Nitroso-di-n-propylamine	<0.2	N-Nitrosodiphenylamine	<0.2
3-Methylphenol + 4-Methylphenol	<4 jl	4-Nitroaniline	<20
Nitrobenzene	<0.2	4,6-Dinitro-2-methylphenol	<6 ca jl
Isophorone	<0.2	4-Bromophenyl phenyl ether	<0.2
2-Nitrophenol	<2 jl	Hexachlorobenzene	<0.2
2,4-Dimethylphenol	<2	Pentachlorophenol	<1 jl
Benzoic acid	<10 jl	Phenanthrene	<0.02
Bis(2-chloroethoxy)methane	<0.2	Anthracene	<0.02
2,4-Dichlorophenol	<2 jl	Carbazole	<0.2
1,2,4-Trichlorobenzene	<0.2	Di-n-butyl phthalate	<2
Naphthalene	<0.2	Fluoranthene	<0.02
Hexachlorobutadiene	<0.2	Pyrene	<0.02
4-Chloroaniline	<20	Benzyl butyl phthalate	<2
4-Chloro-3-methylphenol	<2	Benz(a)anthracene	<0.02
2-Methylnaphthalene	<0.2	Chrysene	<0.02
1-Methylnaphthalene	<0.2	Bis(2-ethylhexyl) phthalate	<3.2
Hexachlorocyclopentadiene	<0.6 ca	Di-n-octyl phthalate	<2
2,4,6-Trichlorophenol	<2 jl	Benzo(a)pyrene	<0.02
2,4,5-Trichlorophenol	<2 jl	Benzo(b)fluoranthene	<0.02
2-Chloronaphthalene	<0.2	Benzo(k)fluoranthene	<0.02
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<0.02
Dimethyl phthalate	<2	Dibenz(a,h)anthracene	<0.02
Acenaphthylene	<0.02	Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW2-1	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/10/20	Lab ID:	003109-02
Date Analyzed:	03/10/20	Data File:	031012.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	6 ip	15	99
Phenol-d6	9 ip	11	65
Nitrobenzene-d5	90	50	150
2-Fluorobiphenyl	92	50	150
2,4,6-Tribromophenol	16 ip	34	132
Terphenyl-d14	89	45	138

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<2	2,6-Dinitrotoluene	<1
Bis(2-chloroethyl) ether	<0.2	3-Nitroaniline	<20
2-Chlorophenol	<2 jl	Acenaphthene	<0.02
1,3-Dichlorobenzene	<0.2	2,4-Dinitrophenol	<6 ca jl
1,4-Dichlorobenzene	<0.2	Dibenzofuran	<0.2
1,2-Dichlorobenzene	<0.2	2,4-Dinitrotoluene	<1
Benzyl alcohol	<2	4-Nitrophenol	<6
2,2'-Oxybis(1-chloropropane)	<0.2	Diethyl phthalate	<2
2-Methylphenol	<2	Fluorene	<0.02
Hexachloroethane	<0.2	4-Chlorophenyl phenyl ether	<0.2
N-Nitroso-di-n-propylamine	<0.2	N-Nitrosodiphenylamine	<0.2
3-Methylphenol + 4-Methylphenol	<4 jl	4-Nitroaniline	<20
Nitrobenzene	<0.2	4,6-Dinitro-2-methylphenol	<6 ca jl
Isophorone	<0.2	4-Bromophenyl phenyl ether	<0.2
2-Nitrophenol	<2 jl	Hexachlorobenzene	<0.2
2,4-Dimethylphenol	<2	Pentachlorophenol	<1 jl
Benzoic acid	<10 jl	Phenanthrene	<0.02
Bis(2-chloroethoxy)methane	<0.2	Anthracene	<0.02
2,4-Dichlorophenol	<2 jl	Carbazole	<0.2
1,2,4-Trichlorobenzene	<0.2	Di-n-butyl phthalate	<2
Naphthalene	<0.2	Fluoranthene	<0.02
Hexachlorobutadiene	<0.2	Pyrene	<0.02
4-Chloroaniline	<20	Benzyl butyl phthalate	<2
4-Chloro-3-methylphenol	<2	Benz(a)anthracene	<0.02
2-Methylnaphthalene	<0.2	Chrysene	<0.02
1-Methylnaphthalene	<0.2	Bis(2-ethylhexyl) phthalate	<3.2
Hexachlorocyclopentadiene	<0.6 ca	Di-n-octyl phthalate	<2
2,4,6-Trichlorophenol	<2 jl	Benzo(a)pyrene	<0.02
2,4,5-Trichlorophenol	<2 jl	Benzo(b)fluoranthene	<0.02
2-Chloronaphthalene	<0.2	Benzo(k)fluoranthene	<0.02
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<0.02
Dimethyl phthalate	<2	Dibenz(a,h)anthracene	<0.02
Acenaphthylene	<0.02	Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW3-1	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/10/20	Lab ID:	003109-03
Date Analyzed:	03/10/20	Data File:	031013.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	10 ip	15	99
Phenol-d6	11	11	65
Nitrobenzene-d5	90	50	150
2-Fluorobiphenyl	92	50	150
2,4,6-Tribromophenol	30 ip	34	132
Terphenyl-d14	92	45	138

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<2	2,6-Dinitrotoluene	<1
Bis(2-chloroethyl) ether	<0.2	3-Nitroaniline	<20
2-Chlorophenol	<2 jl	Acenaphthene	<0.02
1,3-Dichlorobenzene	<0.2	2,4-Dinitrophenol	<6 ca jl
1,4-Dichlorobenzene	<0.2	Dibenzofuran	<0.2
1,2-Dichlorobenzene	<0.2	2,4-Dinitrotoluene	<1
Benzyl alcohol	<2	4-Nitrophenol	<6
2,2'-Oxybis(1-chloropropane)	<0.2	Diethyl phthalate	<2
2-Methylphenol	<2	Fluorene	<0.02
Hexachloroethane	<0.2	4-Chlorophenyl phenyl ether	<0.2
N-Nitroso-di-n-propylamine	<0.2	N-Nitrosodiphenylamine	<0.2
3-Methylphenol + 4-Methylphenol	<4 jl	4-Nitroaniline	<20
Nitrobenzene	<0.2	4,6-Dinitro-2-methylphenol	<6 ca jl
Isophorone	<0.2	4-Bromophenyl phenyl ether	<0.2
2-Nitrophenol	<2 jl	Hexachlorobenzene	<0.2
2,4-Dimethylphenol	<2	Pentachlorophenol	<1 jl
Benzoic acid	<10 jl	Phenanthrene	<0.02
Bis(2-chloroethoxy)methane	<0.2	Anthracene	<0.02
2,4-Dichlorophenol	<2 jl	Carbazole	<0.2
1,2,4-Trichlorobenzene	<0.2	Di-n-butyl phthalate	<2
Naphthalene	<0.2	Fluoranthene	<0.02
Hexachlorobutadiene	<0.2	Pyrene	<0.02
4-Chloroaniline	<20	Benzyl butyl phthalate	<2
4-Chloro-3-methylphenol	<2	Benz(a)anthracene	<0.02
2-Methylnaphthalene	<0.2	Chrysene	<0.02
1-Methylnaphthalene	<0.2	Bis(2-ethylhexyl) phthalate	<3.2
Hexachlorocyclopentadiene	<0.6 ca	Di-n-octyl phthalate	<2
2,4,6-Trichlorophenol	<2 jl	Benzo(a)pyrene	<0.02
2,4,5-Trichlorophenol	<2 jl	Benzo(b)fluoranthene	<0.02
2-Chloronaphthalene	<0.2	Benzo(k)fluoranthene	<0.02
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<0.02
Dimethyl phthalate	<2	Dibenz(a,h)anthracene	<0.02
Acenaphthylene	<0.02	Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW4-1	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/10/20	Lab ID:	003109-05
Date Analyzed:	03/10/20	Data File:	031014.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	5 ip	15	99
Phenol-d6	8 ip	11	65
Nitrobenzene-d5	86	50	150
2-Fluorobiphenyl	88	50	150
2,4,6-Tribromophenol	13 ip	34	132
Terphenyl-d14	83	45	138

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<2	2,6-Dinitrotoluene	<1
Bis(2-chloroethyl) ether	<0.2	3-Nitroaniline	<20
2-Chlorophenol	<2 jl	Acenaphthene	<0.02
1,3-Dichlorobenzene	<0.2	2,4-Dinitrophenol	<6 ca jl
1,4-Dichlorobenzene	<0.2	Dibenzofuran	<0.2
1,2-Dichlorobenzene	<0.2	2,4-Dinitrotoluene	<1
Benzyl alcohol	<2	4-Nitrophenol	<6
2,2'-Oxybis(1-chloropropane)	<0.2	Diethyl phthalate	<2
2-Methylphenol	<2	Fluorene	<0.02
Hexachloroethane	<0.2	4-Chlorophenyl phenyl ether	<0.2
N-Nitroso-di-n-propylamine	<0.2	N-Nitrosodiphenylamine	<0.2
3-Methylphenol + 4-Methylphenol	<4 jl	4-Nitroaniline	<20
Nitrobenzene	<0.2	4,6-Dinitro-2-methylphenol	<6 ca jl
Isophorone	<0.2	4-Bromophenyl phenyl ether	<0.2
2-Nitrophenol	<2 jl	Hexachlorobenzene	<0.2
2,4-Dimethylphenol	<2	Pentachlorophenol	<1 jl
Benzoic acid	<10 jl	Phenanthrene	<0.02
Bis(2-chloroethoxy)methane	<0.2	Anthracene	<0.02
2,4-Dichlorophenol	<2 jl	Carbazole	<0.2
1,2,4-Trichlorobenzene	<0.2	Di-n-butyl phthalate	<2
Naphthalene	<0.2	Fluoranthene	<0.02
Hexachlorobutadiene	<0.2	Pyrene	<0.02
4-Chloroaniline	<20	Benzyl butyl phthalate	<2
4-Chloro-3-methylphenol	<2	Benz(a)anthracene	<0.02
2-Methylnaphthalene	<0.2	Chrysene	<0.02
1-Methylnaphthalene	<0.2	Bis(2-ethylhexyl) phthalate	<3.2
Hexachlorocyclopentadiene	<0.6 ca	Di-n-octyl phthalate	<2
2,4,6-Trichlorophenol	<2 jl	Benzo(a)pyrene	<0.02
2,4,5-Trichlorophenol	<2 jl	Benzo(b)fluoranthene	<0.02
2-Chloronaphthalene	<0.2	Benzo(k)fluoranthene	<0.02
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<0.02
Dimethyl phthalate	<2	Dibenz(a,h)anthracene	<0.02
Acenaphthylene	<0.02	Benzo(g,h,i)perylene	<0.04

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/10/20	Lab ID:	00-591 mb
Date Analyzed:	03/10/20	Data File:	031010.D
Matrix:	Water	Instrument:	GCMS8
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	13 vo	15	99
Phenol-d6	13	11	65
Nitrobenzene-d5	94	50	150
2-Fluorobiphenyl	93	50	150
2,4,6-Tribromophenol	34	34	132
Terphenyl-d14	92	45	138

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Phenol	<2	2,6-Dinitrotoluene	<1
Bis(2-chloroethyl) ether	<0.2	3-Nitroaniline	<20
2-Chlorophenol	<2 jl	Acenaphthene	<0.02
1,3-Dichlorobenzene	<0.2	2,4-Dinitrophenol	<6 ca jl
1,4-Dichlorobenzene	<0.2	Dibenzofuran	<0.2
1,2-Dichlorobenzene	<0.2	2,4-Dinitrotoluene	<1
Benzyl alcohol	<2	4-Nitrophenol	<6
2,2'-Oxybis(1-chloropropane)	<0.2	Diethyl phthalate	<2
2-Methylphenol	<2	Fluorene	<0.02
Hexachloroethane	<0.2	4-Chlorophenyl phenyl ether	<0.2
N-Nitroso-di-n-propylamine	<0.2	N-Nitrosodiphenylamine	<0.2
3-Methylphenol + 4-Methylphenol	<4 jl	4-Nitroaniline	<20
Nitrobenzene	<0.2	4,6-Dinitro-2-methylphenol	<6 ca jl
Isophorone	<0.2	4-Bromophenyl phenyl ether	<0.2
2-Nitrophenol	<2 jl	Hexachlorobenzene	<0.2
2,4-Dimethylphenol	<2	Pentachlorophenol	<1 jl
Benzoic acid	<10 jl	Phenanthrene	<0.02
Bis(2-chloroethoxy)methane	<0.2	Anthracene	<0.02
2,4-Dichlorophenol	<2 jl	Carbazole	<0.2
1,2,4-Trichlorobenzene	<0.2	Di-n-butyl phthalate	<2
Naphthalene	<0.2	Fluoranthene	<0.02
Hexachlorobutadiene	<0.2	Pyrene	<0.02
4-Chloroaniline	<20	Benzyl butyl phthalate	<2
4-Chloro-3-methylphenol	<2	Benz(a)anthracene	<0.02
2-Methylnaphthalene	<0.2	Chrysene	<0.02
1-Methylnaphthalene	<0.2	Bis(2-ethylhexyl) phthalate	<3.2
Hexachlorocyclopentadiene	<0.6 ca	Di-n-octyl phthalate	<2
2,4,6-Trichlorophenol	<2 jl	Benzo(a)pyrene	<0.02
2,4,5-Trichlorophenol	<2 jl	Benzo(b)fluoranthene	<0.02
2-Chloronaphthalene	<0.2	Benzo(k)fluoranthene	<0.02
2-Nitroaniline	<1	Indeno(1,2,3-cd)pyrene	<0.02
Dimethyl phthalate	<2	Dibenz(a,h)anthracene	<0.02
Acenaphthylene	<0.02	Benzo(g,h,i)perylene	<0.04

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW1-1	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/10/20	Lab ID:	003109-01
Date Analyzed:	03/11/20	Data File:	031152.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	93	63	127
4-Bromofluorobenzene	90	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW2-1	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/10/20	Lab ID:	003109-02
Date Analyzed:	03/11/20	Data File:	031153.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	95	57	121
Toluene-d8	92	63	127
4-Bromofluorobenzene	90	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW3-1	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/10/20	Lab ID:	003109-03
Date Analyzed:	03/11/20	Data File:	031154.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	57	121
Toluene-d8	92	63	127
4-Bromofluorobenzene	93	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW2-1 Dup.	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/10/20	Lab ID:	003109-04
Date Analyzed:	03/11/20	Data File:	031155.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	95	63	127
4-Bromofluorobenzene	96	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW4-1	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/10/20	Lab ID:	003109-05
Date Analyzed:	03/12/20	Data File:	031156.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	57	121
Toluene-d8	92	63	127
4-Bromofluorobenzene	91	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/10/20	Lab ID:	00-573 mb
Date Analyzed:	03/11/20	Data File:	031112.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	97	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	MW1-1	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/10/20	Lab ID:	003109-01
Date Analyzed:	03/10/20	Data File:	031011.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	36	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	MW2-1	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/10/20	Lab ID:	003109-02
Date Analyzed:	03/10/20	Data File:	031012.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	35	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	MW3-1	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/10/20	Lab ID:	003109-03
Date Analyzed:	03/10/20	Data File:	031013.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	43	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	MW4-1	Client:	EHSI
Date Received:	03/06/20	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/10/20	Lab ID:	003109-05
Date Analyzed:	03/10/20	Data File:	031014.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	39	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	Poulsbo RV 11361-03, F&BI 003109
Date Extracted:	03/10/20	Lab ID:	00-594 mb
Date Analyzed:	03/10/20	Data File:	031006.D
Matrix:	Water	Instrument:	GC7
Units:	ug/L (ppb)	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	43	24	127

Compounds:	Concentration ug/L (ppb)
Aroclor 1221	<0.1
Aroclor 1232	<0.1
Aroclor 1016	<0.1
Aroclor 1242	<0.1
Aroclor 1248	<0.1
Aroclor 1254	<0.1
Aroclor 1260	<0.1
Aroclor 1262	<0.1
Aroclor 1268	<0.1

Date of Report: 03/17/20
Date Received: 03/06/20
Project: Poulsbo RV 11361-03, F&BI 003109

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 003123-05 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	102	69-134

Date of Report: 03/17/20
Date Received: 03/06/20
Project: Poulsbo RV 11361-03, F&BI 003109

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	96	116	63-142	19

Date of Report: 03/17/20
Date Received: 03/06/20
Project: Poulsbo RV 11361-03, F&BI 003109

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR DISSOLVED METALS USING EPA METHOD 6020B

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	94	94	80-120	0
Barium	ug/L (ppb)	50	98	95	80-120	3
Cadmium	ug/L (ppb)	5	91	91	80-120	0
Chromium	ug/L (ppb)	20	101	97	80-120	4
Lead	ug/L (ppb)	10	95	93	80-120	2
Mercury	ug/L (ppb)	5	87	89	80-120	2
Selenium	ug/L (ppb)	5	85	86	80-120	1
Silver	ug/L (ppb)	5	94	95	80-120	1

Date of Report: 03/17/20
Date Received: 03/06/20
Project: Poulsbo RV 11361-03, F&BI 003109

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 002447-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	ug/L (ppb)	10	1.79	89	87	75-125	2
Barium	ug/L (ppb)	50	30.7	109	105	75-125	4
Cadmium	ug/L (ppb)	5	<1	94	94	75-125	0
Chromium	ug/L (ppb)	20	<1	91	92	75-125	1
Lead	ug/L (ppb)	10	<1	83	81	75-125	2
Mercury	ug/L (ppb)	5	<1	85	85	75-125	0
Selenium	ug/L (ppb)	5	<1	84	81	75-125	4
Silver	ug/L (ppb)	5	<1	82	83	75-125	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	ug/L (ppb)	10	100	80-120
Barium	ug/L (ppb)	50	94	80-120
Cadmium	ug/L (ppb)	5	96	80-120
Chromium	ug/L (ppb)	20	95	80-120
Lead	ug/L (ppb)	10	96	80-120
Mercury	ug/L (ppb)	5	95	80-120
Selenium	ug/L (ppb)	5	97	80-120
Silver	ug/L (ppb)	5	93	80-120

Date of Report: 03/17/20
Date Received: 03/06/20
Project: Poulsbo RV 11361-03, F&BI 003109

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	ug/L (ppb)	5	15	15	10-86	0
Bis(2-chloroethyl) ether	ug/L (ppb)	5	85	92	65-121	8
2-Chlorophenol	ug/L (ppb)	5	46 vo	47 vo	58-123	2
1,3-Dichlorobenzene	ug/L (ppb)	5	74	84	66-113	13
1,4-Dichlorobenzene	ug/L (ppb)	5	73	84	62-114	14
1,2-Dichlorobenzene	ug/L (ppb)	5	75	86	63-115	14
Benzyl alcohol	ug/L (ppb)	10	45	51	37-125	12
2,2'-Oxybis(1-chloropropane)	ug/L (ppb)	5	82	90	70-130	9
2-Methylphenol	ug/L (ppb)	5	49	52	38-119	6
Hexachloroethane	ug/L (ppb)	5	75	86	64-117	14
N-Nitroso-di-n-propylamine	ug/L (ppb)	5	87	98	70-130	12
3-Methylphenol + 4-Methylphenol	ug/L (ppb)	5	39 vo	43 vo	44-110	10
Nitrobenzene	ug/L (ppb)	5	86	94	70-130	9
Isophorone	ug/L (ppb)	5	87	111	70-130	24 vo
2-Nitrophenol	ug/L (ppb)	5	52 vo	54 vo	61-141	4
2,4-Dimethylphenol	ug/L (ppb)	5	71	80	12-127	12
Benzoic acid	ug/L (ppb)	32.5	7 vo	7 vo	10-102	0
Bis(2-chloroethoxy)methane	ug/L (ppb)	5	85	95	70-130	11
2,4-Dichlorophenol	ug/L (ppb)	5	52 vo	54 vo	70-130	4
1,2,4-Trichlorobenzene	ug/L (ppb)	5	78	87	70-130	11
Naphthalene	ug/L (ppb)	5	77	84	65-111	9
Hexachlorobutadiene	ug/L (ppb)	5	75	86	65-115	14
4-Chloroaniline	ug/L (ppb)	10	78	89	24-146	13
4-Chloro-3-methylphenol	ug/L (ppb)	5	64	68	58-133	6
2-Methylnaphthalene	ug/L (ppb)	5	79	85	70-130	7
1-Methylnaphthalene	ug/L (ppb)	5	78	85	70-130	9
Hexachlorocyclopentadiene	ug/L (ppb)	5	58	66	36-112	13
2,4,6-Trichlorophenol	ug/L (ppb)	5	43 vo	45 vo	70-130	5
2,4,5-Trichlorophenol	ug/L (ppb)	5	45 vo	46 vo	70-130	2
2-Chloronaphthalene	ug/L (ppb)	5	85	90	70-130	6
2-Nitroaniline	ug/L (ppb)	10	83	91	64-143	9
Dimethyl phthalate	ug/L (ppb)	5	88	95	64-140	8
Acenaphthylene	ug/L (ppb)	5	90	94	70-130	4
2,6-Dinitrotoluene	ug/L (ppb)	5	85	91	70-130	7
3-Nitroaniline	ug/L (ppb)	10	86	95	53-134	10
Acenaphthene	ug/L (ppb)	5	85	89	65-122	5
2,4-Dinitrophenol	ug/L (ppb)	5	38 vo	38 vo	58-139	0
Dibenzofuran	ug/L (ppb)	5	87	90	70-130	3
2,4-Dinitrotoluene	ug/L (ppb)	5	82	89	70-130	8
4-Nitrophenol	ug/L (ppb)	5	16	16	10-89	0
Diethyl phthalate	ug/L (ppb)	5	87	91	56-141	4
Fluorene	ug/L (ppb)	5	88	91	70-130	3
4-Chlorophenyl phenyl ether	ug/L (ppb)	5	85	90	70-130	6
N-Nitrosodiphenylamine	ug/L (ppb)	5	89	95	70-130	7
4-Nitroaniline	ug/L (ppb)	10	83	96	66-134	15
4,6-Dinitro-2-methylphenol	ug/L (ppb)	5	37 vo	41 vo	69-138	10
4-Bromophenyl phenyl ether	ug/L (ppb)	5	88	95	70-130	8
Hexachlorobenzene	ug/L (ppb)	5	85	91	70-130	7
Pentachlorophenol	ug/L (ppb)	5	34 vo	38 vo	70-130	11
Phenanthrene	ug/L (ppb)	5	88	93	70-130	6
Anthracene	ug/L (ppb)	5	88	93	70-130	6
Carbazole	ug/L (ppb)	5	96	103	70-130	7
Di-n-butyl phthalate	ug/L (ppb)	5	87	97	70-130	11
Fluoranthene	ug/L (ppb)	5	92	100	70-130	8
Pyrene	ug/L (ppb)	5	91	98	70-130	7
Benzyl butyl phthalate	ug/L (ppb)	5	87	98	70-130	12
Benz(a)anthracene	ug/L (ppb)	5	88	94	70-130	7
Chrysene	ug/L (ppb)	5	88	95	70-130	8
Bis(2-ethylhexyl) phthalate	ug/L (ppb)	5	77	88	63-139	13
Di-n-octyl phthalate	ug/L (ppb)	5	76	84	67-147	10
Benzo(a)pyrene	ug/L (ppb)	5	80	86	70-130	7
Benzo(b)fluoranthene	ug/L (ppb)	5	79	87	70-130	10
Benzo(k)fluoranthene	ug/L (ppb)	5	78	85	70-130	9
Indeno(1,2,3-cd)pyrene	ug/L (ppb)	5	84	84	57-141	0
Dibenz(a,h)anthracene	ug/L (ppb)	5	83	83	57-137	0
Benzo(g,h,i)perylene	ug/L (ppb)	5	83	84	50-143	1

Date of Report: 03/17/20
Date Received: 03/06/20
Project: Poulsbo RV 11361-03, F&BI 003109

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 003119-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<1	107	10-172
Chloromethane	ug/L (ppb)	50	<10	106	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	110	36-166
Bromomethane	ug/L (ppb)	50	<1	119	47-169
Chloroethane	ug/L (ppb)	50	<1	105	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	102	44-165
Acetone	ug/L (ppb)	250	<50	98	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	99	60-136
Hexane	ug/L (ppb)	50	<1	95	52-150
Methylene chloride	ug/L (ppb)	50	<5	99	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	105	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	96	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	102	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	104	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	98	71-127
Chloroform	ug/L (ppb)	50	<1	103	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	112	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	101	48-149
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	105	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	101	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	111	56-152
Benzene	ug/L (ppb)	50	<0.35	100	76-125
Trichloroethene	ug/L (ppb)	50	<1	99	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	106	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	108	61-150
Dibromomethane	ug/L (ppb)	50	<1	101	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	110	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	112	72-132
Toluene	ug/L (ppb)	50	<1	96	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	109	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	104	68-131
2-Hexanone	ug/L (ppb)	250	<10	107	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	105	71-128
Tetrachloroethene	ug/L (ppb)	50	2.7	94	10-226
Dibromochloromethane	ug/L (ppb)	50	<1	115	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	106	69-134
Chlorobenzene	ug/L (ppb)	50	<1	98	77-122
Ethylbenzene	ug/L (ppb)	50	<1	98	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	108	73-137
m,p-Xylene	ug/L (ppb)	100	<2	98	69-135
o-Xylene	ug/L (ppb)	50	<1	98	60-140
Styrene	ug/L (ppb)	50	<1	104	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	100	65-142
Bromoform	ug/L (ppb)	50	<1	109	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	95	58-144
Bromobenzene	ug/L (ppb)	50	<1	98	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	98	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	106	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	99	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	94	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	96	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	98	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	97	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	98	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	97	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	98	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	97	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	99	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	107	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	98	66-136
Hexachlorobutadiene	ug/L (ppb)	50	<1	87	60-143
Naphthalene	ug/L (ppb)	50	<1	105	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	98	69-148

Date of Report: 03/17/20
Date Received: 03/06/20
Project: Poulsbo RV 11361-03, F&BI 003109

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	112	119	25-158	6
Chloromethane	ug/L (ppb)	50	107	115	45-156	7
Vinyl chloride	ug/L (ppb)	50	114	119	50-154	4
Bromomethane	ug/L (ppb)	50	119	125	55-143	5
Chloroethane	ug/L (ppb)	50	109	115	58-146	5
Trichlorofluoromethane	ug/L (ppb)	250	108	111	50-150	3
Acetone	ug/L (ppb)	250	91	96	53-131	5
1,1-Dichloroethene	ug/L (ppb)	50	104	108	67-136	4
Hexane	ug/L (ppb)	50	98	95	57-137	3
Methylene chloride	ug/L (ppb)	50	103	107	39-148	4
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	107	104	64-147	3
trans-1,2-Dichloroethene	ug/L (ppb)	50	98	98	68-128	0
1,1-Dichloroethane	ug/L (ppb)	50	105	100	79-121	5
2,2-Dichloropropane	ug/L (ppb)	50	108	101	55-143	7
cis-1,2-Dichloroethene	ug/L (ppb)	50	101	101	80-123	0
Chloroform	ug/L (ppb)	50	105	102	80-121	3
2-Butanone (MEK)	ug/L (ppb)	250	100	95	57-149	5
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	100	94	73-132	6
1,1,1-Trichloroethane	ug/L (ppb)	50	108	104	81-125	4
1,1-Dichloropropene	ug/L (ppb)	50	103	100	77-129	3
Carbon tetrachloride	ug/L (ppb)	50	114	110	75-158	4
Benzene	ug/L (ppb)	50	100	99	69-134	1
Trichloroethene	ug/L (ppb)	50	98	97	79-113	1
1,2-Dichloropropane	ug/L (ppb)	50	103	102	77-123	1
Bromodichloromethane	ug/L (ppb)	50	112	109	81-133	3
Dibromomethane	ug/L (ppb)	50	104	102	82-125	2
4-Methyl-2-pentanone	ug/L (ppb)	250	107	106	65-138	1
cis-1,3-Dichloropropene	ug/L (ppb)	50	111	111	82-132	0
Toluene	ug/L (ppb)	50	99	99	72-122	0
trans-1,3-Dichloropropene	ug/L (ppb)	50	105	104	80-136	1
1,1,2-Trichloroethane	ug/L (ppb)	50	102	103	75-124	1
2-Hexanone	ug/L (ppb)	250	105	97	60-136	8
1,3-Dichloropropane	ug/L (ppb)	50	104	102	76-126	2
Tetrachloroethene	ug/L (ppb)	50	97	97	76-121	0
Dibromochloromethane	ug/L (ppb)	50	112	112	84-133	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	102	102	82-115	0
Chlorobenzene	ug/L (ppb)	50	98	99	83-114	1
Ethylbenzene	ug/L (ppb)	50	100	100	77-124	0
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	112	112	84-127	0
m,p-Xylene	ug/L (ppb)	100	100	101	81-112	1
o-Xylene	ug/L (ppb)	50	100	101	81-121	1
Styrene	ug/L (ppb)	50	104	106	84-119	2
Isopropylbenzene	ug/L (ppb)	50	100	106	80-117	6
Bromoform	ug/L (ppb)	50	104	107	74-136	3
n-Propylbenzene	ug/L (ppb)	50	96	97	74-126	1
Bromobenzene	ug/L (ppb)	50	97	98	80-121	1
1,3,5-Trimethylbenzene	ug/L (ppb)	50	101	101	78-123	0
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	103	104	66-126	1
1,2,3-Trichloropropane	ug/L (ppb)	50	95	96	67-124	1
2-Chlorotoluene	ug/L (ppb)	50	95	96	77-127	1
4-Chlorotoluene	ug/L (ppb)	50	96	97	78-128	1
tert-Butylbenzene	ug/L (ppb)	50	102	102	80-123	0
1,2,4-Trimethylbenzene	ug/L (ppb)	50	100	99	79-122	1
sec-Butylbenzene	ug/L (ppb)	50	103	103	80-116	0
p-Isopropyltoluene	ug/L (ppb)	50	101	101	81-123	0
1,3-Dichlorobenzene	ug/L (ppb)	50	100	100	83-113	0
1,4-Dichlorobenzene	ug/L (ppb)	50	98	99	83-107	1
1,2-Dichlorobenzene	ug/L (ppb)	50	101	102	84-112	1
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	106	104	57-141	2
1,2,4-Trichlorobenzene	ug/L (ppb)	50	104	103	72-130	1
Hexachlorobutadiene	ug/L (ppb)	50	98	97	53-141	1
Naphthalene	ug/L (ppb)	50	109	107	64-133	2
1,2,3-Trichlorobenzene	ug/L (ppb)	50	103	103	65-136	0

Date of Report: 03/17/20
Date Received: 03/06/20
Project: Poulsbo RV 11361-03, F&BI 003109

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Aroclor 1016	ug/L (ppb)	0.25	46	55	35-111	18
Aroclor 1260	ug/L (ppb)	0.25	50	71	29-130	35 vo

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

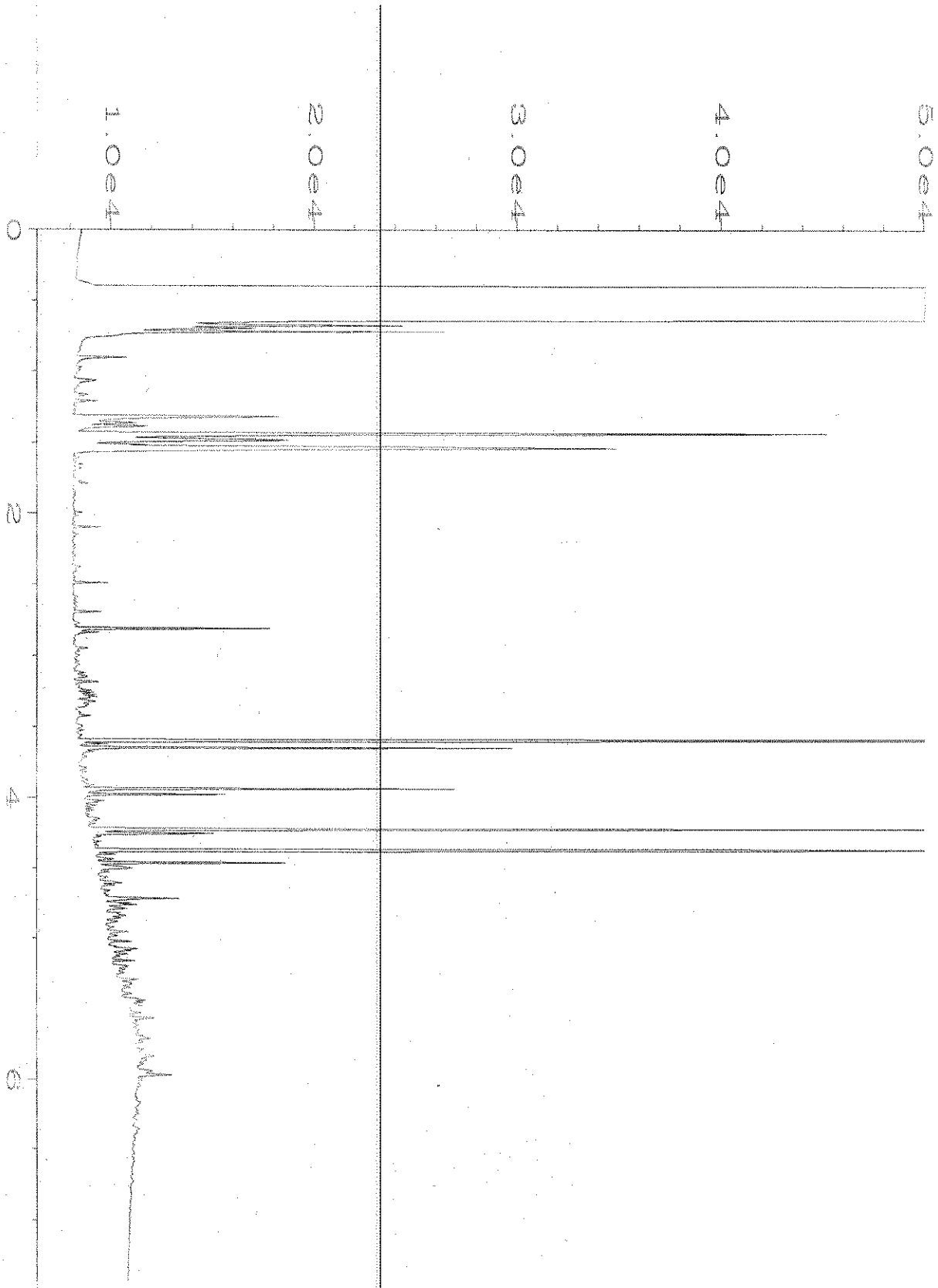
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

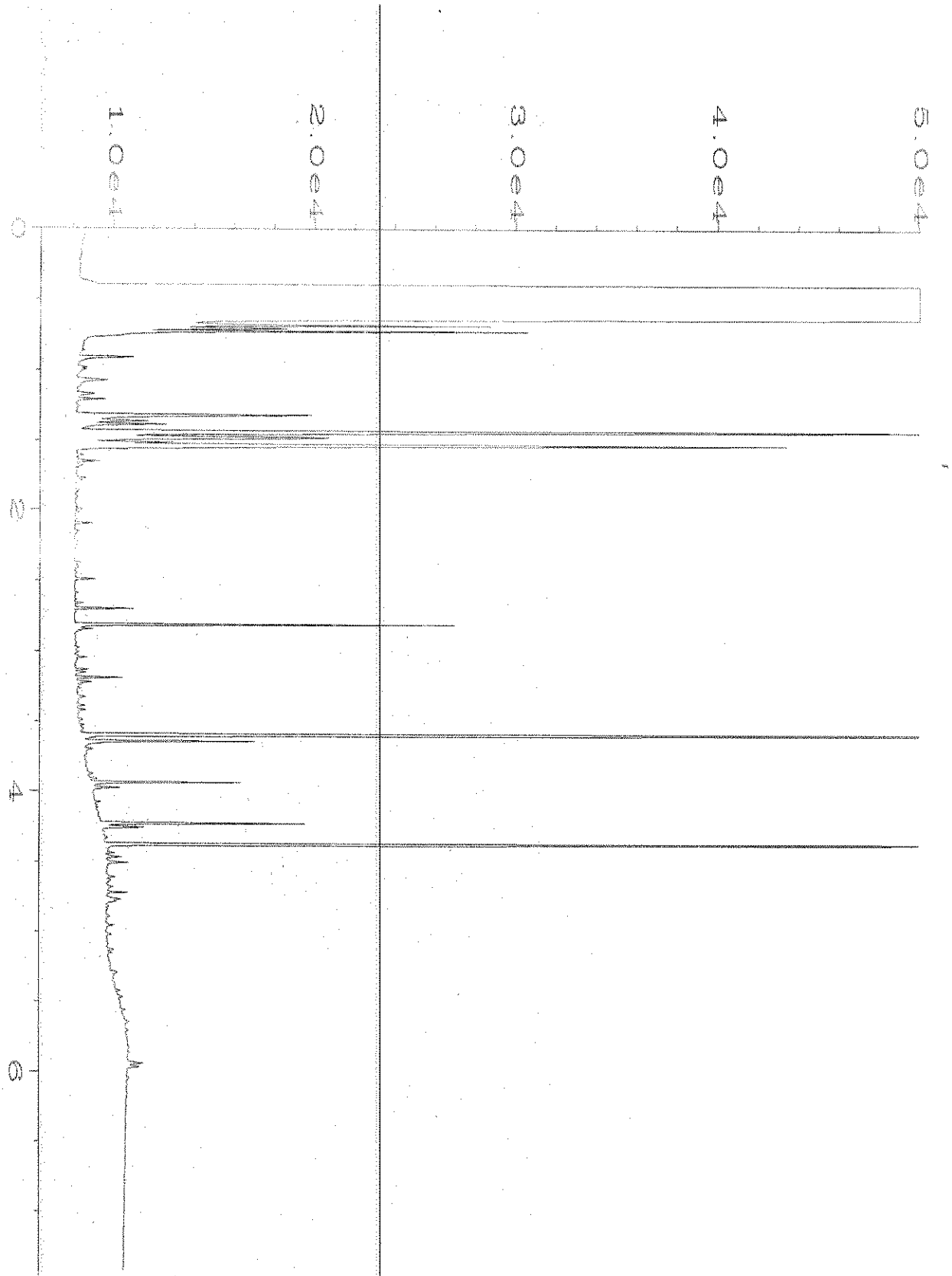
ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



Data File Name	: C:\HPCHEM\1\DATA\03-06-20\065F0901.D		
Operator	: TL	Page Number	: 1
Instrument	: GC1	Vial Number	: 65
Sample Name	: 003109-01	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
Acquired on	: 06 Mar 20 09:36 PM	Instrument Method	: DX.MTH
Report Created on	: 09 Mar 20 10:44 AM	Analysis Method	: DX.MTH



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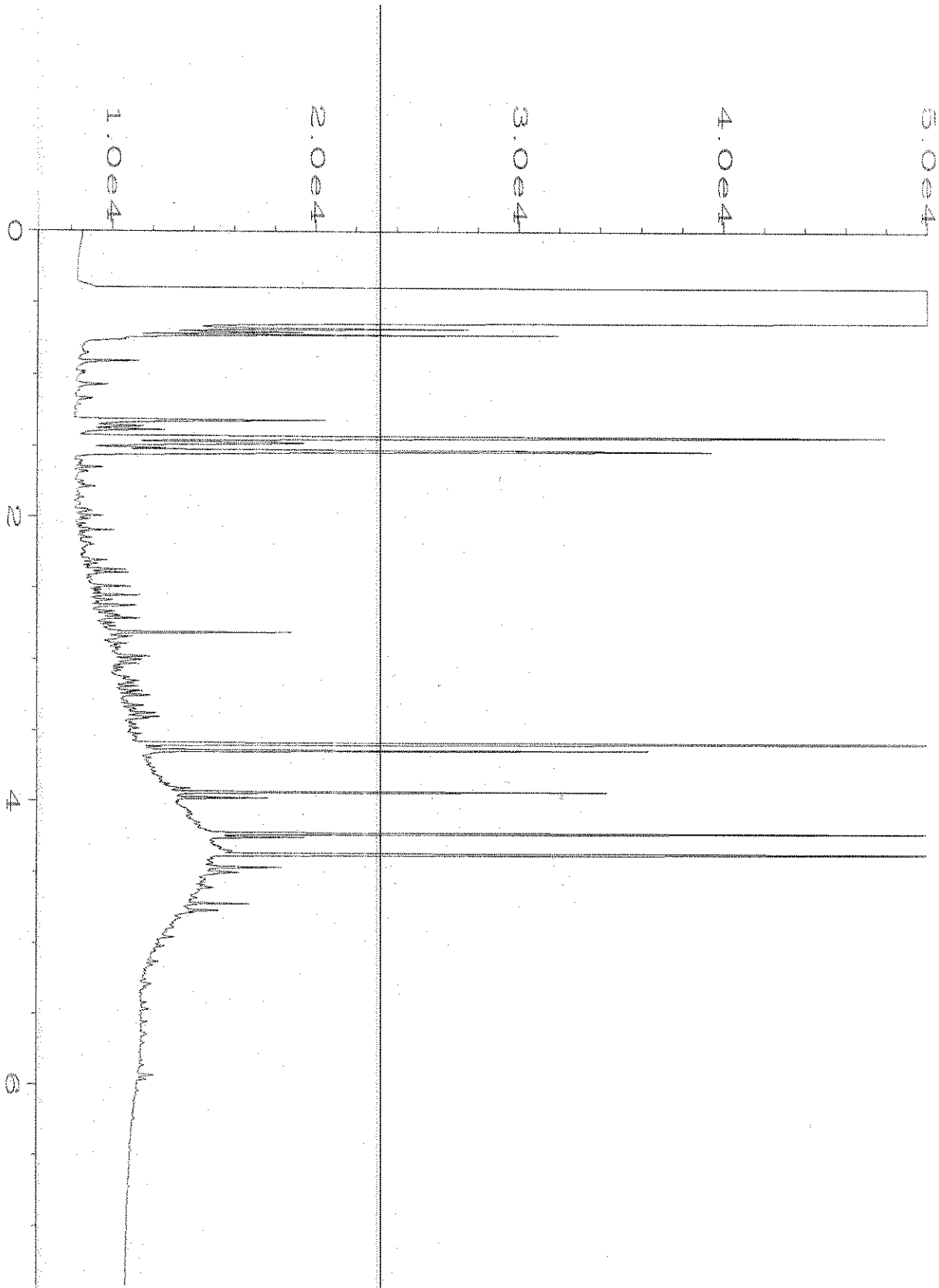
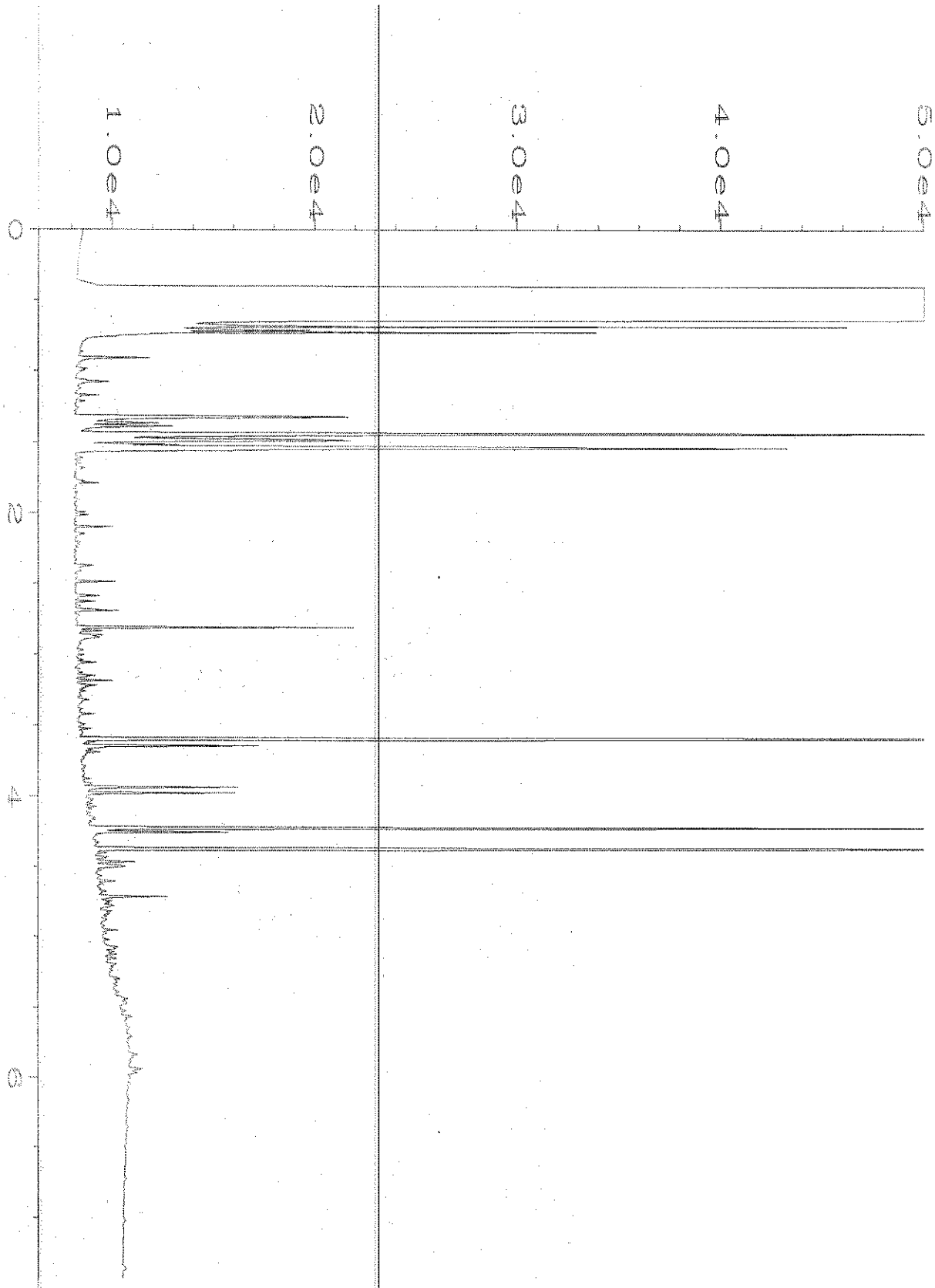
Operator	: TL	Page Number	: 1
Instrument	: GC1	Vial Number	: 66
Sample Name	: 003109-02	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
Acquired on	: 06 Mar 20 09:47 PM	Instrument Method	: DX.MTH
Report Created on	: 09 Mar 20 10:44 AM	Analysis Method	: DX.MTH

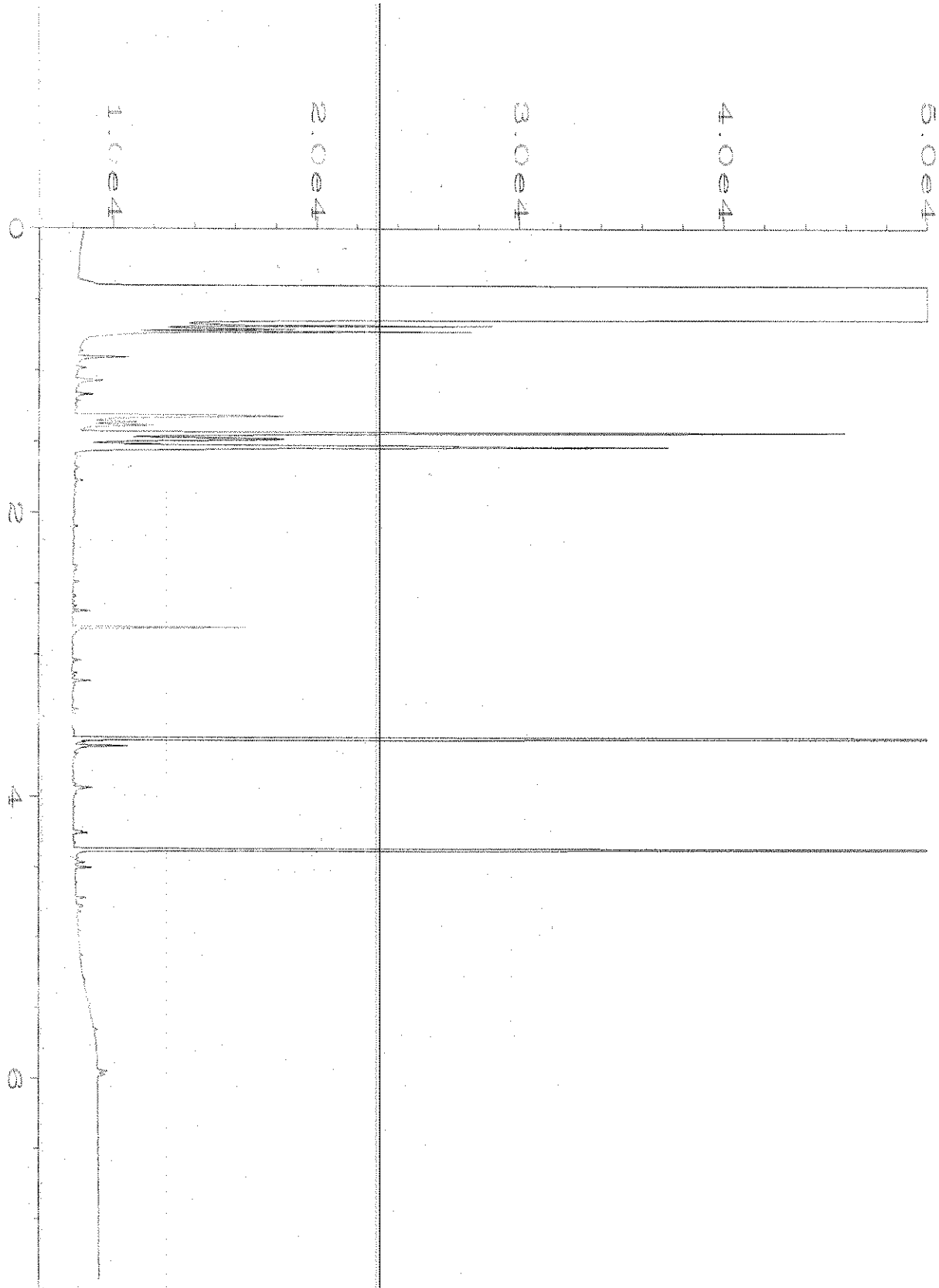


Data File Name : C:\HPCHEM\1\DATA\03-06-20\067F0901.D
Operator : TL
Instrument : GC1
Sample Name : 003109-03
Run Time Bar Code:
Acquired on : 06 Mar 20 09:59 PM
Report Created on: 09 Mar 20 10:44 AM

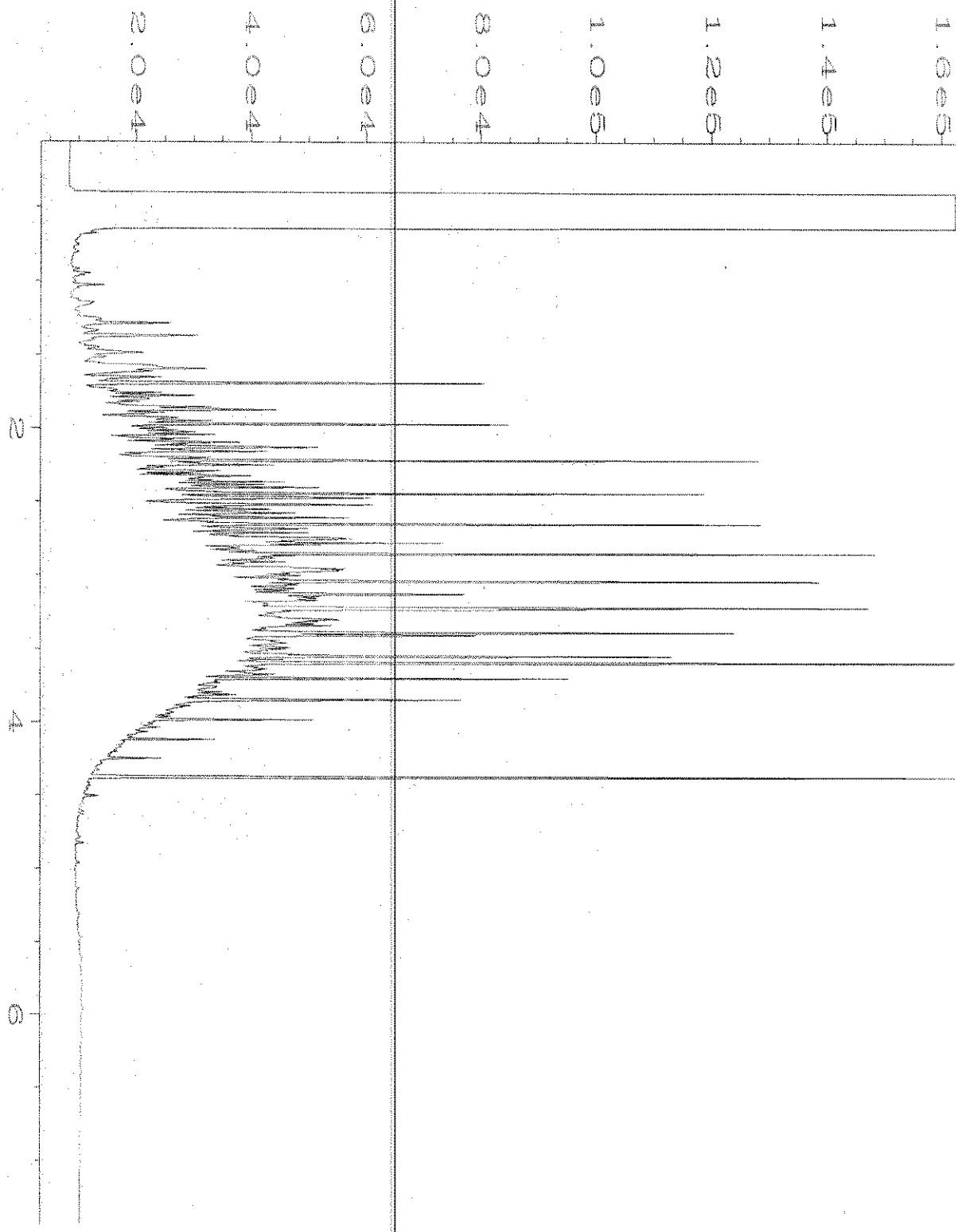
Page Number : 1
Vial Number : 67
Injection Number : 1
Sequence Line : 9
Instrument Method: DX.MTH
Analysis Method : DX.MTH



Data File Name	: C:\HPCHEM\1\DATA\03-06-20\068F0901.D		
Operator	: TL	Page Number	: 1
Instrument	: GC1	Vial Number	: 68
Sample Name	: 003109-05	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 9
Acquired on	: 06 Mar 20 10:10 PM	Instrument Method	: DX.MTH
Report Created on	: 09 Mar 20 10:45 AM	Analysis Method	: DX.MTH



Data File Name	: C:\HPCHEM\1\DATA\03-06-20\046F0701.D		
Operator	: TL	Page Number	: 1
Instrument	: GC1	Vial Number	: 46
Sample Name	: 00-584 mb	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
Acquired on	: 06 Mar 20 05:37 PM	Instrument Method	: DX.MTH
Report Created on	: 09 Mar 20 10:39 AM	Analysis Method	: DX.MTH



Data File Name : C:\HPCHEM\1\DATA\03-06-20\003F0801.D
Operator : TL
Instrument : GC1
Sample Name : 500 Dx 58-146H
Run Time Bar Code:
Acquired on : 06 Mar 20 07:31 PM
Report Created on: 09 Mar 20 10:47 AM

Page Number : 1
Vial Number : 3
Injection Number : 1
Sequence Line : 8
Instrument Method: DX.MTH
Analysis Method : DX.MTH

109
003 ~~108~~ (NP)

SAMPLE CHAIN OF CUSTODY ME 03/06/20

VW2/AO5/AI4

Page # 1 of 1

Report To Jason Cass

Company EHSI

Address 1011 SW Klickitat Way, #104

City, State, ZIP Seattle, WA 98134

Phone 206-381-1628 Email

SAMPLERS (signature) Jason Cass

PROJECT NAME	PO #
Poulsbo RV	11361-03
REMARKS	INVOICE TO
Project specific RLs? - Yes / (No)	

TURNAROUND TIME
- [x] Standard turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Archive samples
- [ ] Other
- Default: Dispose after 30 days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	NWTPH-Dx	NWTPH-Gx	BTEX EPA 8021	NWTPH-HCID	VOCs EPA 8260	PAHs EPA 8270	PCBs EPA 8082	8270 Full	Diss. RCRA8	Total RCRA8		Notes
MW1-1	01A-H	3/5/20	12:27	H2O	8	X	X			X		X	X	X	X		
MW2-1	02		14:50		8	X	X			X		X	X	X	X		
MW3-1	03		16:30		8	X	X			X		X	X	X	X		
MW2-1 Dup.	04 A B		14:50		2					X							
MW4-1	05A-H		17:35		8	X	X			X		X	X	X	X		
													Samples received at 2 °C				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Jason Cass	Jason Cass	EHSI	3/6/20	8:05
Received by: Nhan Phan	Nhan Phan	FEBI	3/6/20	0805
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

March 19, 2020

Ryan Opitz, Project Manager
EHSI
1011 SW Klickitat Way, Suite 104
Seattle, WA 98134

Dear Mr Opitz:

Included are the additional results from the testing of material submitted on February 27, 2020 from the WSDOT Poulsbo RV Phase II 11361-03, F&BI 002426 project. There is 1 page included in this report.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: EHSI A/P, Jason Cass
EHS0319R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 27, 2020 by Friedman & Bruya, Inc. from the EHSI WSDOT Poulsbo RV Phase II 11361-03, F&BI 002426 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	EHSI
002426 -01	MW-4-25
002426 -02	MW-4-30
002426 -03	B1-20
002426 -04	B1-30
002426 -05	B1-30-Dup
002426 -06	Trip Blank

Samples MW-4-30 and B1-30-Dup were sent to Fremont Analytical for hexavalent chromium analysis. The report is enclosed.

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 002426
Work Order Number: 2003161

March 17, 2020

Attention Michael Erdahl:

Fremont Analytical, Inc. received 2 sample(s) on 3/10/2020 for the analyses presented in the following report.

Hexavalent Chromium by EPA Method 7196
Sample Moisture (Percent Moisture)

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

Date: *03/17/2020*

CLIENT: Friedman & Bruya
Project: 002426
Work Order: 2003161

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2003161-001	MW-4-30	02/26/2020 9:20 AM	03/10/2020 4:00 PM
2003161-002	B1-30-DUP	02/27/2020 2:25 PM	03/10/2020 4:00 PM

Case Narrative

WO#: **2003161**

Date: **3/17/2020**

CLIENT: Friedman & Bruya
Project: 002426

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2003161**
Date Reported: **3/17/2020**

CLIENT: Friedman & Bruya
Project: 002426

Lab ID: 2003161-001 **Collection Date:** 2/26/2020 9:20:00 AM
Client Sample ID: **MW-4-30** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R57994		Analyst: EH
Percent Moisture	8.72	0.500		wt%	1	3/13/2020 9:53:11 AM
Hexavalent Chromium by EPA Method 7196				Batch ID: 27781		Analyst: WF
Chromium, Hexavalent	ND	0.527		mg/Kg-dry	1	3/16/2020 5:52:00 PM

Lab ID: 2003161-002 **Collection Date:** 2/27/2020 2:25:00 PM
Client Sample ID: **B1-30-DUP** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R57994		Analyst: EH
Percent Moisture	12.7	0.500		wt%	1	3/13/2020 9:53:11 AM
Hexavalent Chromium by EPA Method 7196				Batch ID: 27781		Analyst: WF
Chromium, Hexavalent	ND	0.542		mg/Kg-dry	1	3/16/2020 6:10:00 PM

Work Order: 2003161
CLIENT: Friedman & Bruya
Project: 002426

QC SUMMARY REPORT

Hexavalent Chromium by EPA Method 7196

Sample ID: **MB-27781** SampType: **MBLK** Units: **mg/Kg** Prep Date: **3/16/2020** RunNo: **58083**
Client ID: **MBLKS** Batch ID: **27781** Analysis Date: **3/16/2020** SeqNo: **1159916**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.500									

Sample ID: **LCS-27781** SampType: **LCS** Units: **mg/Kg** Prep Date: **3/16/2020** RunNo: **58083**
Client ID: **LCSS** Batch ID: **27781** Analysis Date: **3/16/2020** SeqNo: **1159917**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	2.36	0.500	2.500	0	94.6	65	135				

Sample ID: **2003161-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **3/16/2020** RunNo: **58083**
Client ID: **MW-4-30** Batch ID: **27781** Analysis Date: **3/16/2020** SeqNo: **1159919**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.506						0		30	

Sample ID: **2003161-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **3/16/2020** RunNo: **58083**
Client ID: **MW-4-30** Batch ID: **27781** Analysis Date: **3/16/2020** SeqNo: **1159920**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	1.87	0.541	2.706	0.4340	53.2	65	135				S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **2003161-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **3/16/2020** RunNo: **58083**
Client ID: **MW-4-30** Batch ID: **27781** Analysis Date: **3/16/2020** SeqNo: **1159921**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	1.70	0.525	2.623	0.4340	48.3	65	135	1.875	9.73	30	S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample Log-In Check List

Client Name:	**FB**	Work Order Number:	**2003161**
Logged by:	**Carissa True**	Date Received:	**3/10/2020 4:00:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes	☑	No ☐	Not Present	☐
2.	How was the sample delivered?	FedEx				

Log In

3.	Coolers are present?	Yes	☐	No ☑	NA	☐
		No cooler present				
4.	Shipping container/cooler in good condition?	Yes	☑	No ☐		
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes	☐	No ☑	Not Required	☐
6.	Was an attempt made to cool the samples?	Yes	☑	No ☐	NA	☐
7.	Were all items received at a temperature of >2°C to 6°C *	Yes	☑	No ☐	NA	☐
8.	Sample(s) in proper container(s)?	Yes	☑	No ☐		
9.	Sufficient sample volume for indicated test(s)?	Yes	☑	No ☐		
10.	Are samples properly preserved?	Yes	☑	No ☐		
11.	Was preservative added to bottles?	Yes	☐	No ☑	NA	☐
12.	Is there headspace in the VOA vials?	Yes	☐	No ☐	NA	☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes	☑	No ☐		
14.	Does paperwork match bottle labels?	Yes	☑	No ☐		
15.	Are matrices correctly identified on Chain of Custody?	Yes	☑	No ☐		
16.	Is it clear what analyses were requested?	Yes	☑	No ☐		
17.	Were all holding times able to be met?	Yes	☑	No ☐		

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes	☐	No ☐	NA	☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

19. Additional remarks:

Item Information

Item #	Temp ºC
Sample 1	5.5

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

2003161

Page # 1 of 1

Send Report To Michael Erdahl
Company Friedman and Bruya, Inc.
Address 3012 16th Ave W
City, State, ZIP Seattle, WA 98119
Phone # (206) 285-8282 merdahl@friedmanandbruya.com

SUBCONTRACTER Fremont

PROJECT NAME/NO.	PO #
002426	B-128

REMARKS

TURNAROUND TIME
☒ Standard TAT
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Dioxins/Furans	EPH	VPH	Cr VI							Notes
MW-4-30		2/26/20	0920	Soil	1				x							
B1-30-DUP		2/27/20	1425	Soil	1				x							

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	3/10/20	12:47
Received by:		Emma Holmes	FAI	3/10/20	1600
Relinquished by:					
Received by:					

002426

SAMPLE CHAIN OF CUSTODY

ME 02/27/20 US-D3 / BT2

Page 1 of 1

Report To Ryan Opitz, Mike Brady

Company EHSI

Address 1101 SW Klickitat Way, Suite 104

City, State, ZIP Seattle

Phone _____ Email _____

SAMPLERS (*signature*)

PROJECT NAME WSDOT Poulsbo RV Phase II

PO # 11361-03

REMARKS

INVOICE TO

TURNAROUND TIME
- [x] Standard Turnaround Vau
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Dispose after 30 days
- [ ] Archive Samples
- [x] Other 60 Days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	PCBs	RCRA 8	Cr VI		Notes
MW-4-25	01 A-D	2/26/20	8:50	Soil	4		X	X		X	X		X	X			(X) per MB
MW-4-30	02	2/26/20	9:20	Soil	4		(X)	X		X	X		X	X	◆		2/28/20 ME
BI-20	03	2/27/20	1:35	Soil	4		(X)	X		X	X		X	X			◆ per MB
BI-30	04	2/27/20	2:25	Soil	4		(X)	X		X	X		X	X			3/10/20 ME
BI-30-Dup	05	2/27/20	2:25	Soil	4		(X)	X		X	X		X	X	◆		
TRIP BLANK	06 AB	2/26/20	—	H_2O	2			X		X							

Samples received at 4 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Mike Brady	EHSI	2/27	13:43
Received by:	Nhan Phan	FEBI	2/27/20	1343
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

March 6, 2020

Ryan Opitz, Project Manager
EHSI
1011 SW Klickitat Way, Suite 104
Seattle, WA 98134

Dear Mr Opitz:

Included are the results from the testing of material submitted on February 27, 2020 from the WSDOT Poulsbo RV Phase II 11361-03, F&BI 002426 project. There are 44 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: EHSI A/P, Mike Brady
EHS0306R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 27, 2020 by Friedman & Bruya, Inc. from the EHSI WSDOT Poulsbo RV Phase II 11361-03, F&BI 002426 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	EHSI
002426 -01	MW-4-25
002426 -02	MW-4-30
002426 -03	B1-20
002426 -04	B1-30
002426 -05	B1-30-Dup
002426 -06	Trip Blank

A 6020B internal standard failed the acceptance criteria for samples MW-4-30 and B1-30. The samples were diluted and reanalyzed with acceptable results. Both data sets were reported.

The 8270D laboratory control sample and laboratory control sample duplicate failed the relative percent difference for several compounds. The analytes were not detected, therefore the data were acceptable.

All other quality control requirements were acceptable.

Date of Report: 03/06/20
Date Received: 02/27/20
Project: WSDOT Poulsbo RV Phase II 11361-03, F&BI 002426
Date Extracted: 03/03/20
Date Analyzed: 03/04/20

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
MW-4-25 002426-01	<5	93
MW-4-30 002426-02	<5	96
B1-20 002426-03	<5	95
B1-30 002426-04	<5	97
B1-30-Dup 002426-05	<5	87
Method Blank 00-395 MB	<5	97

Date of Report: 03/06/20
Date Received: 02/27/20
Project: WSDOT Poulsbo RV Phase II 11361-03, F&BI 002426
Date Extracted: 02/28/20
Date Analyzed: 02/28/20

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 51-134)
Trip Blank 002426-06	<100	98
Method Blank 00-386 MB	<100	100

Date of Report: 03/06/20
Date Received: 02/27/20
Project: WSDOT Poulsbo RV Phase II 11361-03, F&BI 002426
Date Extracted: 02/27/20
Date Analyzed: 02/28/20

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 53-144)
MW-4-25 002426-01	<50	<250	81
MW-4-30 002426-02	<50	<250	81
B1-20 002426-03	<50	<250	78
B1-30 002426-04	<50	<250	80
B1-30-Dup 002426-05	<50	<250	77
Method Blank 00-507 MB	<50	<250	81

Analysis For Total Metals By EPA Method 6020B

Client ID:	MW-4-25	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/28/20	Lab ID:	002426-01
Date Analyzed:	02/28/20	Data File:	002426-01.118
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.01
Barium	54.3
Cadmium	<1
Chromium	14.1
Lead	2.09
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	MW-4-30	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/28/20	Lab ID:	002426-02
Date Analyzed:	02/28/20	Data File:	002426-02.119
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	2.88
Barium	61.4
Cadmium	<1
Chromium	19.1 J
Lead	2.03
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	MW-4-30	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/28/20	Lab ID:	002426-02 x5
Date Analyzed:	03/03/20	Data File:	002426-02 x5.056
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	21.4

Analysis For Total Metals By EPA Method 6020B

Client ID:	B1-20	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/28/20	Lab ID:	002426-03
Date Analyzed:	02/28/20	Data File:	002426-03.120
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.51
Barium	31.8
Cadmium	<1
Chromium	11.5
Lead	1.21
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B1-30	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/28/20	Lab ID:	002426-04
Date Analyzed:	02/28/20	Data File:	002426-04.121
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.98
Barium	37.7
Cadmium	<1
Chromium	16.2 J
Lead	1.52
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	B1-30	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/28/20	Lab ID:	002426-04 x5
Date Analyzed:	03/03/20	Data File:	002426-04 x5.057
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Chromium	17.8

Analysis For Total Metals By EPA Method 6020B

Client ID:	B1-30-Dup	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/28/20	Lab ID:	002426-05
Date Analyzed:	02/28/20	Data File:	002426-05.122
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.75
Barium	36.8
Cadmium	<1
Chromium	27.7
Lead	1.55
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	EHSI
Date Received:	NA	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/28/20	Lab ID:	I0-120 mb2
Date Analyzed:	02/28/20	Data File:	I0-120 mb2.115
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW-4-25	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/27/20	Lab ID:	002426-01 1/5
Date Analyzed:	02/28/20	Data File:	022826.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	71	50	150
Phenol-d6	78	50	150
Nitrobenzene-d5	75	50	150
2-Fluorobiphenyl	80	50	150
2,4,6-Tribromophenol	70	50	150
Terphenyl-d14	82	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.5	2,6-Dinitrotoluene	<0.25
Bis(2-chloroethyl) ether	<0.05	3-Nitroaniline	<5
2-Chlorophenol	<0.5	Acenaphthene	<0.01
1,3-Dichlorobenzene	<0.05	2,4-Dinitrophenol	<1.5
1,4-Dichlorobenzene	<0.05	Dibenzofuran	<0.05
1,2-Dichlorobenzene	<0.05	2,4-Dinitrotoluene	<0.25
Benzyl alcohol	<0.5	4-Nitrophenol	<1.5
2,2'-Oxybis(1-chloropropane)	<0.05	Diethyl phthalate	<0.5
2-Methylphenol	<0.5	Fluorene	<0.01
Hexachloroethane	<0.05	4-Chlorophenyl phenyl ether	<0.05
N-Nitroso-di-n-propylamine	<0.05	N-Nitrosodiphenylamine	<0.05
3-Methylphenol + 4-Methylphenol	<1	4-Nitroaniline	<5
Nitrobenzene	<0.05	4,6-Dinitro-2-methylphenol	<1.5
Isophorone	<0.05	4-Bromophenyl phenyl ether	<0.05
2-Nitrophenol	<0.5	Hexachlorobenzene	<0.05
2,4-Dimethylphenol	<0.5	Pentachlorophenol	<0.25
Benzoic acid	<2.5	Phenanthrene	<0.01
Bis(2-chloroethoxy)methane	<0.05	Anthracene	<0.01
2,4-Dichlorophenol	<0.5	Carbazole	<0.05
1,2,4-Trichlorobenzene	<0.05	Di-n-butyl phthalate	<0.5
Naphthalene	<0.01	Fluoranthene	<0.01
Hexachlorobutadiene	<0.05	Pyrene	<0.01
4-Chloroaniline	<5	Benzyl butyl phthalate	<0.5
4-Chloro-3-methylphenol	<0.5	Benz(a)anthracene	<0.01
2-Methylnaphthalene	<0.01	Chrysene	<0.01
1-Methylnaphthalene	<0.01	Bis(2-ethylhexyl) phthalate	<0.8
Hexachlorocyclopentadiene	<0.15	Di-n-octyl phthalate	<0.5
2,4,6-Trichlorophenol	<0.5	Benzo(a)pyrene	<0.01
2,4,5-Trichlorophenol	<0.5	Benzo(b)fluoranthene	<0.01
2-Chloronaphthalene	<0.05	Benzo(k)fluoranthene	<0.01
2-Nitroaniline	<0.25	Indeno(1,2,3-cd)pyrene	<0.01
Dimethyl phthalate	<0.5	Dibenz(a,h)anthracene	<0.01
Acenaphthylene	<0.01	Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW-4-30	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/27/20	Lab ID:	002426-02 1/5
Date Analyzed:	02/28/20	Data File:	022827.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	75	50	150
Phenol-d6	82	50	150
Nitrobenzene-d5	78	50	150
2-Fluorobiphenyl	84	50	150
2,4,6-Tribromophenol	74	50	150
Terphenyl-d14	89	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.5	2,6-Dinitrotoluene	<0.25
Bis(2-chloroethyl) ether	<0.05	3-Nitroaniline	<5
2-Chlorophenol	<0.5	Acenaphthene	<0.01
1,3-Dichlorobenzene	<0.05	2,4-Dinitrophenol	<1.5
1,4-Dichlorobenzene	<0.05	Dibenzofuran	<0.05
1,2-Dichlorobenzene	<0.05	2,4-Dinitrotoluene	<0.25
Benzyl alcohol	<0.5	4-Nitrophenol	<1.5
2,2'-Oxybis(1-chloropropane)	<0.05	Diethyl phthalate	<0.5
2-Methylphenol	<0.5	Fluorene	<0.01
Hexachloroethane	<0.05	4-Chlorophenyl phenyl ether	<0.05
N-Nitroso-di-n-propylamine	<0.05	N-Nitrosodiphenylamine	<0.05
3-Methylphenol + 4-Methylphenol	<1	4-Nitroaniline	<5
Nitrobenzene	<0.05	4,6-Dinitro-2-methylphenol	<1.5
Isophorone	<0.05	4-Bromophenyl phenyl ether	<0.05
2-Nitrophenol	<0.5	Hexachlorobenzene	<0.05
2,4-Dimethylphenol	<0.5	Pentachlorophenol	<0.25
Benzoic acid	<2.5	Phenanthrene	<0.01
Bis(2-chloroethoxy)methane	<0.05	Anthracene	<0.01
2,4-Dichlorophenol	<0.5	Carbazole	<0.05
1,2,4-Trichlorobenzene	<0.05	Di-n-butyl phthalate	<0.5
Naphthalene	<0.01	Fluoranthene	<0.01
Hexachlorobutadiene	<0.05	Pyrene	<0.01
4-Chloroaniline	<5	Benzyl butyl phthalate	<0.5
4-Chloro-3-methylphenol	<0.5	Benz(a)anthracene	<0.01
2-Methylnaphthalene	<0.01	Chrysene	<0.01
1-Methylnaphthalene	<0.01	Bis(2-ethylhexyl) phthalate	<0.8
Hexachlorocyclopentadiene	<0.15	Di-n-octyl phthalate	<0.5
2,4,6-Trichlorophenol	<0.5	Benzo(a)pyrene	<0.01
2,4,5-Trichlorophenol	<0.5	Benzo(b)fluoranthene	<0.01
2-Chloronaphthalene	<0.05	Benzo(k)fluoranthene	<0.01
2-Nitroaniline	<0.25	Indeno(1,2,3-cd)pyrene	<0.01
Dimethyl phthalate	<0.5	Dibenz(a,h)anthracene	<0.01
Acenaphthylene	<0.01	Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B1-20	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/27/20	Lab ID:	002426-03 1/5
Date Analyzed:	02/28/20	Data File:	022828.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	75	50	150
Phenol-d6	82	50	150
Nitrobenzene-d5	81	50	150
2-Fluorobiphenyl	85	50	150
2,4,6-Tribromophenol	71	50	150
Terphenyl-d14	86	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.5	2,6-Dinitrotoluene	<0.25
Bis(2-chloroethyl) ether	<0.05	3-Nitroaniline	<5
2-Chlorophenol	<0.5	Acenaphthene	<0.01
1,3-Dichlorobenzene	<0.05	2,4-Dinitrophenol	<1.5
1,4-Dichlorobenzene	<0.05	Dibenzofuran	<0.05
1,2-Dichlorobenzene	<0.05	2,4-Dinitrotoluene	<0.25
Benzyl alcohol	<0.5	4-Nitrophenol	<1.5
2,2'-Oxybis(1-chloropropane)	<0.05	Diethyl phthalate	<0.5
2-Methylphenol	<0.5	Fluorene	<0.01
Hexachloroethane	<0.05	4-Chlorophenyl phenyl ether	<0.05
N-Nitroso-di-n-propylamine	<0.05	N-Nitrosodiphenylamine	<0.05
3-Methylphenol + 4-Methylphenol	<1	4-Nitroaniline	<5
Nitrobenzene	<0.05	4,6-Dinitro-2-methylphenol	<1.5
Isophorone	<0.05	4-Bromophenyl phenyl ether	<0.05
2-Nitrophenol	<0.5	Hexachlorobenzene	<0.05
2,4-Dimethylphenol	<0.5	Pentachlorophenol	<0.25
Benzoic acid	<2.5	Phenanthrene	<0.01
Bis(2-chloroethoxy)methane	<0.05	Anthracene	<0.01
2,4-Dichlorophenol	<0.5	Carbazole	<0.05
1,2,4-Trichlorobenzene	<0.05	Di-n-butyl phthalate	<0.5
Naphthalene	<0.01	Fluoranthene	<0.01
Hexachlorobutadiene	<0.05	Pyrene	<0.01
4-Chloroaniline	<5	Benzyl butyl phthalate	<0.5
4-Chloro-3-methylphenol	<0.5	Benz(a)anthracene	<0.01
2-Methylnaphthalene	<0.01	Chrysene	<0.01
1-Methylnaphthalene	<0.01	Bis(2-ethylhexyl) phthalate	<0.8
Hexachlorocyclopentadiene	<0.15	Di-n-octyl phthalate	<0.5
2,4,6-Trichlorophenol	<0.5	Benzo(a)pyrene	<0.01
2,4,5-Trichlorophenol	<0.5	Benzo(b)fluoranthene	<0.01
2-Chloronaphthalene	<0.05	Benzo(k)fluoranthene	<0.01
2-Nitroaniline	<0.25	Indeno(1,2,3-cd)pyrene	<0.01
Dimethyl phthalate	<0.5	Dibenz(a,h)anthracene	<0.01
Acenaphthylene	<0.01	Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B1-30	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/27/20	Lab ID:	002426-04 1/5
Date Analyzed:	02/29/20	Data File:	022829.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	77	50	150
Phenol-d6	83	50	150
Nitrobenzene-d5	82	50	150
2-Fluorobiphenyl	86	50	150
2,4,6-Tribromophenol	76	50	150
Terphenyl-d14	91	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.5	2,6-Dinitrotoluene	<0.25
Bis(2-chloroethyl) ether	<0.05	3-Nitroaniline	<5
2-Chlorophenol	<0.5	Acenaphthene	<0.01
1,3-Dichlorobenzene	<0.05	2,4-Dinitrophenol	<1.5
1,4-Dichlorobenzene	<0.05	Dibenzofuran	<0.05
1,2-Dichlorobenzene	<0.05	2,4-Dinitrotoluene	<0.25
Benzyl alcohol	<0.5	4-Nitrophenol	<1.5
2,2'-Oxybis(1-chloropropane)	<0.05	Diethyl phthalate	<0.5
2-Methylphenol	<0.5	Fluorene	<0.01
Hexachloroethane	<0.05	4-Chlorophenyl phenyl ether	<0.05
N-Nitroso-di-n-propylamine	<0.05	N-Nitrosodiphenylamine	<0.05
3-Methylphenol + 4-Methylphenol	<1	4-Nitroaniline	<5
Nitrobenzene	<0.05	4,6-Dinitro-2-methylphenol	<1.5
Isophorone	<0.05	4-Bromophenyl phenyl ether	<0.05
2-Nitrophenol	<0.5	Hexachlorobenzene	<0.05
2,4-Dimethylphenol	<0.5	Pentachlorophenol	<0.25
Benzoic acid	<2.5	Phenanthrene	<0.01
Bis(2-chloroethoxy)methane	<0.05	Anthracene	<0.01
2,4-Dichlorophenol	<0.5	Carbazole	<0.05
1,2,4-Trichlorobenzene	<0.05	Di-n-butyl phthalate	<0.5
Naphthalene	<0.01	Fluoranthene	<0.01
Hexachlorobutadiene	<0.05	Pyrene	<0.01
4-Chloroaniline	<5	Benzyl butyl phthalate	<0.5
4-Chloro-3-methylphenol	<0.5	Benz(a)anthracene	<0.01
2-Methylnaphthalene	<0.01	Chrysene	<0.01
1-Methylnaphthalene	<0.01	Bis(2-ethylhexyl) phthalate	<0.8
Hexachlorocyclopentadiene	<0.15	Di-n-octyl phthalate	<0.5
2,4,6-Trichlorophenol	<0.5	Benzo(a)pyrene	<0.01
2,4,5-Trichlorophenol	<0.5	Benzo(b)fluoranthene	<0.01
2-Chloronaphthalene	<0.05	Benzo(k)fluoranthene	<0.01
2-Nitroaniline	<0.25	Indeno(1,2,3-cd)pyrene	<0.01
Dimethyl phthalate	<0.5	Dibenz(a,h)anthracene	<0.01
Acenaphthylene	<0.01	Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	B1-30-Dup	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/27/20	Lab ID:	002426-05 1/5
Date Analyzed:	02/29/20	Data File:	022830.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	76	50	150
Phenol-d6	85	50	150
Nitrobenzene-d5	81	50	150
2-Fluorobiphenyl	86	50	150
2,4,6-Tribromophenol	76	50	150
Terphenyl-d14	91	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.5	2,6-Dinitrotoluene	<0.25
Bis(2-chloroethyl) ether	<0.05	3-Nitroaniline	<5
2-Chlorophenol	<0.5	Acenaphthene	<0.01
1,3-Dichlorobenzene	<0.05	2,4-Dinitrophenol	<1.5
1,4-Dichlorobenzene	<0.05	Dibenzofuran	<0.05
1,2-Dichlorobenzene	<0.05	2,4-Dinitrotoluene	<0.25
Benzyl alcohol	<0.5	4-Nitrophenol	<1.5
2,2'-Oxybis(1-chloropropane)	<0.05	Diethyl phthalate	<0.5
2-Methylphenol	<0.5	Fluorene	<0.01
Hexachloroethane	<0.05	4-Chlorophenyl phenyl ether	<0.05
N-Nitroso-di-n-propylamine	<0.05	N-Nitrosodiphenylamine	<0.05
3-Methylphenol + 4-Methylphenol	<1	4-Nitroaniline	<5
Nitrobenzene	<0.05	4,6-Dinitro-2-methylphenol	<1.5
Isophorone	<0.05	4-Bromophenyl phenyl ether	<0.05
2-Nitrophenol	<0.5	Hexachlorobenzene	<0.05
2,4-Dimethylphenol	<0.5	Pentachlorophenol	<0.25
Benzoic acid	<2.5	Phenanthrene	<0.01
Bis(2-chloroethoxy)methane	<0.05	Anthracene	<0.01
2,4-Dichlorophenol	<0.5	Carbazole	<0.05
1,2,4-Trichlorobenzene	<0.05	Di-n-butyl phthalate	<0.5
Naphthalene	<0.01	Fluoranthene	<0.01
Hexachlorobutadiene	<0.05	Pyrene	<0.01
4-Chloroaniline	<5	Benzyl butyl phthalate	<0.5
4-Chloro-3-methylphenol	<0.5	Benz(a)anthracene	<0.01
2-Methylnaphthalene	<0.01	Chrysene	<0.01
1-Methylnaphthalene	<0.01	Bis(2-ethylhexyl) phthalate	<0.8
Hexachlorocyclopentadiene	<0.15	Di-n-octyl phthalate	<0.5
2,4,6-Trichlorophenol	<0.5	Benzo(a)pyrene	<0.01
2,4,5-Trichlorophenol	<0.5	Benzo(b)fluoranthene	<0.01
2-Chloronaphthalene	<0.05	Benzo(k)fluoranthene	<0.01
2-Nitroaniline	<0.25	Indeno(1,2,3-cd)pyrene	<0.01
Dimethyl phthalate	<0.5	Dibenz(a,h)anthracene	<0.01
Acenaphthylene	<0.01	Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/27/20	Lab ID:	00-480 mb2
Date Analyzed:	02/27/20	Data File:	022710.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	81	50	150
Phenol-d6	90	50	150
Nitrobenzene-d5	81	50	150
2-Fluorobiphenyl	96	50	150
2,4,6-Tribromophenol	79	50	150
Terphenyl-d14	93	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.1	2,6-Dinitrotoluene	<0.05
Bis(2-chloroethyl) ether	<0.01	3-Nitroaniline	<1
2-Chlorophenol	<0.1	Acenaphthene	<0.002
1,3-Dichlorobenzene	<0.01	2,4-Dinitrophenol	<0.3
1,4-Dichlorobenzene	<0.01	Dibenzofuran	<0.01
1,2-Dichlorobenzene	<0.01	2,4-Dinitrotoluene	<0.05
Benzyl alcohol	<0.1	4-Nitrophenol	<0.3
2,2'-Oxybis(1-chloropropane)	<0.01	Diethyl phthalate	<0.1
2-Methylphenol	<0.1	Fluorene	<0.002
Hexachloroethane	<0.01	4-Chlorophenyl phenyl ether	<0.01
N-Nitroso-di-n-propylamine	<0.01	N-Nitrosodiphenylamine	<0.01
3-Methylphenol + 4-Methylphenol	<0.2	4-Nitroaniline	<1
Nitrobenzene	<0.01	4,6-Dinitro-2-methylphenol	<0.3
Isophorone	<0.01	4-Bromophenyl phenyl ether	<0.01
2-Nitrophenol	<0.1	Hexachlorobenzene	<0.01
2,4-Dimethylphenol	<0.1	Pentachlorophenol	<0.05
Benzoic acid	<0.5	Phenanthrene	<0.002
Bis(2-chloroethoxy)methane	<0.01	Anthracene	<0.002
2,4-Dichlorophenol	<0.1	Carbazole	<0.01
1,2,4-Trichlorobenzene	<0.01	Di-n-butyl phthalate	<0.1
Naphthalene	<0.002	Fluoranthene	<0.002
Hexachlorobutadiene	<0.01	Pyrene	<0.002
4-Chloroaniline	<1	Benzyl butyl phthalate	<0.1
4-Chloro-3-methylphenol	<0.1	Benz(a)anthracene	<0.002
2-Methylnaphthalene	<0.002	Chrysene	<0.002
1-Methylnaphthalene	<0.002	Bis(2-ethylhexyl) phthalate	<0.16
Hexachlorocyclopentadiene	<0.03	Di-n-octyl phthalate	<0.1
2,4,6-Trichlorophenol	<0.1	Benzo(a)pyrene	<0.002
2,4,5-Trichlorophenol	<0.1	Benzo(b)fluoranthene	<0.002
2-Chloronaphthalene	<0.01	Benzo(k)fluoranthene	<0.002
2-Nitroaniline	<0.05	Indeno(1,2,3-cd)pyrene	<0.002
Dimethyl phthalate	<0.1	Dibenz(a,h)anthracene	<0.002
Acenaphthylene	<0.002	Benzo(g,h,i)perylene	<0.002

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-4-25	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/28/20	Lab ID:	002426-01
Date Analyzed:	02/28/20	Data File:	022840.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	145
Toluene-d8	96	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-4-30	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/28/20	Lab ID:	002426-02
Date Analyzed:	02/28/20	Data File:	022841.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	62	145
Toluene-d8	96	55	145
4-Bromofluorobenzene	100	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	B1-20	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/28/20	Lab ID:	002426-03
Date Analyzed:	02/28/20	Data File:	022842.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	62	145
Toluene-d8	97	55	145
4-Bromofluorobenzene	102	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	B1-30	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/28/20	Lab ID:	002426-04
Date Analyzed:	02/28/20	Data File:	022843.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	145
Toluene-d8	97	55	145
4-Bromofluorobenzene	103	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	B1-30-Dup	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/28/20	Lab ID:	002426-05
Date Analyzed:	02/28/20	Data File:	022844.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	145
Toluene-d8	96	55	145
4-Bromofluorobenzene	101	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/27/20	Lab ID:	00-487 mb2
Date Analyzed:	02/28/20	Data File:	022811.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	62	145
Toluene-d8	95	55	145
4-Bromofluorobenzene	99	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Trip Blank	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	03/02/20	Lab ID:	002426-06
Date Analyzed:	03/02/20	Data File:	030248.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	100	63	127
4-Bromofluorobenzene	103	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	03/02/20	Lab ID:	00-489 mb
Date Analyzed:	03/02/20	Data File:	030212.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	97	63	127
4-Bromofluorobenzene	100	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	MW-4-25	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/27/20	Lab ID:	002426-01 1/6
Date Analyzed:	02/28/20	Data File:	022805.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	78	23	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	MW-4-30	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/27/20	Lab ID:	002426-02 1/6
Date Analyzed:	02/28/20	Data File:	022806.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	75	23	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	B1-20	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/27/20	Lab ID:	002426-03 1/6
Date Analyzed:	02/28/20	Data File:	022807.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	70	23	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	B1-30	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/27/20	Lab ID:	002426-04 1/6
Date Analyzed:	02/28/20	Data File:	022808.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	78	23	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	B1-30-Dup	Client:	EHSI
Date Received:	02/27/20	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/27/20	Lab ID:	002426-05 1/6
Date Analyzed:	02/28/20	Data File:	022809.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	76	23	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	WSDOT Poulsbo RV Phase II
Date Extracted:	02/26/20	Lab ID:	00-478 mb3 1/6
Date Analyzed:	02/28/20	Data File:	022804.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	88	23	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Date of Report: 03/06/20
Date Received: 02/27/20
Project: WSDOT Poulsbo RV Phase II 11361-03, F&BI 002426

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 003014-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	100	61-153

Date of Report: 03/06/20
Date Received: 02/27/20
Project: WSDOT Poulsbo RV Phase II 11361-03, F&BI 002426

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 002442-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	104	69-134

Date of Report: 03/06/20
Date Received: 02/27/20
Project: WSDOT Poulsbo RV Phase II 11361-03, F&BI 002426

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 002426-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	104	106	64-133	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	102	58-147

Date of Report: 03/06/20
Date Received: 02/27/20
Project: WSDOT Poulsbo RV Phase II 11361-03, F&BI 002426

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 002019-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	1.60	82	81	75-125	1
Barium	mg/kg (ppm)	50	46.0	102	98	75-125	4
Cadmium	mg/kg (ppm)	10	<1	95	95	75-125	0
Chromium	mg/kg (ppm)	50	17.0	81	80	75-125	1
Lead	mg/kg (ppm)	50	1.66	97	97	75-125	0
Mercury	mg/kg (ppm	5	<1	92	96	75-125	4
Selenium	mg/kg (ppm)	5	<1	88	89	75-125	1
Silver	mg/kg (ppm)	10	<1	92	94	75-125	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	89	80-120
Barium	mg/kg (ppm)	50	103	80-120
Cadmium	mg/kg (ppm)	10	102	80-120
Chromium	mg/kg (ppm)	50	97	80-120
Lead	mg/kg (ppm)	50	109	80-120
Mercury	mg/kg (ppm)	5	95	80-120
Selenium	mg/kg (ppm)	5	99	80-120
Silver	mg/kg (ppm)	10	103	80-120

Date of Report: 03/06/20
Date Received: 02/27/20
Project: WSDOT Poulsbo RV Phase II 11361-03, F&BI 002426

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: 002372-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Phenol	mg/kg (ppm)	0.17	<0.1	75	50-150
Bis(2-chloroethyl) ether	mg/kg (ppm)	0.17	<0.01	69	50-150
2-Chlorophenol	mg/kg (ppm)	0.17	<0.1	71	50-150
1,3-Dichlorobenzene	mg/kg (ppm)	0.17	<0.01	66	50-150
1,4-Dichlorobenzene	mg/kg (ppm)	0.17	<0.01	65	50-150
1,2-Dichlorobenzene	mg/kg (ppm)	0.17	<0.01	67	50-150
Benzyl alcohol	mg/kg (ppm)	0.33	<0.1	77	50-150
2,2'-Oxybis(1-chloropropane)	mg/kg (ppm)	0.17	<0.01	72	50-150
2-Methylphenol	mg/kg (ppm)	0.17	<0.1	75	50-150
Hexachloroethane	mg/kg (ppm)	0.17	<0.01	66	50-150
N-Nitroso-di-n-propylamine	mg/kg (ppm)	0.17	<0.01	85	50-150
3-Methylphenol + 4-Methylphenol	mg/kg (ppm)	0.17	<0.2	76	50-150
Nitrobenzene	mg/kg (ppm)	0.17	<0.01	75	50-150
Isophorone	mg/kg (ppm)	0.17	<0.01	86	50-150
2-Nitrophenol	mg/kg (ppm)	0.17	<0.1	80	50-150
2,4-Dimethylphenol	mg/kg (ppm)	0.17	<0.1	75	50-150
Benzoic acid	mg/kg (ppm)	0.25	<0.5	98	50-150
Bis(2-chloroethoxy)methane	mg/kg (ppm)	0.17	<0.01	81	50-150
2,4-Dichlorophenol	mg/kg (ppm)	0.17	<0.1	76	50-150
1,2,4-Trichlorobenzene	mg/kg (ppm)	0.17	<0.01	70	50-150
Naphthalene	mg/kg (ppm)	0.17	<0.002	69	50-150
Hexachlorobutadiene	mg/kg (ppm)	0.17	<0.01	66	50-150
4-Chloroaniline	mg/kg (ppm)	0.33	<1	59	50-150
4-Chloro-3-methylphenol	mg/kg (ppm)	0.17	<0.1	79	50-150
2-Methylnaphthalene	mg/kg (ppm)	0.17	<0.002	74	50-150
1-Methylnaphthalene	mg/kg (ppm)	0.17	<0.002	74	50-150
Hexachlorocyclopentadiene	mg/kg (ppm)	0.17	<0.03	81	50-150
2,4,6-Trichlorophenol	mg/kg (ppm)	0.17	<0.1	88	50-150
2,4,5-Trichlorophenol	mg/kg (ppm)	0.17	<0.1	83	50-150
2-Chloronaphthalene	mg/kg (ppm)	0.17	<0.01	78	50-150
2-Nitroaniline	mg/kg (ppm)	0.33	<0.05	80	50-150
Dimethyl phthalate	mg/kg (ppm)	0.17	<0.1	87	50-150
Acenaphthylene	mg/kg (ppm)	0.17	<0.002	84	50-150
2,6-Dinitrotoluene	mg/kg (ppm)	0.17	<0.05	82	50-150
3-Nitroaniline	mg/kg (ppm)	0.33	<1	66	50-150
Acenaphthene	mg/kg (ppm)	0.17	<0.002	80	50-150
2,4-Dinitrophenol	mg/kg (ppm)	0.17	<0.3	85	50-150
Dibenzofuran	mg/kg (ppm)	0.17	<0.01	78	50-150
2,4-Dinitrotoluene	mg/kg (ppm)	0.17	<0.05	79	50-150
4-Nitrophenol	mg/kg (ppm)	0.17	<0.3	80	50-150
Diethyl phthalate	mg/kg (ppm)	0.17	<0.1	82	50-150
Fluorene	mg/kg (ppm)	0.17	<0.002	81	50-150
4-Chlorophenyl phenyl ether	mg/kg (ppm)	0.17	<0.01	78	50-150
N-Nitrosodiphenylamine	mg/kg (ppm)	0.17	<0.01	85	50-150
4-Nitroaniline	mg/kg (ppm)	0.33	<1	63	50-150
4,6-Dinitro-2-methylphenol	mg/kg (ppm)	0.17	<0.3	91	50-150
4-Bromophenyl phenyl ether	mg/kg (ppm)	0.17	<0.01	86	50-150
Hexachlorobenzene	mg/kg (ppm)	0.17	<0.01	86	50-150
Pentachlorophenol	mg/kg (ppm)	0.17	<0.05	94	50-150
Phenanthrene	mg/kg (ppm)	0.17	<0.002	87	50-150
Anthracene	mg/kg (ppm)	0.17	<0.002	84	50-150
Carbazole	mg/kg (ppm)	0.17	<0.01	93	50-150
Di-n-butyl phthalate	mg/kg (ppm)	0.17	<0.1	103	50-150
Fluoranthene	mg/kg (ppm)	0.17	<0.002	91	50-150
Pyrene	mg/kg (ppm)	0.17	<0.002	86	50-150
Benzyl butyl phthalate	mg/kg (ppm)	0.17	<0.1	94	50-150
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.002	90	50-150
Chrysene	mg/kg (ppm)	0.17	<0.002	90	50-150
Bis(2-ethylhexyl) phthalate	mg/kg (ppm)	0.17	<0.16	90	50-150
Di-n-octyl phthalate	mg/kg (ppm)	0.17	<0.1	88	50-150
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.002	76	50-150
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.002	77	50-150
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.002	78	50-150
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.002	79	50-150
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.002	75	50-150
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.002	76	50-150

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Project: WSDOT Poulsbo RV Phase II 11361-03, F&BI 002426

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	mg/kg (ppm)	0.17	78	86	70-130	10
Bis(2-chloroethyl) ether	mg/kg (ppm)	0.17	72	80	70-130	11
2-Chlorophenol	mg/kg (ppm)	0.17	74	82	70-130	10
1,3-Dichlorobenzene	mg/kg (ppm)	0.17	68	77	62-115	12
1,4-Dichlorobenzene	mg/kg (ppm)	0.17	66	75	63-114	13
1,2-Dichlorobenzene	mg/kg (ppm)	0.17	69	77	68-113	11
Benzyl alcohol	mg/kg (ppm)	0.33	78	87	70-130	11
2,2'-Oxybis(1-chloropropane)	mg/kg (ppm)	0.17	75	83	70-130	10
2-Methylphenol	mg/kg (ppm)	0.17	77	85	70-130	10
Hexachloroethane	mg/kg (ppm)	0.17	71	79	70-130	11
N-Nitroso-di-n-propylamine	mg/kg (ppm)	0.17	88	94	70-130	7
3-Methylphenol + 4-Methylphenol	mg/kg (ppm)	0.17	77	88	70-130	13
Nitrobenzene	mg/kg (ppm)	0.17	76	85	70-130	11
Isophorone	mg/kg (ppm)	0.17	85	93	70-130	9
2-Nitrophenol	mg/kg (ppm)	0.17	78	91	70-130	15
2,4-Dimethylphenol	mg/kg (ppm)	0.17	75	84	58-118	11
Benzoic acid	mg/kg (ppm)	0.25	97	118	61-153	20
Bis(2-chloroethoxy)methane	mg/kg (ppm)	0.17	83	91	70-130	9
2,4-Dichlorophenol	mg/kg (ppm)	0.17	75	87	70-130	15
1,2,4-Trichlorobenzene	mg/kg (ppm)	0.17	73	81	70-130	10
Naphthalene	mg/kg (ppm)	0.17	71	77	70-130	8
Hexachlorobutadiene	mg/kg (ppm)	0.17	71	78	70-130	9
4-Chloroaniline	mg/kg (ppm)	0.33	14	29	10-90	70 vo
4-Chloro-3-methylphenol	mg/kg (ppm)	0.17	73	83	70-130	13
2-Methylnaphthalene	mg/kg (ppm)	0.17	74	80	70-130	8
1-Methylnaphthalene	mg/kg (ppm)	0.17	74	81	70-130	9
Hexachlorocyclopentadiene	mg/kg (ppm)	0.17	87	112	48-154	25 vo
2,4,6-Trichlorophenol	mg/kg (ppm)	0.17	88	99	70-130	12
2,4,5-Trichlorophenol	mg/kg (ppm)	0.17	79	95	70-130	18
2-Chloronaphthalene	mg/kg (ppm)	0.17	80	87	70-130	8
2-Nitroaniline	mg/kg (ppm)	0.33	77	87	70-130	12
Dimethyl phthalate	mg/kg (ppm)	0.17	82	88	70-130	7
Acenaphthylene	mg/kg (ppm)	0.17	84	92	70-130	9
2,6-Dinitrotoluene	mg/kg (ppm)	0.17	78	85	70-130	9
3-Nitroaniline	mg/kg (ppm)	0.33	57	66	54-104	15
Acenaphthene	mg/kg (ppm)	0.17	80	86	70-130	7
2,4-Dinitrophenol	mg/kg (ppm)	0.17	79	98	51-159	21 vo
Dibenzofuran	mg/kg (ppm)	0.17	77	86	70-130	11
2,4-Dinitrotoluene	mg/kg (ppm)	0.17	75	83	70-130	10
4-Nitrophenol	mg/kg (ppm)	0.17	75	88	60-146	16
Diethyl phthalate	mg/kg (ppm)	0.17	77	81	63-133	5
Fluorene	mg/kg (ppm)	0.17	78	84	70-130	7
4-Chlorophenyl phenyl ether	mg/kg (ppm)	0.17	74	81	70-130	9
N-Nitrosodiphenylamine	mg/kg (ppm)	0.17	81	89	70-130	9
4-Nitroaniline	mg/kg (ppm)	0.33	64	80	50-124	22 vo
4,6-Dinitro-2-methylphenol	mg/kg (ppm)	0.17	86	103	68-139	18
4-Bromophenyl phenyl ether	mg/kg (ppm)	0.17	86	91	43-167	6
Hexachlorobenzene	mg/kg (ppm)	0.17	88	91	70-130	3
Pentachlorophenol	mg/kg (ppm)	0.17	90	106	61-136	16
Phenanthrene	mg/kg (ppm)	0.17	85	90	70-130	6
Anthracene	mg/kg (ppm)	0.17	82	87	70-130	6
Carbazole	mg/kg (ppm)	0.17	89	99	70-130	11
Di-n-butyl phthalate	mg/kg (ppm)	0.17	97	93	70-130	4
Fluoranthene	mg/kg (ppm)	0.17	87	95	70-130	9
Pyrene	mg/kg (ppm)	0.17	86	90	70-130	5
Benzyl butyl phthalate	mg/kg (ppm)	0.17	85	93	70-130	9
Benz(a)anthracene	mg/kg (ppm)	0.17	87	93	70-130	7
Chrysene	mg/kg (ppm)	0.17	88	93	70-130	6
Bis(2-ethylhexyl) phthalate	mg/kg (ppm)	0.17	81	90	70-130	11
Di-n-octyl phthalate	mg/kg (ppm)	0.17	80	87	57-156	8
Benzo(a)pyrene	mg/kg (ppm)	0.17	73	79	70-130	8
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	77	79	70-130	3
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	78	81	70-130	4
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	71	84	63-145	17
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	69	80	60-150	15
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	70	83	57-144	17

Date of Report: 03/06/20
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Project: WSDOT Poulsbo RV Phase II 11361-03, F&BI 002426

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 002426-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	24	24	10-142	0
Chloromethane	mg/kg (ppm)	2.5	<0.5	53	53	10-126	0
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	55	55	10-138	0
Bromomethane	mg/kg (ppm)	2.5	<0.5	71	69	10-163	3
Chloroethane	mg/kg (ppm)	2.5	<0.5	65	66	10-176	2
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	63	64	10-176	2
Acetone	mg/kg (ppm)	12.5	<0.5	72	71	10-163	1
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	72	76	10-160	5
Hexane	mg/kg (ppm)	2.5	<0.25	59	57	10-137	3
Methylene chloride	mg/kg (ppm)	2.5	<0.5	77	77	10-156	0
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	84	85	21-145	1
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	77	77	14-137	0
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	80	79	19-140	1
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	82	84	10-158	2
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	84	85	25-135	1
Chloroform	mg/kg (ppm)	2.5	<0.05	85	84	21-145	1
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	77	74	19-147	4
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	78	75	12-160	4
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	83	84	10-156	1
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	80	78	17-140	3
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	87	87	9-164	0
Benzene	mg/kg (ppm)	2.5	<0.03	79	78	29-129	1
Trichloroethene	mg/kg (ppm)	2.5	<0.02	79	77	21-139	3
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	84	82	30-135	2
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	90	86	23-155	5
Dibromomethane	mg/kg (ppm)	2.5	<0.05	88	85	23-145	3
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	95	88	24-155	8
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	90	84	28-144	7
Toluene	mg/kg (ppm)	2.5	<0.05	89	88	35-130	1
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	99	93	26-149	6
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	97	93	10-205	4
2-Hexanone	mg/kg (ppm)	12.5	<0.5	95	90	15-166	5
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	94	91	31-137	3
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	89	88	20-133	1
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	98	96	28-150	2
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	97	94	28-142	3
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	91	89	32-129	2
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	92	90	32-137	2
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	102	101	31-143	1
m,p-Xylene	mg/kg (ppm)	5	<0.1	92	91	34-136	1
o-Xylene	mg/kg (ppm)	2.5	<0.05	93	92	33-134	1
Styrene	mg/kg (ppm)	2.5	<0.05	96	94	35-137	2
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	94	94	31-142	0
Bromoform	mg/kg (ppm)	2.5	<0.05	97	95	21-156	2
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	95	93	23-146	2
Bromobenzene	mg/kg (ppm)	2.5	<0.05	94	92	34-130	2
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	96	95	18-149	1
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	99	96	28-140	3
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	95	91	25-144	4
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	94	91	31-134	3
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	93	91	31-136	2
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	99	95	30-137	4
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	96	94	10-182	2
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	97	95	23-145	2
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	98	95	21-149	3
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	93	90	30-131	3
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	92	89	29-129	3
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	92	90	31-132	2
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	96	93	11-161	3
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	95	94	22-142	1
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	100	98	10-142	2
Naphthalene	mg/kg (ppm)	2.5	<0.05	95	93	14-157	2
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	95	94	20-144	1

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	46	10-146
Chloromethane	mg/kg (ppm)	2.5	72	27-133
Vinyl chloride	mg/kg (ppm)	2.5	75	22-139
Bromomethane	mg/kg (ppm)	2.5	82	38-114
Chloroethane	mg/kg (ppm)	2.5	80	9-163
Trichlorofluoromethane	mg/kg (ppm)	2.5	83	10-196
Acetone	mg/kg (ppm)	12.5	105	52-141
1,1-Dichloroethene	mg/kg (ppm)	2.5	94	47-128
Hexane	mg/kg (ppm)	2.5	83	43-142
Methylene chloride	mg/kg (ppm)	2.5	90	42-132
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	92	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	89	67-129
1,1-Dichloroethane	mg/kg (ppm)	2.5	91	68-115
2,2-Dichloropropane	mg/kg (ppm)	2.5	90	52-170
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	94	72-127
Chloroform	mg/kg (ppm)	2.5	95	66-120
2-Butanone (MEK)	mg/kg (ppm)	12.5	94	72-127
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	88	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	96	62-131
1,1-Dichloropropene	mg/kg (ppm)	2.5	92	69-128
Carbon tetrachloride	mg/kg (ppm)	2.5	103	60-139
Benzene	mg/kg (ppm)	2.5	90	68-114
Trichloroethene	mg/kg (ppm)	2.5	91	64-117
1,2-Dichloropropane	mg/kg (ppm)	2.5	96	72-127
Bromodichloromethane	mg/kg (ppm)	2.5	103	72-130
Dibromomethane	mg/kg (ppm)	2.5	97	70-120
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	104	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	103	75-136
Toluene	mg/kg (ppm)	2.5	102	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	116	72-132
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	111	75-113
2-Hexanone	mg/kg (ppm)	12.5	114	33-152
1,3-Dichloropropane	mg/kg (ppm)	2.5	108	72-130
Tetrachloroethene	mg/kg (ppm)	2.5	101	72-114
Dibromochloromethane	mg/kg (ppm)	2.5	117	74-125
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	112	74-132
Chlorobenzene	mg/kg (ppm)	2.5	102	76-111
Ethylbenzene	mg/kg (ppm)	2.5	103	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	115	69-135
m,p-Xylene	mg/kg (ppm)	5	103	78-122
o-Xylene	mg/kg (ppm)	2.5	103	77-124
Styrene	mg/kg (ppm)	2.5	108	74-126
Isopropylbenzene	mg/kg (ppm)	2.5	105	76-127
Bromoform	mg/kg (ppm)	2.5	115	56-132
n-Propylbenzene	mg/kg (ppm)	2.5	106	74-124
Bromobenzene	mg/kg (ppm)	2.5	106	72-122
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	108	76-126
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	110	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	108	61-137
2-Chlorotoluene	mg/kg (ppm)	2.5	105	74-121
4-Chlorotoluene	mg/kg (ppm)	2.5	105	75-122
tert-Butylbenzene	mg/kg (ppm)	2.5	109	73-130
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	107	76-125
sec-Butylbenzene	mg/kg (ppm)	2.5	107	71-130
p-Isopropyltoluene	mg/kg (ppm)	2.5	107	70-132
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	103	75-121
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	101	74-117
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	101	76-121
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	109	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	102	64-135
Hexachlorobutadiene	mg/kg (ppm)	2.5	105	50-153
Naphthalene	mg/kg (ppm)	2.5	104	63-140
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	101	63-138

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Project: WSDOT Poulsbo RV Phase II 11361-03, F&BI 002426

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 002464-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<1	64	10-172
Chloromethane	ug/L (ppb)	50	<10	74	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	79	36-166
Bromomethane	ug/L (ppb)	50	<1	90	47-169
Chloroethane	ug/L (ppb)	50	<1	85	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	90	44-165
Acetone	ug/L (ppb)	250	<50	66	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	89	60-136
Hexane	ug/L (ppb)	50	<1	86	52-150
Methylene chloride	ug/L (ppb)	50	<5	87	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	92	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	90	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	89	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	97	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	93	71-127
Chloroform	ug/L (ppb)	50	<1	92	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	76	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	82	48-149
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	94	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	89	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	101	56-152
Benzene	ug/L (ppb)	50	<0.35	87	76-125
Trichloroethene	ug/L (ppb)	50	<1	86	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	91	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	100	61-150
Dibromomethane	ug/L (ppb)	50	<1	90	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	98	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	98	72-132
Toluene	ug/L (ppb)	50	2.0	97	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	108	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	102	68-131
2-Hexanone	ug/L (ppb)	250	<10	96	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	97	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	95	10-226
Dibromochloromethane	ug/L (ppb)	50	<1	113	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	101	69-134
Chlorobenzene	ug/L (ppb)	50	<1	96	77-122
Ethylbenzene	ug/L (ppb)	50	<1	98	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	112	73-137
m,p-Xylene	ug/L (ppb)	100	2.2	99	69-135
o-Xylene	ug/L (ppb)	50	1.3	99	60-140
Styrene	ug/L (ppb)	50	<1	103	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	101	65-142
Bromoform	ug/L (ppb)	50	<1	110	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	101	58-144
Bromobenzene	ug/L (ppb)	50	<1	99	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	101	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	102	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	95	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	99	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	99	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	104	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	1.9	101	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	101	64-140
p-Isopropyltoluene	ug/L (ppb)	50	2.6	102	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	97	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	95	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	95	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	105	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	100	66-136
Hexachlorobutadiene	ug/L (ppb)	50	<1	95	60-143
Naphthalene	ug/L (ppb)	50	1.3	103	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	98	69-148

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	90	79	25-158	13
Chloromethane	ug/L (ppb)	50	89	83	45-156	7
Vinyl chloride	ug/L (ppb)	50	92	84	50-154	9
Bromomethane	ug/L (ppb)	50	99	92	55-143	7
Chloroethane	ug/L (ppb)	50	90	86	58-146	5
Trichlorofluoromethane	ug/L (ppb)	250	94	91	50-150	3
Acetone	ug/L (ppb)	250	79	78	53-131	1
1,1-Dichloroethene	ug/L (ppb)	50	93	91	67-136	2
Hexane	ug/L (ppb)	50	90	93	57-137	3
Methylene chloride	ug/L (ppb)	50	89	90	39-148	1
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	95	92	64-147	3
trans-1,2-Dichloroethene	ug/L (ppb)	50	88	89	68-128	1
1,1-Dichloroethane	ug/L (ppb)	50	90	90	79-121	0
2,2-Dichloropropane	ug/L (ppb)	50	98	96	55-143	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	92	94	80-123	2
Chloroform	ug/L (ppb)	50	93	93	80-121	0
2-Butanone (MEK)	ug/L (ppb)	250	92	92	57-149	0
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	86	87	73-132	1
1,1,1-Trichloroethane	ug/L (ppb)	50	95	96	81-125	1
1,1-Dichloropropene	ug/L (ppb)	50	92	93	77-129	1
Carbon tetrachloride	ug/L (ppb)	50	103	105	75-158	2
Benzene	ug/L (ppb)	50	90	91	69-134	1
Trichloroethene	ug/L (ppb)	50	89	90	79-113	1
1,2-Dichloropropane	ug/L (ppb)	50	96	98	77-123	2
Bromodichloromethane	ug/L (ppb)	50	105	106	81-133	1
Dibromomethane	ug/L (ppb)	50	99	98	82-125	1
4-Methyl-2-pentanone	ug/L (ppb)	250	106	106	65-138	0
cis-1,3-Dichloropropene	ug/L (ppb)	50	107	110	82-132	3
Toluene	ug/L (ppb)	50	98	101	72-122	3
trans-1,3-Dichloropropene	ug/L (ppb)	50	116	119	80-136	3
1,1,2-Trichloroethane	ug/L (ppb)	50	108	110	75-124	2
2-Hexanone	ug/L (ppb)	250	109	112	60-136	3
1,3-Dichloropropane	ug/L (ppb)	50	104	107	76-126	3
Tetrachloroethene	ug/L (ppb)	50	98	100	76-121	2
Dibromochloromethane	ug/L (ppb)	50	120	121	84-133	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	109	111	82-115	2
Chlorobenzene	ug/L (ppb)	50	99	100	83-114	1
Ethylbenzene	ug/L (ppb)	50	100	102	77-124	2
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	115	114	84-127	1
m,p-Xylene	ug/L (ppb)	100	100	102	81-112	2
o-Xylene	ug/L (ppb)	50	100	99	81-121	1
Styrene	ug/L (ppb)	50	105	106	84-119	1
Isopropylbenzene	ug/L (ppb)	50	102	101	80-117	1
Bromoform	ug/L (ppb)	50	118	117	74-136	1
n-Propylbenzene	ug/L (ppb)	50	104	108	74-126	4
Bromobenzene	ug/L (ppb)	50	102	107	80-121	5
1,3,5-Trimethylbenzene	ug/L (ppb)	50	105	106	78-123	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	109	112	66-126	3
1,2,3-Trichloropropane	ug/L (ppb)	50	103	107	67-124	4
2-Chlorotoluene	ug/L (ppb)	50	101	105	77-127	4
4-Chlorotoluene	ug/L (ppb)	50	102	106	78-128	4
tert-Butylbenzene	ug/L (ppb)	50	107	107	80-123	0
1,2,4-Trimethylbenzene	ug/L (ppb)	50	105	106	79-122	1
sec-Butylbenzene	ug/L (ppb)	50	105	105	80-116	0
p-Isopropyltoluene	ug/L (ppb)	50	105	105	81-123	0
1,3-Dichlorobenzene	ug/L (ppb)	50	100	101	83-113	1
1,4-Dichlorobenzene	ug/L (ppb)	50	98	100	83-107	2
1,2-Dichlorobenzene	ug/L (ppb)	50	98	98	84-112	0
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	116	112	57-141	4
1,2,4-Trichlorobenzene	ug/L (ppb)	50	102	98	72-130	4
Hexachlorobutadiene	ug/L (ppb)	50	101	96	53-141	5
Naphthalene	ug/L (ppb)	50	106	100	64-133	6
1,2,3-Trichlorobenzene	ug/L (ppb)	50	100	96	65-136	4

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Project: WSDOT Poulsbo RV Phase II 11361-03, F&BI 002426

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

Laboratory Code: 002400-01 1/6 (Matrix Spike) 1/6

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Control Limits	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.25	<0.02	78	88	30-123	12
Aroclor 1260	mg/kg (ppm)	0.25	<0.02	88	89	26-131	1

Laboratory Code: Laboratory Control Sample 1/6

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Aroclor 1016	mg/kg (ppm)	0.25	105	55-137
Aroclor 1260	mg/kg (ppm)	0.25	112	51-150

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

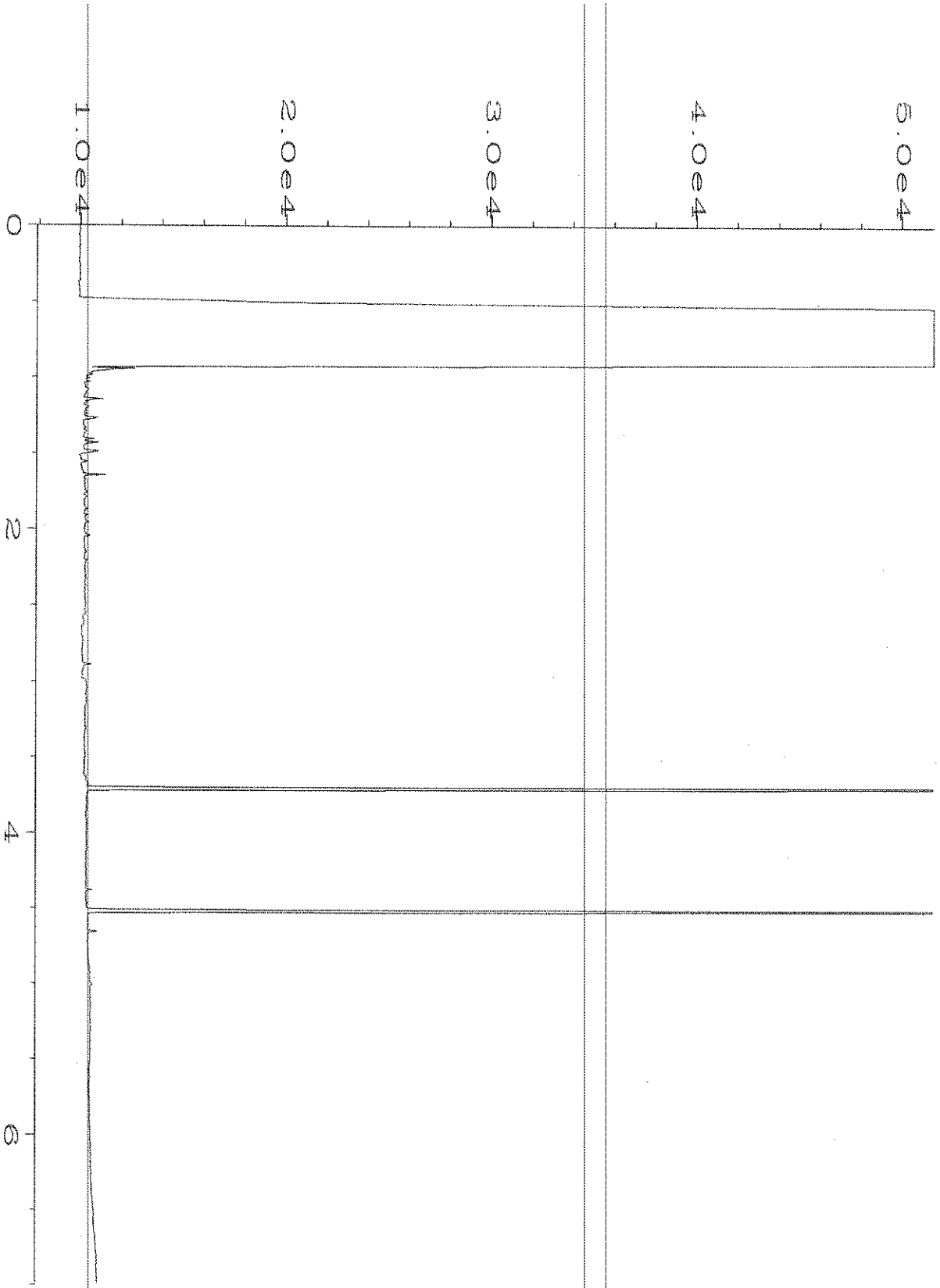
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



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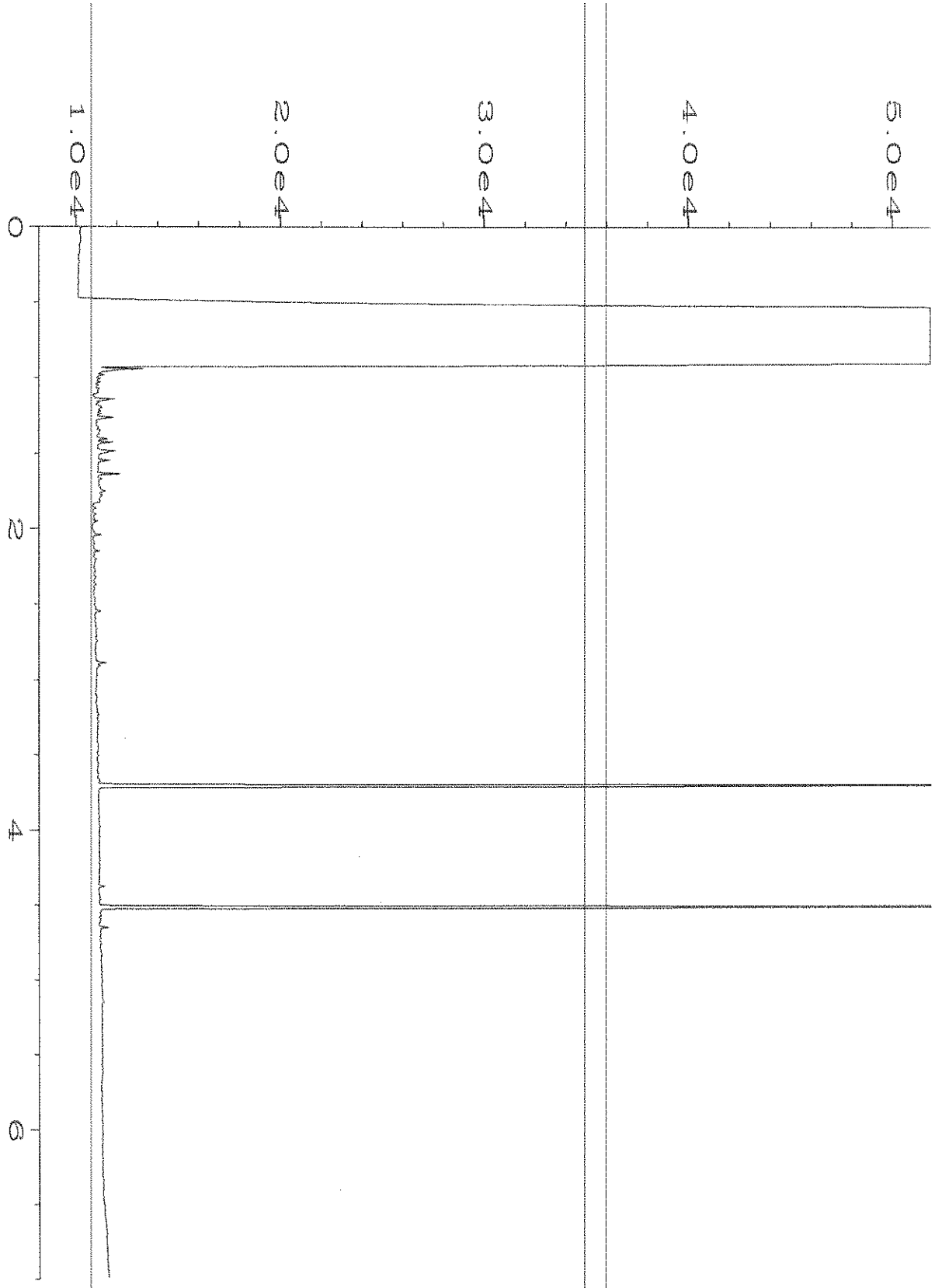
Instrument : GC6
Sample Name : 002426-01
Run Time Bar Code:
Acquired on : 28 Feb 20 08:44 AM
Report Created on: 02 Mar 20 08:12 AM

Page Number : 1
Vial Number : 10
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



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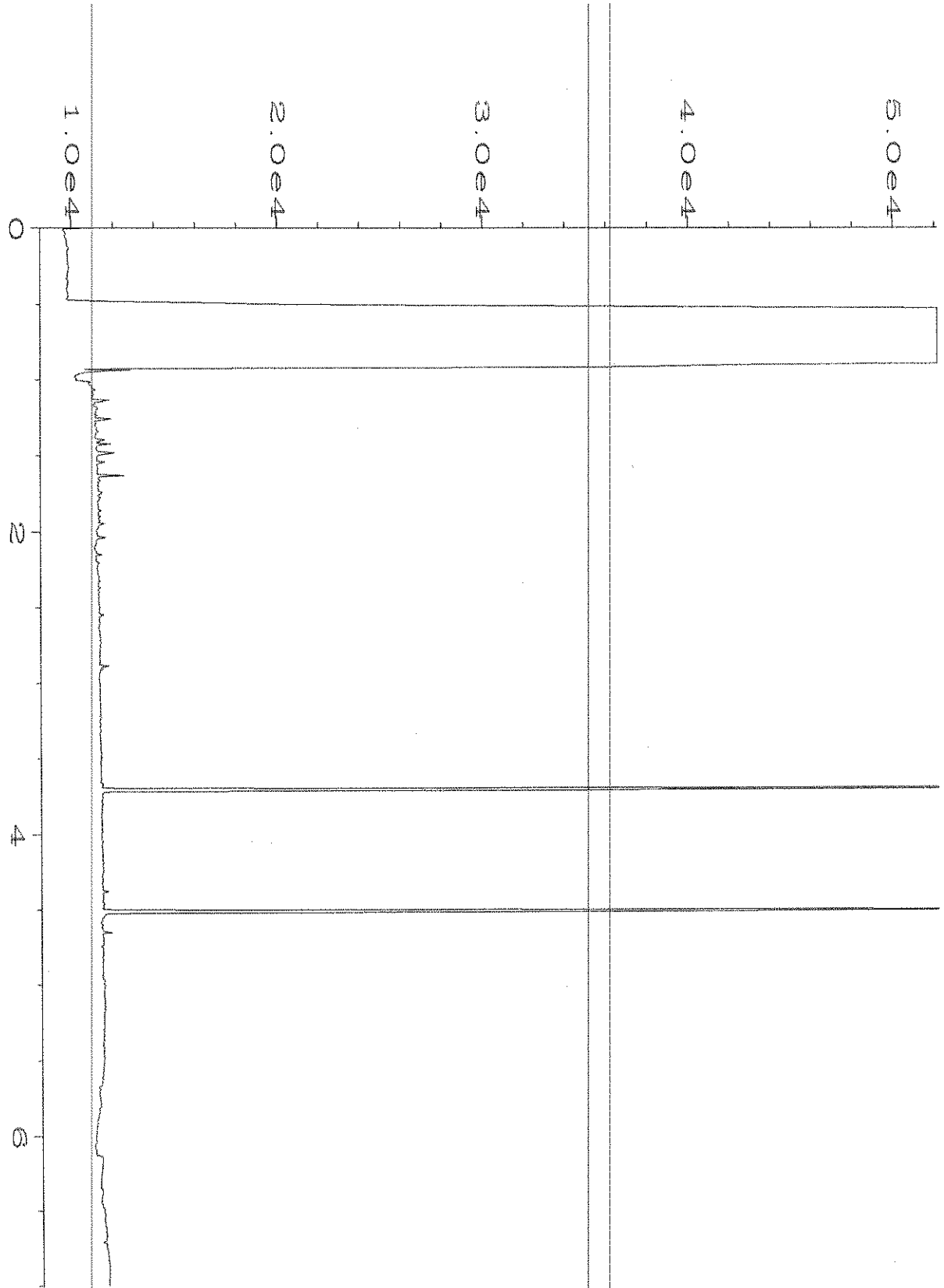
Instrument : GC6
Sample Name : 002426-02
Run Time Bar Code:
Acquired on : 28 Feb 20 08:55 AM
Report Created on: 02 Mar 20 08:12 AM

Page Number : 1
Vial Number : 11
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



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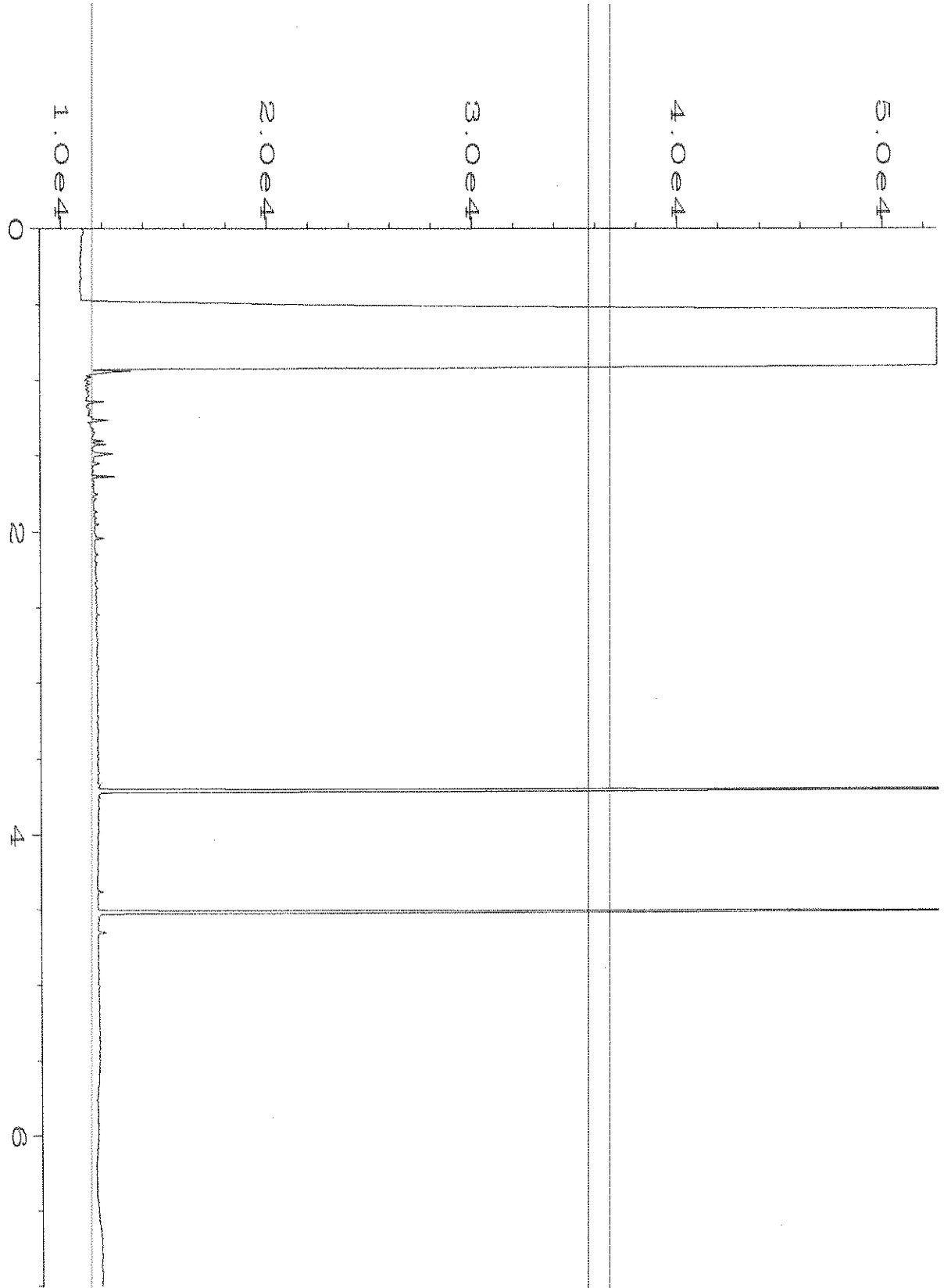

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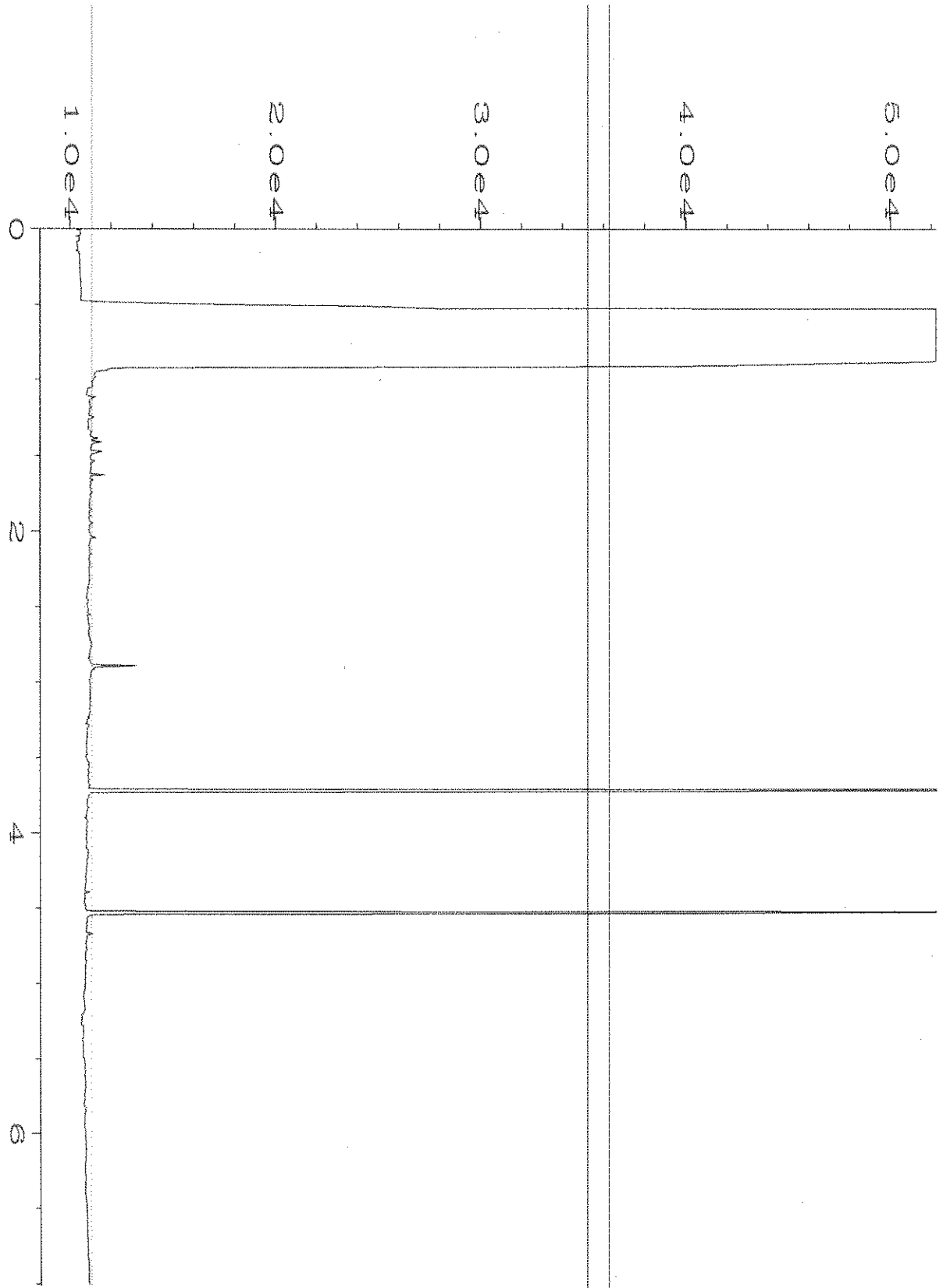
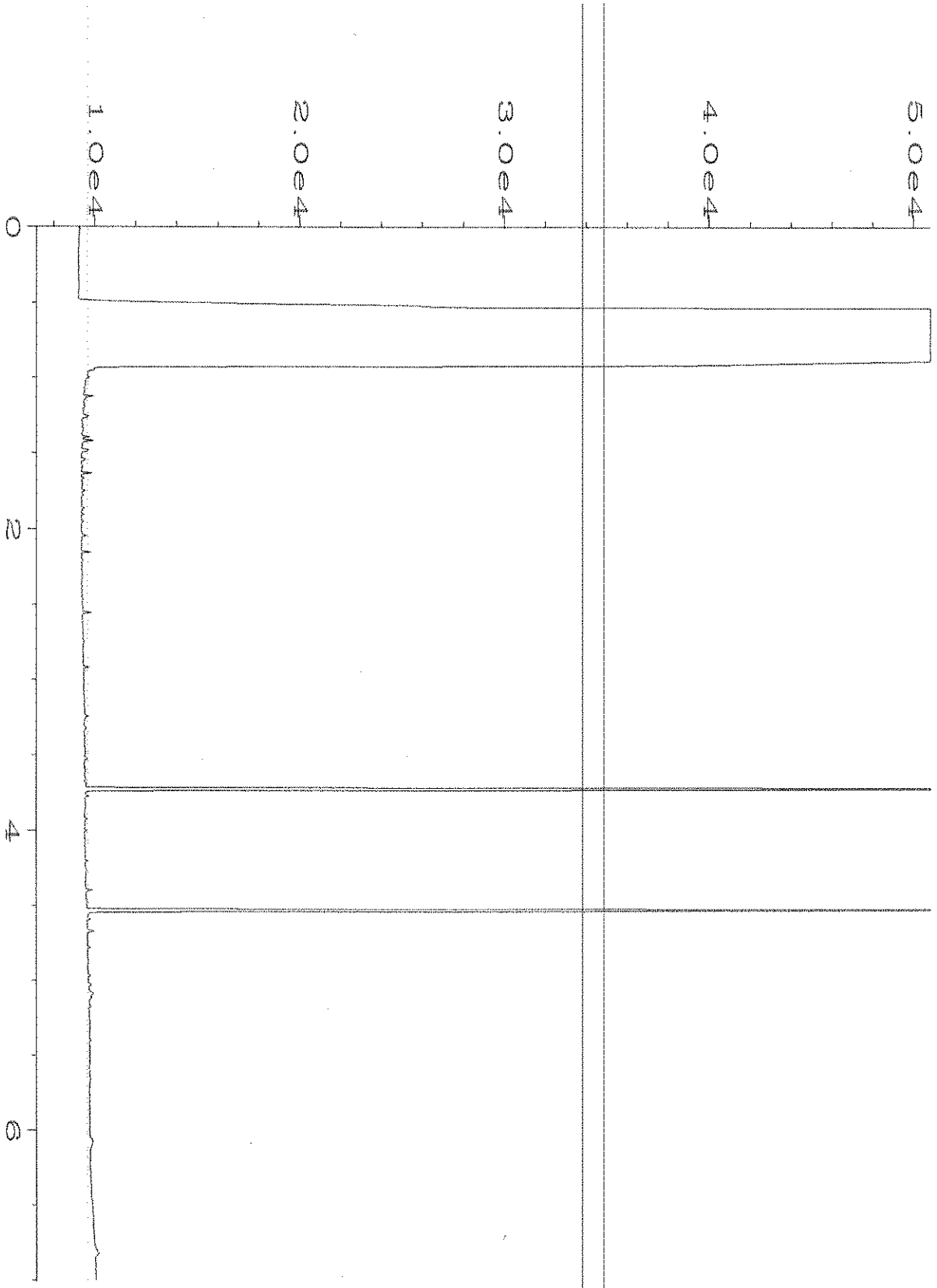
Run Time Bar Code:		Sequence Line	: 3
Acquired on	: 28 Feb 20 09:16 AM	Instrument Method	: DX.MTH
Report Created on	: 02 Mar 20 08:13 AM	Analysis Method	: DEFAULT.MTH



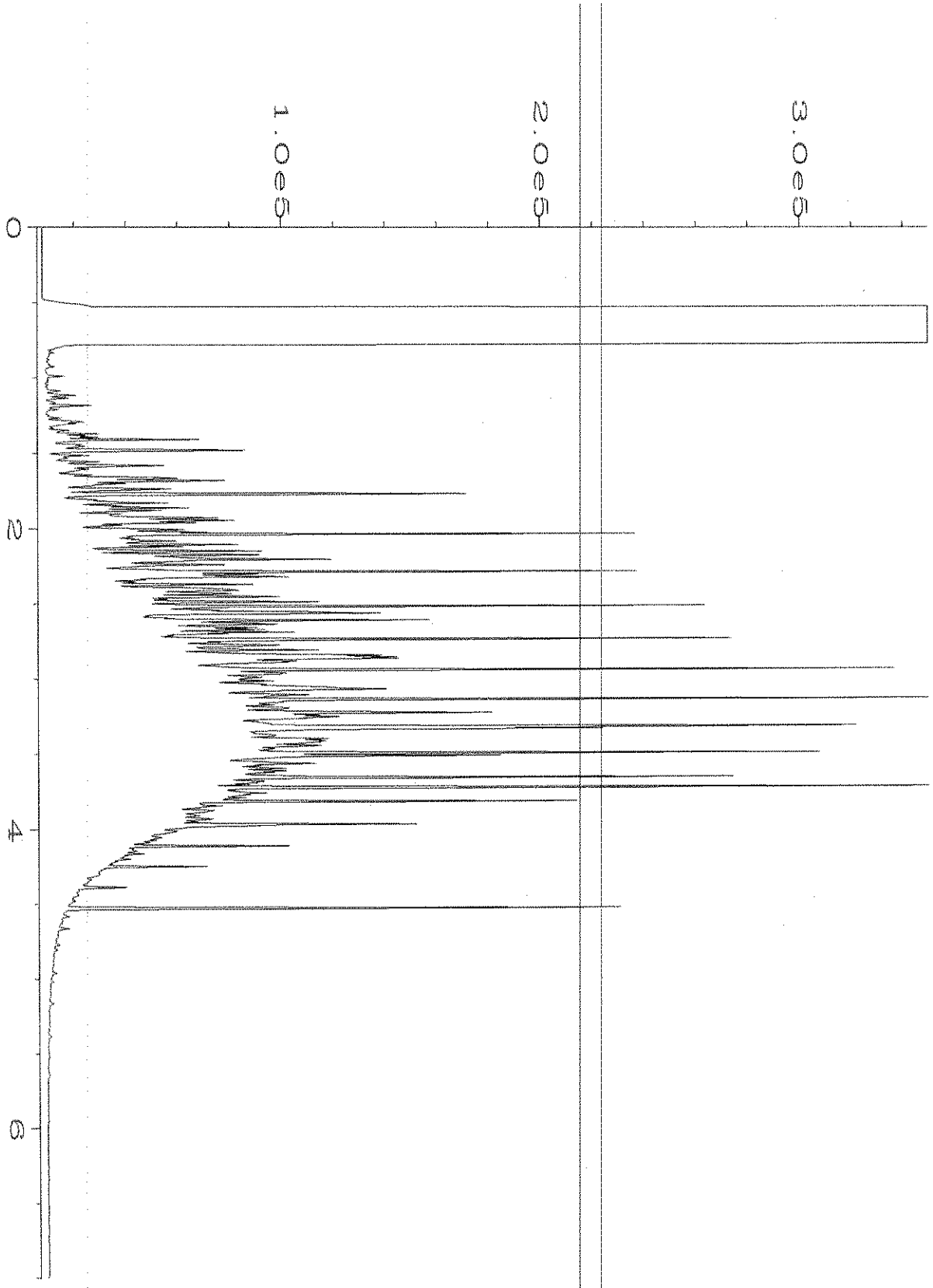
Data File Name : C:\HPCHEM\6\DATA\02-28-20\014F0301.D
Operator : TL
Instrument : GC6
Sample Name : 002426-05
Run Time Bar Code:
Acquired on : 28 Feb 20 09:27 AM
Report Created on: 02 Mar 20 08:13 AM

Page Number : 1
Vial Number : 14
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name : C:\HPCHEM\6\DATA\02-28-20\006F0301.D
Operator : TL
Instrument : GC6
Sample Name : 00-507 mb
Run Time Bar Code:
Acquired on : 28 Feb 20 08:03 AM
Report Created on: 02 Mar 20 08:13 AM

Page Number : 1
Vial Number : 6
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name	: C:\HPCHEM\6\DATA\02-28-20\005F0401.D		
Operator	: TL	Page Number	: 1
Instrument	: GC6	Vial Number	: 5
Sample Name	: 1000 Dx 58-146C	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 4
Acquired on	: 28 Feb 20 02:09 PM	Instrument Method	: DX.MTH
Report Created on	: 02 Mar 20 08:13 AM	Analysis Method	: DEFAULT.MTH

002426

SAMPLE CHAIN OF CUSTODY

ME 02/27/20 US-D3 / BT2

Report To Ryan Opitz, Mike Brady

Company EHSI

Address 1101 S Kickitat Way, Suite 104

City, State, ZIP Seattle

Phone _____ Email _____

SAMPLERS (*signature*)

PROJECT NAME WSDOT Poulsbo RV Phase II

PO # 11361-03

REMARKS

INVOICE TO

Page # 1 of 1

TURNAROUND TIME

☒ Standard Turnaround VAJ

☐ RUSH _____

Rush charges authorized by: _____

SAMPLE DISPOSAL

☐ Dispose after 30 days

☐ Archive Samples

☒ Other 60 Days

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	PCBs	RCRA 8			Notes
						ANALYSES REQUESTED											
MW-4-25	01 A-D	2/26/20	8:50	Soil	4		X	X		X	X		X	X			(X) - per MB
MW-4-30	02	2/26/20	9:20	Soil	4		(X)	X		X	X		X	X			2/28/20 ME
BI-20	03	2/27/20	1:35	Soil	4		(X)	X		X	X		X	X			
BI-30	04	2/27/20	2:25	Soil	4		(X)	X		X	X		X	X			
BI-30-Dup	05	2/27/20	2:25	Soil	4		(X)	X		X	X		X	X			
TRIP BLANK	06 AB	2/26/20	—	H_2O	2			X		X							
																	Samples received at 4 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Mike Brady	EHSI	2/27	13:43
Received by:	Nhan Phan	FEBI	2/27/20	1343
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

March 4, 2020

Ryan Opitz, Project Manager
EHSI
1011 SW Klickitat Way, Suite 104
Seattle, WA 98134

Dear Mr Opitz:

Included are the results from the testing of material submitted on February 25, 2020 from the WSDOT Poulsbo RV Phase II ESA 11361, F&BI 002372 project. There are 31 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: EHSI A/P, Mike Brady
EHS0304R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on February 25, 2020 by Friedman & Bruya, Inc. from the EHSI WSDOT Poulsbo RV Phase II ESA 11361, F&BI 002372 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	EHSI
002372 -01	MW-2-22.5
002372 -02	MW-2-30
002372 -03	MW-2-22.5 DUP
002372 -04	Trip Blank

Mercury in the 6020B matrix spike duplicate and the associated relative percent difference failed the acceptance criteria. The laboratory control sample passed the acceptance criteria, therefore the results were due to matrix effect.

The 8270E laboratory control samples failed the relative percent difference for several compounds. The analytes were not detected in the samples therefore the data were acceptable.

The 8082A matrix control samples failed the relative percent difference for Aroclor 1016. The analyte was not detected in the samples therefore the data were acceptable.

All other quality control requirements were acceptable.

Date of Report: 03/04/20
Date Received: 02/25/20
Project: WSDOT Poulsbo RV Phase II ESA 11361, F&BI 002372
Date Extracted: 02/26/20
Date Analyzed: 02/26/20

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 50-150)
MW-2-22.5 002372-01	<5	92
MW-2-30 002372-02	<5	91
MW-2-22.5 DUP 002372-03	<5	91
Method Blank 00-385 MB	<5	95

Date of Report: 03/04/20
Date Received: 02/25/20
Project: WSDOT Poulsbo RV Phase II ESA 11361, F&BI 002372
Date Extracted: 02/28/20
Date Analyzed: 02/28/20

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 51-134)
Trip Blank 002372-04	<100	97
Method Blank 00-386 MB	<100	100

Date of Report: 03/04/20
Date Received: 02/25/20
Project: WSDOT Poulsbo RV Phase II ESA 11361, F&BI 002372
Date Extracted: 02/25/20
Date Analyzed: 02/25/20

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
MW-2-22.5 002372-01	<50	<250	94
MW-2-30 002372-02	<50	<250	93
MW-2-22.5 DUP 002372-03	<50	<250	94
Method Blank 00-472 MB	<50	<250	96

Analysis For Total Metals By EPA Method 6020B

Client ID:	MW-2-22.5	Client:	EHSI
Date Received:	02/25/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/25/20	Lab ID:	002372-01
Date Analyzed:	02/25/20	Data File:	002372-01.104
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.45
Barium	48.1
Cadmium	<1
Chromium	11.0
Lead	1.60
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	MW-2-30	Client:	EHSI
Date Received:	02/25/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/25/20	Lab ID:	002372-02
Date Analyzed:	02/25/20	Data File:	002372-02.105
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	3.00
Barium	41.2
Cadmium	<1
Chromium	16.7
Lead	2.20
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	EHSI
Date Received:	NA	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/25/20	Lab ID:	I0-108 mb2
Date Analyzed:	02/25/20	Data File:	I0-108 mb2.085
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW-2-22.5	Client:	EHSI
Date Received:	02/25/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	002372-01
Date Analyzed:	02/27/20	Data File:	022711.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	55	50	150
Phenol-d6	62	50	150
Nitrobenzene-d5	55	50	150
2-Fluorobiphenyl	73	50	150
2,4,6-Tribromophenol	77	50	150
Terphenyl-d14	85	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.1	2,6-Dinitrotoluene	<0.05
Bis(2-chloroethyl) ether	<0.01	3-Nitroaniline	<1
2-Chlorophenol	<0.1	Acenaphthene	<0.002
1,3-Dichlorobenzene	<0.01	2,4-Dinitrophenol	<0.3
1,4-Dichlorobenzene	<0.01	Dibenzofuran	<0.01
1,2-Dichlorobenzene	<0.01	2,4-Dinitrotoluene	<0.05
Benzyl alcohol	<0.1	4-Nitrophenol	<0.3
2,2'-Oxybis(1-chloropropane)	<0.01	Diethyl phthalate	<0.1
2-Methylphenol	<0.1	Fluorene	<0.002
Hexachloroethane	<0.01	4-Chlorophenyl phenyl ether	<0.01
N-Nitroso-di-n-propylamine	<0.01	N-Nitrosodiphenylamine	<0.01
3-Methylphenol + 4-Methylphenol	<0.2	4-Nitroaniline	<1
Nitrobenzene	<0.01	4,6-Dinitro-2-methylphenol	<0.3
Isophorone	<0.01	4-Bromophenyl phenyl ether	<0.01
2-Nitrophenol	<0.1	Hexachlorobenzene	<0.01
2,4-Dimethylphenol	<0.1	Pentachlorophenol	<0.05
Benzoic acid	<0.5	Phenanthrene	<0.002
Bis(2-chloroethoxy)methane	<0.01	Anthracene	<0.002
2,4-Dichlorophenol	<0.1	Carbazole	<0.01
1,2,4-Trichlorobenzene	<0.01	Di-n-butyl phthalate	<0.1
Naphthalene	<0.002	Fluoranthene	<0.002
Hexachlorobutadiene	<0.01	Pyrene	<0.002
4-Chloroaniline	<1	Benzyl butyl phthalate	<0.1
4-Chloro-3-methylphenol	<0.1	Benz(a)anthracene	<0.002
2-Methylnaphthalene	<0.002	Chrysene	<0.002
1-Methylnaphthalene	<0.002	Bis(2-ethylhexyl) phthalate	<0.16
Hexachlorocyclopentadiene	<0.03	Di-n-octyl phthalate	<0.1
2,4,6-Trichlorophenol	<0.1	Benzo(a)pyrene	<0.002
2,4,5-Trichlorophenol	<0.1	Benzo(b)fluoranthene	<0.002
2-Chloronaphthalene	<0.01	Benzo(k)fluoranthene	<0.002
2-Nitroaniline	<0.05	Indeno(1,2,3-cd)pyrene	<0.002
Dimethyl phthalate	<0.1	Dibenz(a,h)anthracene	<0.002
Acenaphthylene	<0.002	Benzo(g,h,i)perylene	<0.002

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW-2-30	Client:	EHSI
Date Received:	02/25/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	002372-02 1/5
Date Analyzed:	02/27/20	Data File:	022712.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	73	50	150
Phenol-d6	83	50	150
Nitrobenzene-d5	72	50	150
2-Fluorobiphenyl	83	50	150
2,4,6-Tribromophenol	73	50	150
Terphenyl-d14	79	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.5	2,6-Dinitrotoluene	<0.25
Bis(2-chloroethyl) ether	<0.05	3-Nitroaniline	<5
2-Chlorophenol	<0.5	Acenaphthene	<0.01
1,3-Dichlorobenzene	<0.05	2,4-Dinitrophenol	<1.5
1,4-Dichlorobenzene	<0.05	Dibenzofuran	<0.05
1,2-Dichlorobenzene	<0.05	2,4-Dinitrotoluene	<0.25
Benzyl alcohol	<0.5	4-Nitrophenol	<1.5
2,2'-Oxybis(1-chloropropane)	<0.05	Diethyl phthalate	<0.5
2-Methylphenol	<0.5	Fluorene	<0.01
Hexachloroethane	<0.05	4-Chlorophenyl phenyl ether	<0.05
N-Nitroso-di-n-propylamine	<0.05	N-Nitrosodiphenylamine	<0.05
3-Methylphenol + 4-Methylphenol	<1	4-Nitroaniline	<5
Nitrobenzene	<0.05	4,6-Dinitro-2-methylphenol	<1.5
Isophorone	<0.05	4-Bromophenyl phenyl ether	<0.05
2-Nitrophenol	<0.5	Hexachlorobenzene	<0.05
2,4-Dimethylphenol	<0.5	Pentachlorophenol	<0.25
Benzoic acid	<2.5	Phenanthrene	<0.01
Bis(2-chloroethoxy)methane	<0.05	Anthracene	<0.01
2,4-Dichlorophenol	<0.5	Carbazole	<0.05
1,2,4-Trichlorobenzene	<0.05	Di-n-butyl phthalate	<0.5
Naphthalene	<0.01	Fluoranthene	<0.01
Hexachlorobutadiene	<0.05	Pyrene	<0.01
4-Chloroaniline	<5	Benzyl butyl phthalate	<0.5
4-Chloro-3-methylphenol	<0.5	Benz(a)anthracene	<0.01
2-Methylnaphthalene	<0.01	Chrysene	<0.01
1-Methylnaphthalene	<0.01	Bis(2-ethylhexyl) phthalate	<0.8
Hexachlorocyclopentadiene	<0.15	Di-n-octyl phthalate	<0.5
2,4,6-Trichlorophenol	<0.5	Benzo(a)pyrene	<0.01
2,4,5-Trichlorophenol	<0.5	Benzo(b)fluoranthene	<0.01
2-Chloronaphthalene	<0.05	Benzo(k)fluoranthene	<0.01
2-Nitroaniline	<0.25	Indeno(1,2,3-cd)pyrene	<0.01
Dimethyl phthalate	<0.5	Dibenz(a,h)anthracene	<0.01
Acenaphthylene	<0.01	Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	00-480 mb
Date Analyzed:	02/27/20	Data File:	022709.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	76	50	150
Phenol-d6	85	50	150
Nitrobenzene-d5	76	50	150
2-Fluorobiphenyl	91	50	150
2,4,6-Tribromophenol	74	50	150
Terphenyl-d14	89	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.1	2,6-Dinitrotoluene	<0.05
Bis(2-chloroethyl) ether	<0.01	3-Nitroaniline	<1
2-Chlorophenol	<0.1	Acenaphthene	<0.002
1,3-Dichlorobenzene	<0.01	2,4-Dinitrophenol	<0.3
1,4-Dichlorobenzene	<0.01	Dibenzofuran	<0.01
1,2-Dichlorobenzene	<0.01	2,4-Dinitrotoluene	<0.05
Benzyl alcohol	<0.1	4-Nitrophenol	<0.3
2,2'-Oxybis(1-chloropropane)	<0.01	Diethyl phthalate	<0.1
2-Methylphenol	<0.1	Fluorene	<0.002
Hexachloroethane	<0.01	4-Chlorophenyl phenyl ether	<0.01
N-Nitroso-di-n-propylamine	<0.01	N-Nitrosodiphenylamine	<0.01
3-Methylphenol + 4-Methylphenol	<0.2	4-Nitroaniline	<1
Nitrobenzene	<0.01	4,6-Dinitro-2-methylphenol	<0.3
Isophorone	<0.01	4-Bromophenyl phenyl ether	<0.01
2-Nitrophenol	<0.1	Hexachlorobenzene	<0.01
2,4-Dimethylphenol	<0.1	Pentachlorophenol	<0.05
Benzoic acid	<0.5	Phenanthrene	<0.002
Bis(2-chloroethoxy)methane	<0.01	Anthracene	<0.002
2,4-Dichlorophenol	<0.1	Carbazole	<0.01
1,2,4-Trichlorobenzene	<0.01	Di-n-butyl phthalate	<0.1
Naphthalene	<0.002	Fluoranthene	<0.002
Hexachlorobutadiene	<0.01	Pyrene	<0.002
4-Chloroaniline	<1	Benzyl butyl phthalate	<0.1
4-Chloro-3-methylphenol	<0.1	Benz(a)anthracene	<0.002
2-Methylnaphthalene	<0.002	Chrysene	<0.002
1-Methylnaphthalene	<0.002	Bis(2-ethylhexyl) phthalate	<0.16
Hexachlorocyclopentadiene	<0.03	Di-n-octyl phthalate	<0.1
2,4,6-Trichlorophenol	<0.1	Benzo(a)pyrene	<0.002
2,4,5-Trichlorophenol	<0.1	Benzo(b)fluoranthene	<0.002
2-Chloronaphthalene	<0.01	Benzo(k)fluoranthene	<0.002
2-Nitroaniline	<0.05	Indeno(1,2,3-cd)pyrene	<0.002
Dimethyl phthalate	<0.1	Dibenz(a,h)anthracene	<0.002
Acenaphthylene	<0.002	Benzo(g,h,i)perylene	<0.002

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-2-22.5	Client:	EHSI
Date Received:	02/25/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	002372-01
Date Analyzed:	02/28/20	Data File:	022820.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	145
Toluene-d8	95	55	145
4-Bromofluorobenzene	99	65	139

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-2-30	Client:	EHSI
Date Received:	02/25/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	002372-02
Date Analyzed:	02/26/20	Data File:	022624.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	105	50	150
4-Bromofluorobenzene	107	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-2-22.5 DUP	Client:	EHSI
Date Received:	02/25/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	002372-03
Date Analyzed:	02/26/20	Data File:	022625.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	106	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	00-420 mb2
Date Analyzed:	02/26/20	Data File:	022613.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	96	50	150
Toluene-d8	100	50	150
4-Bromofluorobenzene	98	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Trip Blank	Client:	EHSI
Date Received:	02/25/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	002372-04
Date Analyzed:	02/26/20	Data File:	022629.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	97	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	00-429 mb2
Date Analyzed:	02/26/20	Data File:	022612.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	95	50	150

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	MW-2-22.5	Client:	EHSI
Date Received:	02/25/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/25/20	Lab ID:	002372-01 1/6
Date Analyzed:	02/25/20	Data File:	022511.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	78	23	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	MW-2-30	Client:	EHSI
Date Received:	02/25/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/25/20	Lab ID:	002372-02 1/6
Date Analyzed:	02/25/20	Data File:	022512.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	85	23	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/25/20	Lab ID:	00-462 mb2 1/6
Date Analyzed:	02/25/20	Data File:	022504.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	92	23	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Date of Report: 03/04/20
Date Received: 02/25/20
Project: WSDOT Poulsbo RV Phase II ESA 11361, F&BI 002372

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 002320-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	100	71-131

Date of Report: 03/04/20
Date Received: 02/25/20
Project: WSDOT Poulsbo RV Phase II ESA 11361, F&BI 002372

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 002442-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	104	69-134

Date of Report: 03/04/20
Date Received: 02/25/20
Project: WSDOT Poulsbo RV Phase II ESA 11361, F&BI 002372

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 002366-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	<50	94	98	73-135	4

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	96	74-139

Date of Report: 03/04/20
Date Received: 02/25/20
Project: WSDOT Poulsbo RV Phase II ESA 11361, F&BI 002372

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 002320-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	5.01	83	88	75-125	6
Barium	mg/kg (ppm)	50	40.6	83 b	105 b	75-125	23 b
Cadmium	mg/kg (ppm)	10	<1	91	97	75-125	6
Chromium	mg/kg (ppm)	50	27.5	84	90	75-125	7
Lead	mg/kg (ppm)	50	10.8	95	100	75-125	5
Mercury	mg/kg (ppm	5	<1	97	73 vo	75-125	28 vo
Selenium	mg/kg (ppm)	5	<1	90	97	75-125	7
Silver	mg/kg (ppm)	10	<1	85	92	75-125	8

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	97	80-120
Barium	mg/kg (ppm)	50	93	80-120
Cadmium	mg/kg (ppm)	10	97	80-120
Chromium	mg/kg (ppm)	50	91	80-120
Lead	mg/kg (ppm)	50	101	80-120
Mercury	mg/kg (ppm)	5	93	80-120
Selenium	mg/kg (ppm)	5	103	80-120
Silver	mg/kg (ppm)	10	92	80-120

Date of Report: 03/04/20
Date Received: 02/25/20
Project: WSDOT Poulsbo RV Phase II ESA 11361, F&BI 002372

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: 002372-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Phenol	mg/kg (ppm)	0.17	<0.1	75	50-150
Bis(2-chloroethyl) ether	mg/kg (ppm)	0.17	<0.01	69	50-150
2-Chlorophenol	mg/kg (ppm)	0.17	<0.1	71	50-150
1,3-Dichlorobenzene	mg/kg (ppm)	0.17	<0.01	66	50-150
1,4-Dichlorobenzene	mg/kg (ppm)	0.17	<0.01	65	50-150
1,2-Dichlorobenzene	mg/kg (ppm)	0.17	<0.01	67	50-150
Benzyl alcohol	mg/kg (ppm)	0.33	<0.1	77	50-150
2,2'-Oxybis(1-chloropropane)	mg/kg (ppm)	0.17	<0.01	72	50-150
2-Methylphenol	mg/kg (ppm)	0.17	<0.1	75	50-150
Hexachloroethane	mg/kg (ppm)	0.17	<0.01	66	50-150
N-Nitroso-di-n-propylamine	mg/kg (ppm)	0.17	<0.01	85	50-150
3-Methylphenol + 4-Methylphenol	mg/kg (ppm)	0.17	<0.2	76	50-150
Nitrobenzene	mg/kg (ppm)	0.17	<0.01	75	50-150
Isophorone	mg/kg (ppm)	0.17	<0.01	86	50-150
2-Nitrophenol	mg/kg (ppm)	0.17	<0.1	80	50-150
2,4-Dimethylphenol	mg/kg (ppm)	0.17	<0.1	75	50-150
Benzoic acid	mg/kg (ppm)	0.25	<0.5	98	50-150
Bis(2-chloroethoxy)methane	mg/kg (ppm)	0.17	<0.01	81	50-150
2,4-Dichlorophenol	mg/kg (ppm)	0.17	<0.1	76	50-150
1,2,4-Trichlorobenzene	mg/kg (ppm)	0.17	<0.01	70	50-150
Naphthalene	mg/kg (ppm)	0.17	<0.002	69	50-150
Hexachlorobutadiene	mg/kg (ppm)	0.17	<0.01	66	50-150
4-Chloroaniline	mg/kg (ppm)	0.33	<1	59	50-150
4-Chloro-3-methylphenol	mg/kg (ppm)	0.17	<0.1	79	50-150
2-Methylnaphthalene	mg/kg (ppm)	0.17	<0.002	74	50-150
1-Methylnaphthalene	mg/kg (ppm)	0.17	<0.002	74	50-150
Hexachlorocyclopentadiene	mg/kg (ppm)	0.17	<0.03	81	50-150
2,4,6-Trichlorophenol	mg/kg (ppm)	0.17	<0.1	88	50-150
2,4,5-Trichlorophenol	mg/kg (ppm)	0.17	<0.1	83	50-150
2-Chloronaphthalene	mg/kg (ppm)	0.17	<0.01	78	50-150
2-Nitroaniline	mg/kg (ppm)	0.33	<0.05	80	50-150
Dimethyl phthalate	mg/kg (ppm)	0.17	<0.1	87	50-150
Acenaphthylene	mg/kg (ppm)	0.17	<0.002	84	50-150
2,6-Dinitrotoluene	mg/kg (ppm)	0.17	<0.05	82	50-150
3-Nitroaniline	mg/kg (ppm)	0.33	<1	66	50-150
Acenaphthene	mg/kg (ppm)	0.17	<0.002	80	50-150
2,4-Dinitrophenol	mg/kg (ppm)	0.17	<0.3	85	50-150
Dibenzofuran	mg/kg (ppm)	0.17	<0.01	78	50-150
2,4-Dinitrotoluene	mg/kg (ppm)	0.17	<0.05	79	50-150
4-Nitrophenol	mg/kg (ppm)	0.17	<0.3	80	50-150
Diethyl phthalate	mg/kg (ppm)	0.17	<0.1	82	50-150
Fluorene	mg/kg (ppm)	0.17	<0.002	81	50-150
4-Chlorophenyl phenyl ether	mg/kg (ppm)	0.17	<0.01	78	50-150
N-Nitrosodiphenylamine	mg/kg (ppm)	0.17	<0.01	85	50-150
4-Nitroaniline	mg/kg (ppm)	0.33	<1	63	50-150
4,6-Dinitro-2-methylphenol	mg/kg (ppm)	0.17	<0.3	91	50-150
4-Bromophenyl phenyl ether	mg/kg (ppm)	0.17	<0.01	86	50-150
Hexachlorobenzene	mg/kg (ppm)	0.17	<0.01	86	50-150
Pentachlorophenol	mg/kg (ppm)	0.17	<0.05	94	50-150
Phenanthrene	mg/kg (ppm)	0.17	<0.002	87	50-150
Anthracene	mg/kg (ppm)	0.17	<0.002	84	50-150
Carbazole	mg/kg (ppm)	0.17	<0.01	93	50-150
Di-n-butyl phthalate	mg/kg (ppm)	0.17	<0.1	103	50-150
Fluoranthene	mg/kg (ppm)	0.17	<0.002	91	50-150
Pyrene	mg/kg (ppm)	0.17	<0.002	86	50-150
Benzyl butyl phthalate	mg/kg (ppm)	0.17	<0.1	94	50-150
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.002	90	50-150
Chrysene	mg/kg (ppm)	0.17	<0.002	90	50-150
Bis(2-ethylhexyl) phthalate	mg/kg (ppm)	0.17	<0.16	90	50-150
Di-n-octyl phthalate	mg/kg (ppm)	0.17	<0.1	88	50-150
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.002	76	50-150
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.002	77	50-150
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.002	78	50-150
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.002	79	50-150
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.002	75	50-150
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.002	76	50-150

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	mg/kg (ppm)	0.17	78	86	70-130	10
Bis(2-chloroethyl) ether	mg/kg (ppm)	0.17	72	80	70-130	11
2-Chlorophenol	mg/kg (ppm)	0.17	74	82	70-130	10
1,3-Dichlorobenzene	mg/kg (ppm)	0.17	68	77	62-115	12
1,4-Dichlorobenzene	mg/kg (ppm)	0.17	66	75	63-114	13
1,2-Dichlorobenzene	mg/kg (ppm)	0.17	69	77	68-113	11
Benzyl alcohol	mg/kg (ppm)	0.33	78	87	70-130	11
2,2'-Oxybis(1-chloropropane)	mg/kg (ppm)	0.17	75	83	70-130	10
2-Methylphenol	mg/kg (ppm)	0.17	77	85	70-130	10
Hexachloroethane	mg/kg (ppm)	0.17	71	79	70-130	11
N-Nitroso-di-n-propylamine	mg/kg (ppm)	0.17	88	94	70-130	7
3-Methylphenol + 4-Methylphenol	mg/kg (ppm)	0.17	77	88	70-130	13
Nitrobenzene	mg/kg (ppm)	0.17	76	85	70-130	11
Isophorone	mg/kg (ppm)	0.17	85	93	70-130	9
2-Nitrophenol	mg/kg (ppm)	0.17	78	91	70-130	15
2,4-Dimethylphenol	mg/kg (ppm)	0.17	75	84	58-118	11
Benzoic acid	mg/kg (ppm)	0.25	97	118	61-153	20
Bis(2-chloroethoxy)methane	mg/kg (ppm)	0.17	83	91	70-130	9
2,4-Dichlorophenol	mg/kg (ppm)	0.17	75	87	70-130	15
1,2,4-Trichlorobenzene	mg/kg (ppm)	0.17	73	81	70-130	10
Naphthalene	mg/kg (ppm)	0.17	71	77	70-130	8
Hexachlorobutadiene	mg/kg (ppm)	0.17	71	78	70-130	9
4-Chloroaniline	mg/kg (ppm)	0.33	14	29	10-90	70 vo
4-Chloro-3-methylphenol	mg/kg (ppm)	0.17	73	83	70-130	13
2-Methylnaphthalene	mg/kg (ppm)	0.17	74	80	70-130	8
1-Methylnaphthalene	mg/kg (ppm)	0.17	74	81	70-130	9
Hexachlorocyclopentadiene	mg/kg (ppm)	0.17	87	112	48-154	25 vo
2,4,6-Trichlorophenol	mg/kg (ppm)	0.17	88	99	70-130	12
2,4,5-Trichlorophenol	mg/kg (ppm)	0.17	79	95	70-130	18
2-Chloronaphthalene	mg/kg (ppm)	0.17	80	87	70-130	8
2-Nitroaniline	mg/kg (ppm)	0.33	77	87	70-130	12
Dimethyl phthalate	mg/kg (ppm)	0.17	82	88	70-130	7
Acenaphthylene	mg/kg (ppm)	0.17	84	92	70-130	9
2,6-Dinitrotoluene	mg/kg (ppm)	0.17	78	85	70-130	9
3-Nitroaniline	mg/kg (ppm)	0.33	57	66	54-104	15
Acenaphthene	mg/kg (ppm)	0.17	80	86	70-130	7
2,4-Dinitrophenol	mg/kg (ppm)	0.17	79	98	51-159	21 vo
Dibenzofuran	mg/kg (ppm)	0.17	77	86	70-130	11
2,4-Dinitrotoluene	mg/kg (ppm)	0.17	75	83	70-130	10
4-Nitrophenol	mg/kg (ppm)	0.17	75	88	60-146	16
Diethyl phthalate	mg/kg (ppm)	0.17	77	81	63-133	5
Fluorene	mg/kg (ppm)	0.17	78	84	70-130	7
4-Chlorophenyl phenyl ether	mg/kg (ppm)	0.17	74	81	70-130	9
N-Nitrosodiphenylamine	mg/kg (ppm)	0.17	81	89	70-130	9
4-Nitroaniline	mg/kg (ppm)	0.33	64	80	50-124	22 vo
4,6-Dinitro-2-methylphenol	mg/kg (ppm)	0.17	86	103	68-139	18
4-Bromophenyl phenyl ether	mg/kg (ppm)	0.17	86	91	43-167	6
Hexachlorobenzene	mg/kg (ppm)	0.17	88	91	70-130	3
Pentachlorophenol	mg/kg (ppm)	0.17	90	106	61-136	16
Phenanthrene	mg/kg (ppm)	0.17	85	90	70-130	6
Anthracene	mg/kg (ppm)	0.17	82	87	70-130	6
Carbazole	mg/kg (ppm)	0.17	89	99	70-130	11
Di-n-butyl phthalate	mg/kg (ppm)	0.17	97	93	70-130	4
Fluoranthene	mg/kg (ppm)	0.17	87	95	70-130	9
Pyrene	mg/kg (ppm)	0.17	86	90	70-130	5
Benzyl butyl phthalate	mg/kg (ppm)	0.17	85	93	70-130	9
Benz(a)anthracene	mg/kg (ppm)	0.17	87	93	70-130	7
Chrysene	mg/kg (ppm)	0.17	88	93	70-130	6
Bis(2-ethylhexyl) phthalate	mg/kg (ppm)	0.17	81	90	70-130	11
Di-n-octyl phthalate	mg/kg (ppm)	0.17	80	87	57-156	8
Benzo(a)pyrene	mg/kg (ppm)	0.17	73	79	70-130	8
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	77	79	70-130	3
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	78	81	70-130	4
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	71	84	63-145	17
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	69	80	60-150	15
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	70	83	57-144	17

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 002340-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	30	29	10-56	3
Chloromethane	mg/kg (ppm)	2.5	<0.5	53	53	10-90	0
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	55	55	10-91	0
Bromomethane	mg/kg (ppm)	2.5	<0.5	67	67	10-110	0
Chloroethane	mg/kg (ppm)	2.5	<0.5	66	65	10-101	2
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	65	67	10-95	3
Acetone	mg/kg (ppm)	12.5	<0.5	71	83	11-141	16
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	75	75	22-107	0
Hexane	mg/kg (ppm)	2.5	<0.25	69	71	10-95	3
Methylene chloride	mg/kg (ppm)	2.5	<0.5	113	112	14-128	1
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	82	80	17-134	2
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	77	77	13-112	0
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	79	79	23-115	0
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	94	87	18-117	8
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	84	83	25-120	1
Chloroform	mg/kg (ppm)	2.5	<0.05	86	88	29-117	2
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	68	83	20-133	20
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	85	92	22-124	8
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	88	89	27-112	1
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	84	89	26-107	6
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	87	86	28-126	1
Benzene	mg/kg (ppm)	2.5	<0.03	83	86	26-114	4
Trichloroethene	mg/kg (ppm)	2.5	<0.02	81	84	30-112	4
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	90	91	31-119	1
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	91	94	31-131	3
Dibromomethane	mg/kg (ppm)	2.5	<0.05	85	90	27-124	6
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	88	96	16-147	9
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	94	98	28-137	4
Toluene	mg/kg (ppm)	2.5	<0.05	89	94	34-112	5
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	92	97	30-136	5
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	88	93	32-126	6
2-Hexanone	mg/kg (ppm)	12.5	<0.5	80	92	17-147	14
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	90	96	29-125	6
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	88	93	25-114	6
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	92	98	32-143	6
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	87	95	32-126	9
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	86	91	37-113	6
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	89	93	34-115	4
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	96	101	35-126	5
m,p-Xylene	mg/kg (ppm)	5	<0.1	92	97	25-125	5
o-Xylene	mg/kg (ppm)	2.5	<0.05	92	97	27-126	5
Styrene	mg/kg (ppm)	2.5	<0.05	92	96	39-121	4
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	95	99	34-123	4
Bromoform	mg/kg (ppm)	2.5	<0.05	87	94	18-155	8
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	95	101	31-120	6
Bromobenzene	mg/kg (ppm)	2.5	<0.05	87	95	40-115	9
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	97	106	24-130	9
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	91	102	27-148	11
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	87	100	33-123	14
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	91	98	39-110	7
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	92	98	39-111	6
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	101	112	36-116	10
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	96	104	35-116	8
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	103	111	33-118	7
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	99	107	32-119	8
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	91	98	38-111	7
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	89	95	39-109	7
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	87	95	40-111	9
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	89	105	44-112	16
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	97	102	31-121	5
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	98	104	24-128	6
Naphthalene	mg/kg (ppm)	2.5	<0.05	93	104	24-139	11
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	97	103	35-117	6

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	48	10-76
Chloromethane	mg/kg (ppm)	2.5	70	34-98
Vinyl chloride	mg/kg (ppm)	2.5	74	42-107
Bromomethane	mg/kg (ppm)	2.5	82	46-113
Chloroethane	mg/kg (ppm)	2.5	81	47-115
Trichlorofluoromethane	mg/kg (ppm)	2.5	84	53-112
Acetone	mg/kg (ppm)	12.5	97	39-147
1,1-Dichloroethene	mg/kg (ppm)	2.5	89	65-110
Hexane	mg/kg (ppm)	2.5	98	55-107
Methylene chloride	mg/kg (ppm)	2.5	113	50-127
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	94	72-122
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	93	71-113
1,1-Dichloroethane	mg/kg (ppm)	2.5	95	74-109
2,2-Dichloropropane	mg/kg (ppm)	2.5	97	63-145
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	91	73-110
Chloroform	mg/kg (ppm)	2.5	95	76-110
2-Butanone (MEK)	mg/kg (ppm)	12.5	93	60-121
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	100	73-111
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	97	72-116
1,1-Dichloropropene	mg/kg (ppm)	2.5	99	72-112
Carbon tetrachloride	mg/kg (ppm)	2.5	96	67-123
Benzene	mg/kg (ppm)	2.5	94	72-106
Trichloroethene	mg/kg (ppm)	2.5	94	72-107
1,2-Dichloropropane	mg/kg (ppm)	2.5	100	74-115
Bromodichloromethane	mg/kg (ppm)	2.5	103	75-126
Dibromomethane	mg/kg (ppm)	2.5	98	76-116
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	105	80-128
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	110	71-138
Toluene	mg/kg (ppm)	2.5	100	74-111
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	106	73-124
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	101	76-118
2-Hexanone	mg/kg (ppm)	12.5	103	67-123
1,3-Dichloropropane	mg/kg (ppm)	2.5	105	75-118
Tetrachloroethene	mg/kg (ppm)	2.5	98	73-111
Dibromochloromethane	mg/kg (ppm)	2.5	106	64-152
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	103	77-117
Chlorobenzene	mg/kg (ppm)	2.5	96	76-109
Ethylbenzene	mg/kg (ppm)	2.5	98	75-112
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	104	75-129
m,p-Xylene	mg/kg (ppm)	5	102	77-115
o-Xylene	mg/kg (ppm)	2.5	100	76-115
Styrene	mg/kg (ppm)	2.5	103	76-119
Isopropylbenzene	mg/kg (ppm)	2.5	103	76-120
Bromoform	mg/kg (ppm)	2.5	104	50-174
n-Propylbenzene	mg/kg (ppm)	2.5	103	77-115
Bromobenzene	mg/kg (ppm)	2.5	99	76-112
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	108	77-121
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	102	74-121
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	105	73-117
2-Chlorotoluene	mg/kg (ppm)	2.5	101	75-113
4-Chlorotoluene	mg/kg (ppm)	2.5	102	77-115
tert-Butylbenzene	mg/kg (ppm)	2.5	111	77-123
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	107	77-119
sec-Butylbenzene	mg/kg (ppm)	2.5	110	78-120
p-Isopropyltoluene	mg/kg (ppm)	2.5	106	77-120
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	102	76-112
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	100	74-109
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	97	75-114
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	106	68-122
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	100	75-122
Hexachlorobutadiene	mg/kg (ppm)	2.5	102	74-130
Naphthalene	mg/kg (ppm)	2.5	101	73-122
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	101	75-117

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 002376-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<1	96	55-137
Chloromethane	ug/L (ppb)	50	<10	89	57-129
Vinyl chloride	ug/L (ppb)	50	<0.2	89	61-139
Bromomethane	ug/L (ppb)	50	<1	91	20-265
Chloroethane	ug/L (ppb)	50	<1	87	55-149
Trichlorofluoromethane	ug/L (ppb)	50	<1	94	65-137
Acetone	ug/L (ppb)	250	<50	79	48-149
1,1-Dichloroethene	ug/L (ppb)	50	<1	94	71-123
Hexane	ug/L (ppb)	50	<1	107	44-139
Methylene chloride	ug/L (ppb)	50	<5	112	61-126
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	96	68-125
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	94	72-122
1,1-Dichloroethane	ug/L (ppb)	50	<1	95	79-113
2,2-Dichloropropane	ug/L (ppb)	50	<1	100	48-157
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	63-126
Chloroform	ug/L (ppb)	50	<1	100	77-117
2-Butanone (MEK)	ug/L (ppb)	250	<10	92	70-135
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	98	70-119
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	102	75-121
1,1-Dichloropropene	ug/L (ppb)	50	<1	104	67-121
Carbon tetrachloride	ug/L (ppb)	50	<1	100	70-132
Benzene	ug/L (ppb)	50	<0.35	98	75-114
Trichloroethene	ug/L (ppb)	50	<1	94	73-122
1,2-Dichloropropane	ug/L (ppb)	50	<1	101	80-111
Bromodichloromethane	ug/L (ppb)	50	<1	102	78-117
Dibromomethane	ug/L (ppb)	50	<1	95	73-125
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	106	79-140
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	105	76-120
Toluene	ug/L (ppb)	50	<1	108	73-117
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	108	75-122
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	104	81-116
2-Hexanone	ug/L (ppb)	250	<10	97	74-127
1,3-Dichloropropane	ug/L (ppb)	50	<1	100	80-113
Tetrachloroethene	ug/L (ppb)	50	<1	99	40-155
Dibromochloromethane	ug/L (ppb)	50	<1	106	69-129
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	99	79-120
Chlorobenzene	ug/L (ppb)	50	<1	96	75-115
Ethylbenzene	ug/L (ppb)	50	<1	100	66-124
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	112	76-130
m,p-Xylene	ug/L (ppb)	100	<2	104	63-128
o-Xylene	ug/L (ppb)	50	<1	104	64-129
Styrene	ug/L (ppb)	50	<1	104	56-142
Isopropylbenzene	ug/L (ppb)	50	<1	109	74-122
Bromoform	ug/L (ppb)	50	<1	103	49-138
n-Propylbenzene	ug/L (ppb)	50	<1	106	65-129
Bromobenzene	ug/L (ppb)	50	<1	99	70-121
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	113	60-138
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	107	77-120
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	106	62-125
2-Chlorotoluene	ug/L (ppb)	50	<1	103	40-159
4-Chlorotoluene	ug/L (ppb)	50	<1	104	76-122
tert-Butylbenzene	ug/L (ppb)	50	<1	117	74-125
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	111	59-136
sec-Butylbenzene	ug/L (ppb)	50	<1	115	69-127
p-Isopropyltoluene	ug/L (ppb)	50	<1	111	64-132
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	102	77-113
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	100	75-110
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	101	70-120
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	113	69-129
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	110	66-123
Hexachlorobutadiene	ug/L (ppb)	50	<1	104	53-136
Naphthalene	ug/L (ppb)	50	<1	115	60-145
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	112	59-130

Date of Report: 03/04/20
Date Received: 02/25/20
Project: WSDOT Poulsbo RV Phase II ESA 11361, F&BI 002372

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	91	95	50-157	4
Chloromethane	ug/L (ppb)	50	89	92	62-130	3
Vinyl chloride	ug/L (ppb)	50	88	91	70-128	3
Bromomethane	ug/L (ppb)	50	89	90	60-143	1
Chloroethane	ug/L (ppb)	50	85	86	66-149	1
Trichlorofluoromethane	ug/L (ppb)	50	89	91	65-138	2
Acetone	ug/L (ppb)	250	82	84	44-145	2
1,1-Dichloroethene	ug/L (ppb)	50	89	89	72-121	0
Hexane	ug/L (ppb)	50	102	104	51-153	2
Methylene chloride	ug/L (ppb)	50	105	107	63-132	2
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	94	97	70-122	3
trans-1,2-Dichloroethene	ug/L (ppb)	50	90	93	76-118	3
1,1-Dichloroethane	ug/L (ppb)	50	93	95	77-119	2
2,2-Dichloropropane	ug/L (ppb)	50	99	107	62-141	8
cis-1,2-Dichloroethene	ug/L (ppb)	50	94	96	76-119	2
Chloroform	ug/L (ppb)	50	96	99	78-117	3
2-Butanone (MEK)	ug/L (ppb)	250	100	99	48-150	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	103	102	75-116	1
1,1,1-Trichloroethane	ug/L (ppb)	50	100	102	80-116	2
1,1-Dichloropropene	ug/L (ppb)	50	105	105	78-119	0
Carbon tetrachloride	ug/L (ppb)	50	98	101	72-128	3
Benzene	ug/L (ppb)	50	100	101	75-116	1
Trichloroethene	ug/L (ppb)	50	95	98	72-119	3
1,2-Dichloropropane	ug/L (ppb)	50	98	109	79-121	11
Bromodichloromethane	ug/L (ppb)	50	102	109	76-120	7
Dibromomethane	ug/L (ppb)	50	94	102	79-121	8
4-Methyl-2-pentanone	ug/L (ppb)	250	105	113	54-153	7
cis-1,3-Dichloropropene	ug/L (ppb)	50	110	118	76-128	7
Toluene	ug/L (ppb)	50	103	107	79-115	4
trans-1,3-Dichloropropene	ug/L (ppb)	50	114	115	76-128	1
1,1,2-Trichloroethane	ug/L (ppb)	50	105	108	78-120	3
2-Hexanone	ug/L (ppb)	250	104	110	49-147	6
1,3-Dichloropropane	ug/L (ppb)	50	108	112 vo	81-111	4
Tetrachloroethene	ug/L (ppb)	50	100	100	78-109	0
Dibromochloromethane	ug/L (ppb)	50	113	113	63-140	0
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	107	109	82-118	2
Chlorobenzene	ug/L (ppb)	50	99	100	80-113	1
Ethylbenzene	ug/L (ppb)	50	101	104	83-111	3
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	108	109	76-125	1
m,p-Xylene	ug/L (ppb)	100	104	105	81-112	1
o-Xylene	ug/L (ppb)	50	102	106	81-117	4
Styrene	ug/L (ppb)	50	106	108	83-121	2
Isopropylbenzene	ug/L (ppb)	50	106	108	78-118	2
Bromoform	ug/L (ppb)	50	109	109	40-161	0
n-Propylbenzene	ug/L (ppb)	50	105	111	81-115	6
Bromobenzene	ug/L (ppb)	50	101	105	80-113	4
1,3,5-Trimethylbenzene	ug/L (ppb)	50	110	116	83-117	5
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	106	112	79-118	6
1,2,3-Trichloropropane	ug/L (ppb)	50	105	115	74-116	9
2-Chlorotoluene	ug/L (ppb)	50	101	107	79-112	6
4-Chlorotoluene	ug/L (ppb)	50	104	110	80-116	6
tert-Butylbenzene	ug/L (ppb)	50	117	122 vo	81-119	4
1,2,4-Trimethylbenzene	ug/L (ppb)	50	108	115	81-121	6
sec-Butylbenzene	ug/L (ppb)	50	112	117	83-123	4
p-Isopropyltoluene	ug/L (ppb)	50	108	113	81-117	5
1,3-Dichlorobenzene	ug/L (ppb)	50	101	105	80-115	4
1,4-Dichlorobenzene	ug/L (ppb)	50	99	103	77-112	4
1,2-Dichlorobenzene	ug/L (ppb)	50	99	103	79-115	4
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	110	118	62-133	7
1,2,4-Trichlorobenzene	ug/L (ppb)	50	102	108	75-119	6
Hexachlorobutadiene	ug/L (ppb)	50	99	104	70-116	5
Naphthalene	ug/L (ppb)	50	106	112	72-131	6
1,2,3-Trichlorobenzene	ug/L (ppb)	50	102	108	74-122	6

Date of Report: 03/04/20
Date Received: 02/25/20
Project: WSDOT Poulsbo RV Phase II ESA 11361, F&BI 002372

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

Laboratory Code: 002301-21 1/6 (Matrix Spike) 1/6

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Control Limits	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.25	<0.02	96	69	30-123	33 vo
Aroclor 1260	mg/kg (ppm)	0.25	<0.02	102	84	26-131	19

Laboratory Code: Laboratory Control Sample 1/6

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Aroclor 1016	mg/kg (ppm)	0.25	95	55-137
Aroclor 1260	mg/kg (ppm)	0.25	112	51-150

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

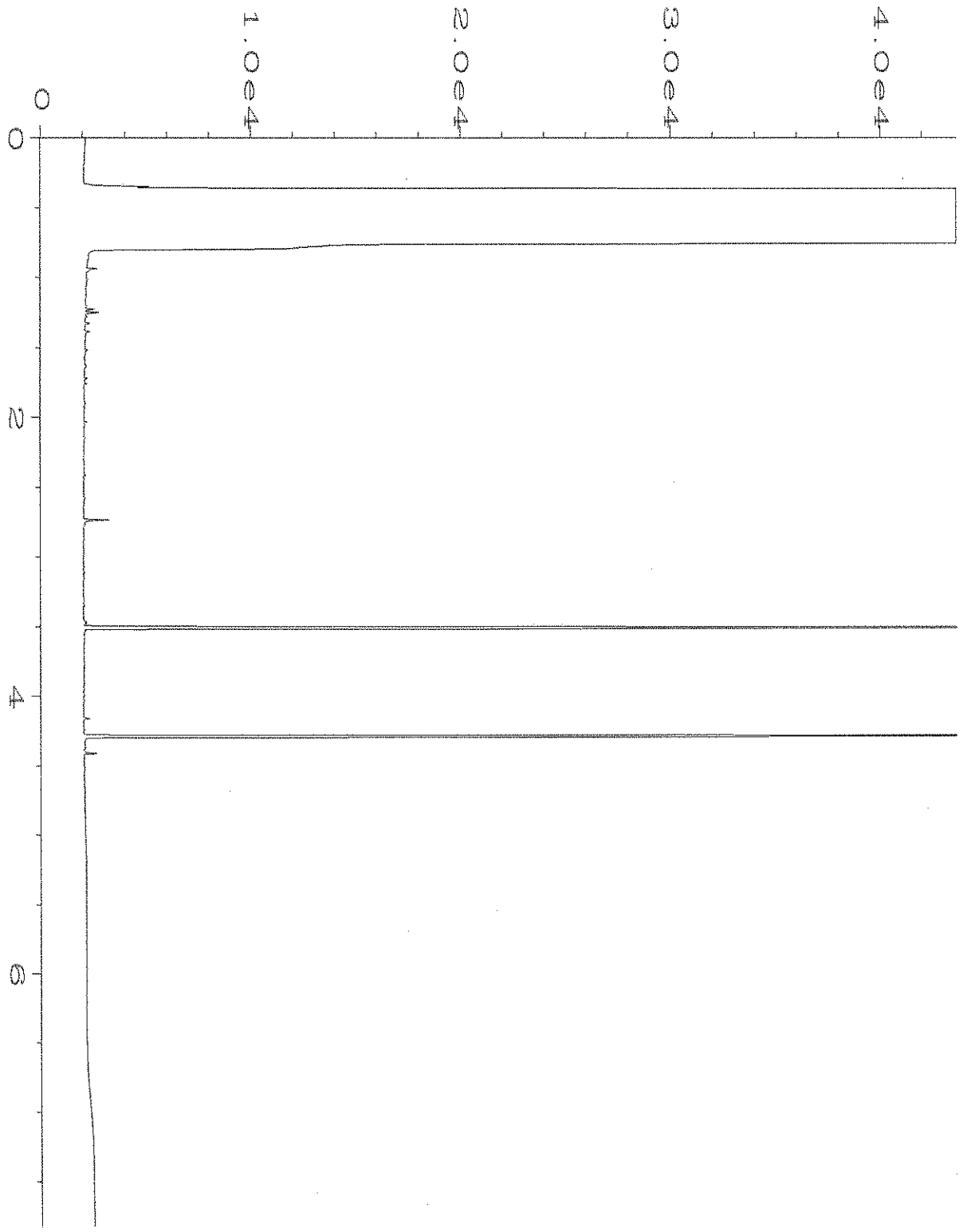
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

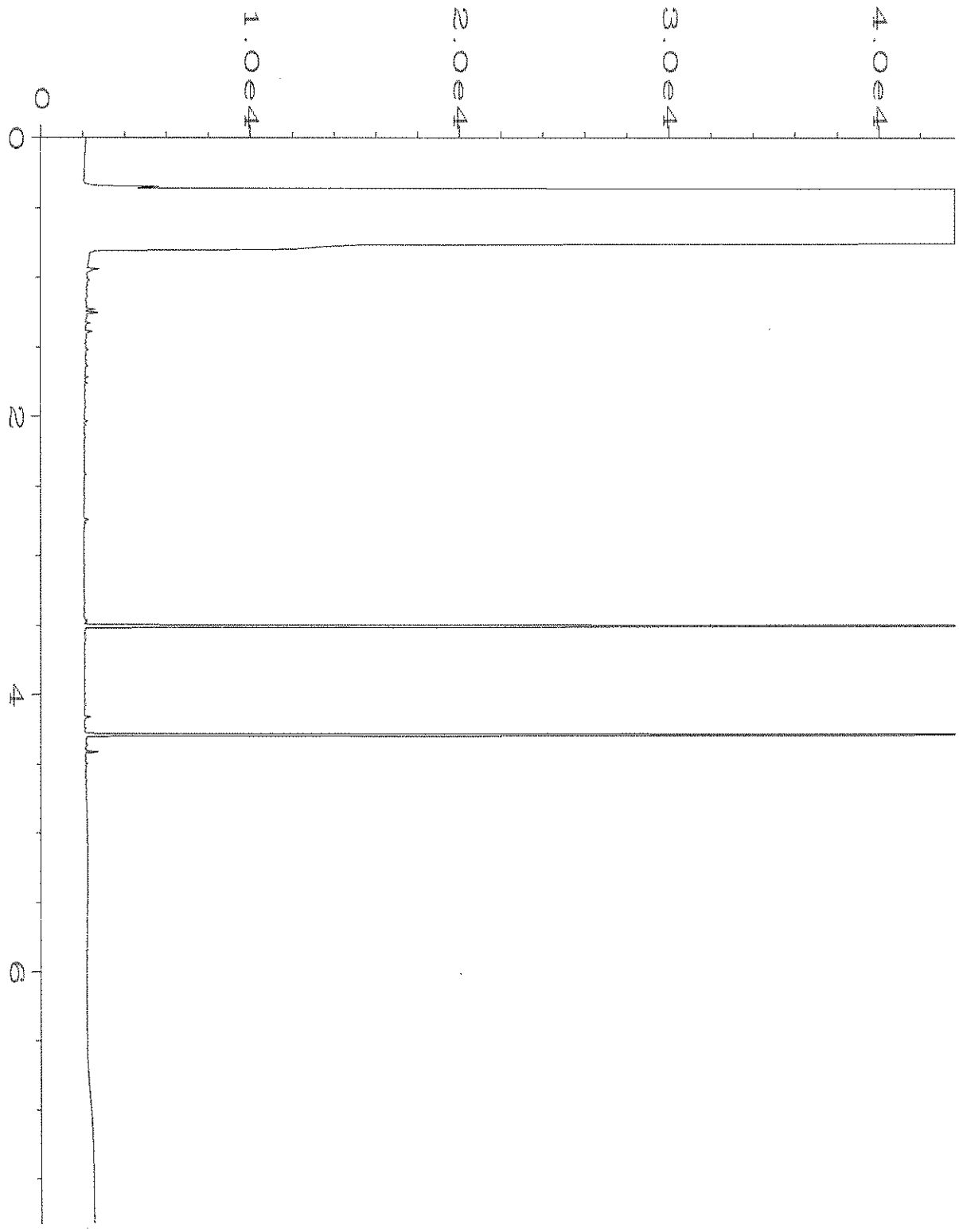
vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

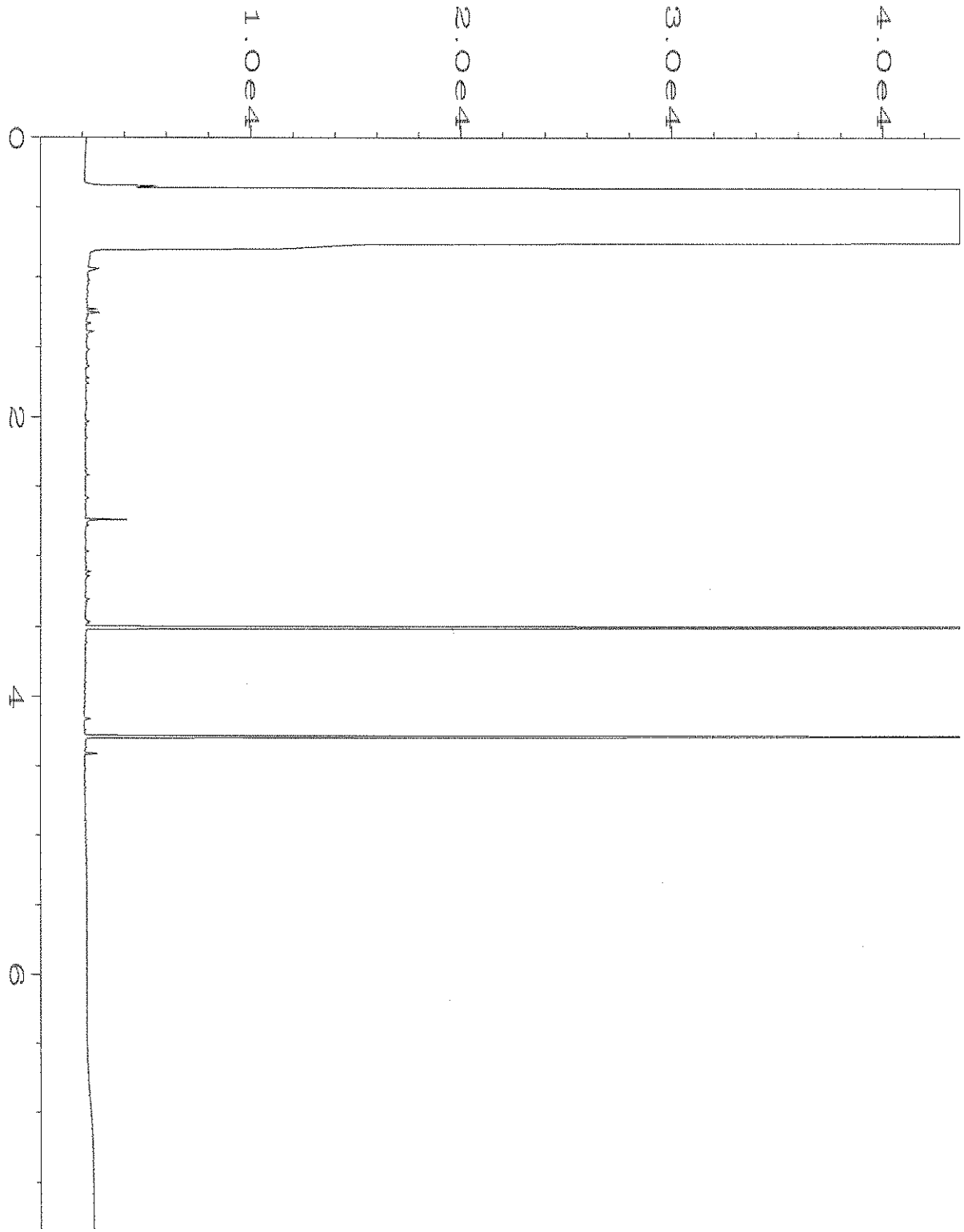


Data File Name : C:\HPCHEM\4\DATA\02-25-20\038F0701.D
Operator : TL
Instrument : GC#4
Sample Name : 002372-01
Run Time Bar Code:
Acquired on : 25 Feb 20 06:38 PM
Report Created on: 26 Feb 20 08:30 AM

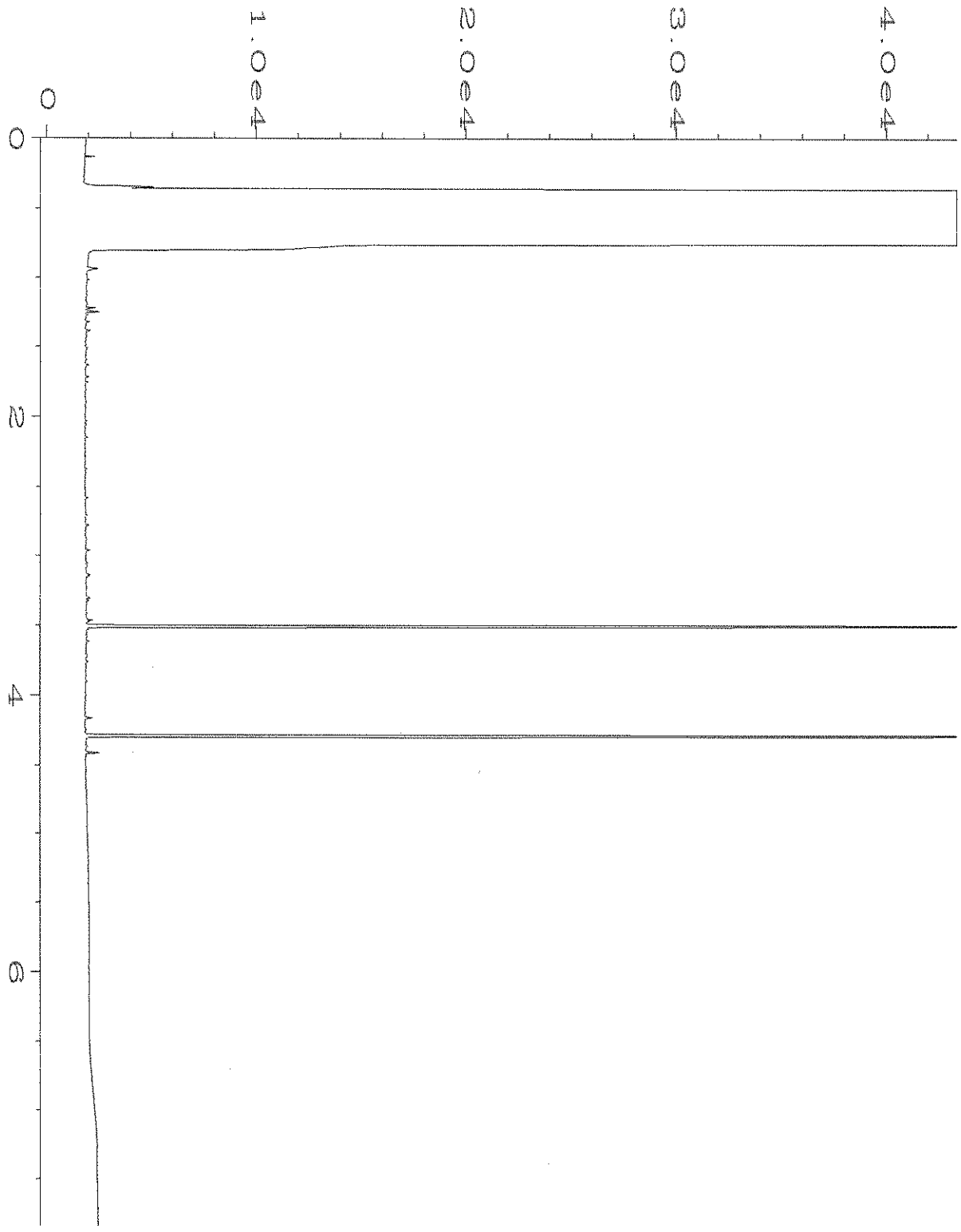
Page Number : 1
Vial Number : 38
Injection Number : 1
Sequence Line : 7
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name	: C:\HPCHEM\4\DATA\02-25-20\039F0701.D		
Operator	: TL	Page Number	: 1
Instrument	: GC#4	Vial Number	: 39
Sample Name	: 002372-02	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
Acquired on	: 25 Feb 20 06:50 PM	Instrument Method	: DX.MTH
Report Created on	: 26 Feb 20 08:30 AM	Analysis Method	: DEFAULT.MTH

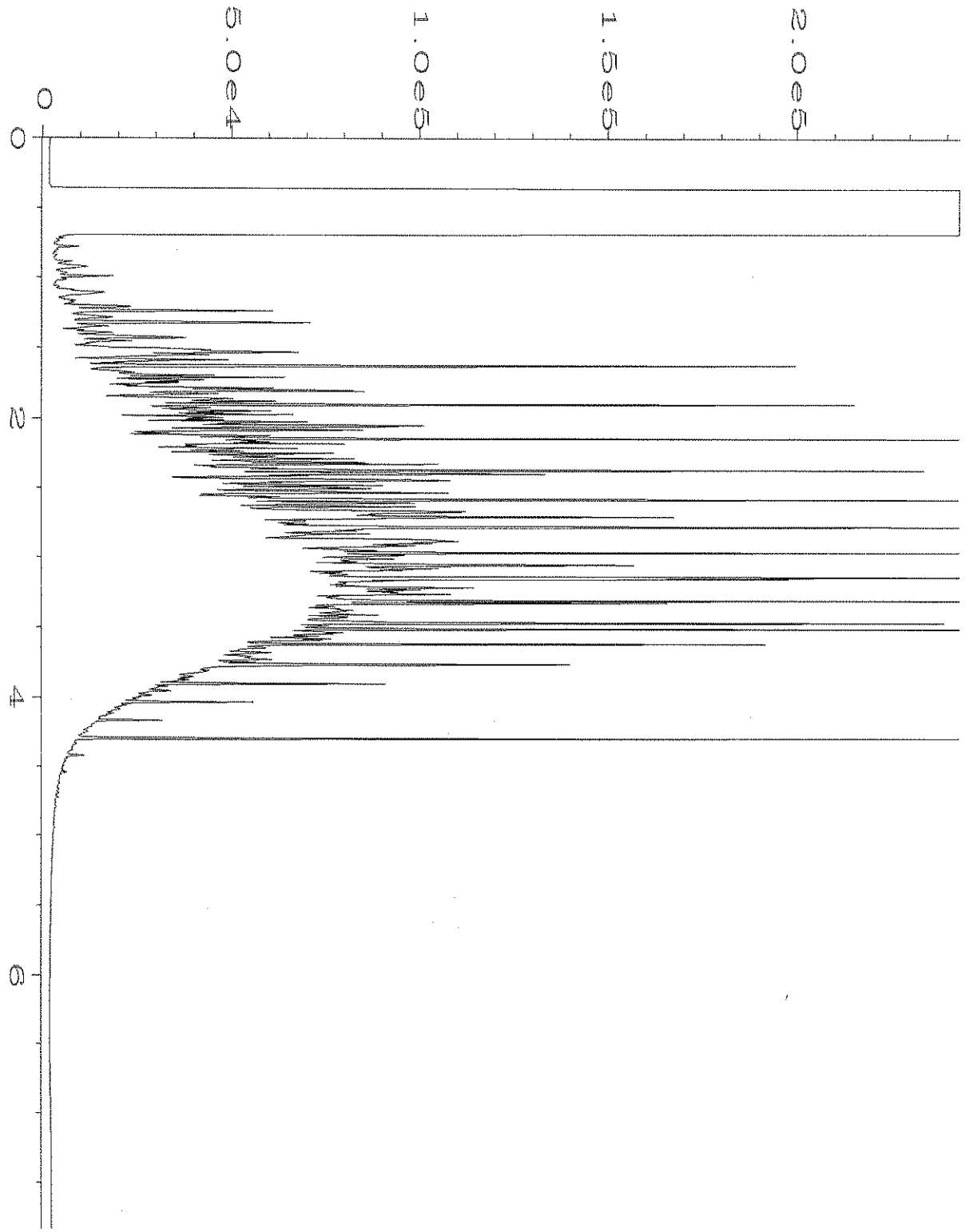


Data File Name	: C:\HPCHEM\4\DATA\02-25-20\040F0701.D		
Operator	: TL	Page Number	: 1
Instrument	: GC#4	Vial Number	: 40
Sample Name	: 002372-03	Injection Number	: 1
Run Time Bar Code:		Sequence Line	: 7
Acquired on	: 25 Feb 20 07:02 PM	Instrument Method	: DX.MTH
Report Created on	: 26 Feb 20 08:30 AM	Analysis Method	: DEFAULT.MTH



Data File Name : C:\HPCHEM\4\DATA\02-25-20\017F0501.D
Operator : TL
Instrument : GC#4
Sample Name : 00-472 mb
Run Time Bar Code:
Acquired on : 25 Feb 20 02:05 PM
Report Created on: 26 Feb 20 08:31 AM

Page Number : 1
Vial Number : 17
Injection Number : 1
Sequence Line : 5
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name : C:\HPCHEM\4\DATA\02-25-20\005F0401.D
Operator : TL
Instrument : GC#4
Sample Name : 1000 Dx 58-146C
Run Time Bar Code:
Acquired on : 25 Feb 20 01:45 PM
Report Created on: 26 Feb 20 08:30 AM

Page Number : 1
Vial Number : 5
Injection Number : 1
Sequence Line : 4
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH

002372

SAMPLE CHAIN OF CUSTODY ME 02/25/20

VW1 / BI / VS-D3

Page # 1 of 1

Report To Ryan Opitz, Mike Brady

Company EHSI

Address 1011 SW Klickitat Way Suite 104

City, State, ZIP Seattle Wa 98134

Phone 206-381-1178 Email

SAMPLERS (signature)

PROJECT NAME WSDOT Parsbo RV Phase II ESA

PO # 11361

REMARKS

INVOICE TO

TURNAROUND TIME
- [x] Standard Turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Dispose after 30 days
- [ ] Archive Samples
- [x] Other HOLD FOR PROJ. ~60 DAYS

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	PCBs	RCRA 8			Notes
MW-2-22.5	01 A-C	2/24/20	9:35	Soil	3		X	X		X	X		X	X			
MW-2-30	02 A-D	2/24/20	10:30	Soil	4		X	X		X	X		X	X			
MW-2-22.5 DUP	03 A B	2/24/20	9:35	SOIL	2		X	X		X							
TRIP BLANK	04 A B	2/24/20	—	H_2O	2			X		X							
													Samples received at 5 °C				

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Sunny Joshi	EHSI	2/25/20	12:00
Received by:	VINH	FBI	2/25/20	12:00
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

March 4, 2020

Ryan Opitz, Project Manager
EHSI
1011 SW Klickitat Way, Suite 104
Seattle, WA 98134

Dear Mr Opitz:

Included are the results from the testing of material submitted on February 26, 2020 from the WSDOT Poulsbo RV Phase II ESA 11361-03, F&BI 002400 project. There are 42 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days, or as directed by the Chain of Custody document. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: EHSI A/P, Mike Brady
EHS0304R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on February 26, 2020 by Friedman & Bruya, Inc. from the EHSI WSDOT Poulsbo RV Phase II ESA 11361-03, F&BI 002400 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	EHSI
002400 -01	MW-3-15
002400 -02	MW-3-15-Dup
002400 -03	MW-3-30
002400 -04	MW-1-20
002400 -05	MW-1-30
002400 -06	Trip Blank

The 8270E laboratory control samples failed the relative percent difference for several compounds. The analytes were not detected in the samples therefore the data were acceptable.

All other quality control requirements were acceptable.

Date of Report: 03/04/20
Date Received: 02/26/20
Project: WSDOT Poulsbo RV Phase II ESA 11361-03, F&BI 002400
Date Extracted: 02/27/20
Date Analyzed: 02/27/20

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 58-139)
MW-3-15 002400-01	<5	104
MW-3-15-Dup 002400-02	<5	107
MW-3-30 002400-03	<5	109
MW-1-20 002400-04	<5	104
MW-1-30 002400-05	<5	107
Method Blank 00-388 MB	<5	103

Date of Report: 03/04/20
Date Received: 02/26/20
Project: WSDOT Poulsbo RV Phase II ESA 11361-03, F&BI 002400
Date Extracted: 02/28/20
Date Analyzed: 02/28/20

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS GASOLINE USING METHOD NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Gasoline Range	Surrogate (% Recovery) (Limit 51-134)
Trip Blank 002400-06	<100	97
Method Blank 00-386 MB	<100	100

Date of Report: 03/04/20
Date Received: 02/26/20
Project: WSDOT Poulsbo RV Phase II ESA 11361-03, F&BI 002400
Date Extracted: 02/26/20
Date Analyzed: 02/26/20

RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported on a Dry Weight Basis
Results Reported as mg/kg (ppm)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 56-165)
MW-3-15 002400-01	<50	<250	91
MW-3-15-Dup 002400-02	<50	<250	83
MW-3-30 002400-03	<50	<250	83
MW-1-20 002400-04	<50	<250	83
MW-1-30 002400-05	<50	<250	82
Method Blank 00-477 MB	<50	<250	82

Analysis For Total Metals By EPA Method 6020B

Client ID:	MW-3-15	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/27/20	Lab ID:	002400-01
Date Analyzed:	02/27/20	Data File:	002400-01.064
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.65
Barium	48.6
Cadmium	<1
Chromium	12.2
Lead	2.22
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	MW-3-15-Dup	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/27/20	Lab ID:	002400-02
Date Analyzed:	02/27/20	Data File:	002400-02.065
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.88
Barium	58.2
Cadmium	<1
Chromium	13.5
Lead	2.10
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	MW-3-30	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/27/20	Lab ID:	002400-03
Date Analyzed:	02/27/20	Data File:	002400-03.066
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.52
Barium	34.7
Cadmium	<1
Chromium	14.4
Lead	1.51
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	MW-1-20	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/27/20	Lab ID:	002400-04
Date Analyzed:	02/27/20	Data File:	002400-04.067
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.59
Barium	39.8
Cadmium	<1
Chromium	15.6
Lead	1.40
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	MW-1-30	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/27/20	Lab ID:	002400-05
Date Analyzed:	02/27/20	Data File:	002400-05.068
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.67
Barium	26.1
Cadmium	<1
Chromium	14.7
Lead	1.13
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Total Metals By EPA Method 6020B

Client ID:	Method Blank	Client:	EHSI
Date Received:	NA	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/27/20	Lab ID:	I0-115 mb2
Date Analyzed:	02/27/20	Data File:	I0-115 mb2.041
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Barium	<1
Cadmium	<1
Chromium	<1
Lead	<1
Mercury	<1
Selenium	<1
Silver	<1

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW-3-15	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	002400-01 1/5
Date Analyzed:	02/27/20	Data File:	022713.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	73	50	150
Phenol-d6	83	50	150
Nitrobenzene-d5	72	50	150
2-Fluorobiphenyl	86	50	150
2,4,6-Tribromophenol	74	50	150
Terphenyl-d14	82	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.5	2,6-Dinitrotoluene	<0.25
Bis(2-chloroethyl) ether	<0.05	3-Nitroaniline	<5
2-Chlorophenol	<0.5	Acenaphthene	<0.01
1,3-Dichlorobenzene	<0.05	2,4-Dinitrophenol	<1.5
1,4-Dichlorobenzene	<0.05	Dibenzofuran	<0.05
1,2-Dichlorobenzene	<0.05	2,4-Dinitrotoluene	<0.25
Benzyl alcohol	<0.5	4-Nitrophenol	<1.5
2,2'-Oxybis(1-chloropropane)	<0.05	Diethyl phthalate	<0.5
2-Methylphenol	<0.5	Fluorene	<0.01
Hexachloroethane	<0.05	4-Chlorophenyl phenyl ether	<0.05
N-Nitroso-di-n-propylamine	<0.05	N-Nitrosodiphenylamine	<0.05
3-Methylphenol + 4-Methylphenol	<1	4-Nitroaniline	<5
Nitrobenzene	<0.05	4,6-Dinitro-2-methylphenol	<1.5
Isophorone	<0.05	4-Bromophenyl phenyl ether	<0.05
2-Nitrophenol	<0.5	Hexachlorobenzene	<0.05
2,4-Dimethylphenol	<0.5	Pentachlorophenol	<0.25
Benzoic acid	<2.5	Phenanthrene	<0.01
Bis(2-chloroethoxy)methane	<0.05	Anthracene	<0.01
2,4-Dichlorophenol	<0.5	Carbazole	<0.05
1,2,4-Trichlorobenzene	<0.05	Di-n-butyl phthalate	<0.5
Naphthalene	<0.01	Fluoranthene	<0.01
Hexachlorobutadiene	<0.05	Pyrene	<0.01
4-Chloroaniline	<5	Benzyl butyl phthalate	<0.5
4-Chloro-3-methylphenol	<0.5	Benz(a)anthracene	<0.01
2-Methylnaphthalene	<0.01	Chrysene	<0.01
1-Methylnaphthalene	<0.01	Bis(2-ethylhexyl) phthalate	<0.8
Hexachlorocyclopentadiene	<0.15	Di-n-octyl phthalate	<0.5
2,4,6-Trichlorophenol	<0.5	Benzo(a)pyrene	<0.01
2,4,5-Trichlorophenol	<0.5	Benzo(b)fluoranthene	<0.01
2-Chloronaphthalene	<0.05	Benzo(k)fluoranthene	<0.01
2-Nitroaniline	<0.25	Indeno(1,2,3-cd)pyrene	<0.01
Dimethyl phthalate	<0.5	Dibenz(a,h)anthracene	<0.01
Acenaphthylene	<0.01	Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW-3-15-Dup	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	002400-02 1/5
Date Analyzed:	02/27/20	Data File:	022714.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	76	50	150
Phenol-d6	84	50	150
Nitrobenzene-d5	75	50	150
2-Fluorobiphenyl	87	50	150
2,4,6-Tribromophenol	75	50	150
Terphenyl-d14	84	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.5	2,6-Dinitrotoluene	<0.25
Bis(2-chloroethyl) ether	<0.05	3-Nitroaniline	<5
2-Chlorophenol	<0.5	Acenaphthene	<0.01
1,3-Dichlorobenzene	<0.05	2,4-Dinitrophenol	<1.5
1,4-Dichlorobenzene	<0.05	Dibenzofuran	<0.05
1,2-Dichlorobenzene	<0.05	2,4-Dinitrotoluene	<0.25
Benzyl alcohol	<0.5	4-Nitrophenol	<1.5
2,2'-Oxybis(1-chloropropane)	<0.05	Diethyl phthalate	<0.5
2-Methylphenol	<0.5	Fluorene	<0.01
Hexachloroethane	<0.05	4-Chlorophenyl phenyl ether	<0.05
N-Nitroso-di-n-propylamine	<0.05	N-Nitrosodiphenylamine	<0.05
3-Methylphenol + 4-Methylphenol	<1	4-Nitroaniline	<5
Nitrobenzene	<0.05	4,6-Dinitro-2-methylphenol	<1.5
Isophorone	<0.05	4-Bromophenyl phenyl ether	<0.05
2-Nitrophenol	<0.5	Hexachlorobenzene	<0.05
2,4-Dimethylphenol	<0.5	Pentachlorophenol	<0.25
Benzoic acid	<2.5	Phenanthrene	<0.01
Bis(2-chloroethoxy)methane	<0.05	Anthracene	<0.01
2,4-Dichlorophenol	<0.5	Carbazole	<0.05
1,2,4-Trichlorobenzene	<0.05	Di-n-butyl phthalate	<0.5
Naphthalene	<0.01	Fluoranthene	<0.01
Hexachlorobutadiene	<0.05	Pyrene	<0.01
4-Chloroaniline	<5	Benzyl butyl phthalate	<0.5
4-Chloro-3-methylphenol	<0.5	Benz(a)anthracene	<0.01
2-Methylnaphthalene	<0.01	Chrysene	<0.01
1-Methylnaphthalene	<0.01	Bis(2-ethylhexyl) phthalate	<0.8
Hexachlorocyclopentadiene	<0.15	Di-n-octyl phthalate	<0.5
2,4,6-Trichlorophenol	<0.5	Benzo(a)pyrene	<0.01
2,4,5-Trichlorophenol	<0.5	Benzo(b)fluoranthene	<0.01
2-Chloronaphthalene	<0.05	Benzo(k)fluoranthene	<0.01
2-Nitroaniline	<0.25	Indeno(1,2,3-cd)pyrene	<0.01
Dimethyl phthalate	<0.5	Dibenz(a,h)anthracene	<0.01
Acenaphthylene	<0.01	Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW-3-30	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	002400-03 1/5
Date Analyzed:	02/27/20	Data File:	022715.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	80	50	150
Phenol-d6	88	50	150
Nitrobenzene-d5	79	50	150
2-Fluorobiphenyl	92	50	150
2,4,6-Tribromophenol	79	50	150
Terphenyl-d14	87	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.5	2,6-Dinitrotoluene	<0.25
Bis(2-chloroethyl) ether	<0.05	3-Nitroaniline	<5
2-Chlorophenol	<0.5	Acenaphthene	<0.01
1,3-Dichlorobenzene	<0.05	2,4-Dinitrophenol	<1.5
1,4-Dichlorobenzene	<0.05	Dibenzofuran	<0.05
1,2-Dichlorobenzene	<0.05	2,4-Dinitrotoluene	<0.25
Benzyl alcohol	<0.5	4-Nitrophenol	<1.5
2,2'-Oxybis(1-chloropropane)	<0.05	Diethyl phthalate	<0.5
2-Methylphenol	<0.5	Fluorene	<0.01
Hexachloroethane	<0.05	4-Chlorophenyl phenyl ether	<0.05
N-Nitroso-di-n-propylamine	<0.05	N-Nitrosodiphenylamine	<0.05
3-Methylphenol + 4-Methylphenol	<1	4-Nitroaniline	<5
Nitrobenzene	<0.05	4,6-Dinitro-2-methylphenol	<1.5
Isophorone	<0.05	4-Bromophenyl phenyl ether	<0.05
2-Nitrophenol	<0.5	Hexachlorobenzene	<0.05
2,4-Dimethylphenol	<0.5	Pentachlorophenol	<0.25
Benzoic acid	<2.5	Phenanthrene	<0.01
Bis(2-chloroethoxy)methane	<0.05	Anthracene	<0.01
2,4-Dichlorophenol	<0.5	Carbazole	<0.05
1,2,4-Trichlorobenzene	<0.05	Di-n-butyl phthalate	<0.5
Naphthalene	<0.01	Fluoranthene	<0.01
Hexachlorobutadiene	<0.05	Pyrene	<0.01
4-Chloroaniline	<5	Benzyl butyl phthalate	<0.5
4-Chloro-3-methylphenol	<0.5	Benz(a)anthracene	<0.01
2-Methylnaphthalene	<0.01	Chrysene	<0.01
1-Methylnaphthalene	<0.01	Bis(2-ethylhexyl) phthalate	<0.8
Hexachlorocyclopentadiene	<0.15	Di-n-octyl phthalate	<0.5
2,4,6-Trichlorophenol	<0.5	Benzo(a)pyrene	<0.01
2,4,5-Trichlorophenol	<0.5	Benzo(b)fluoranthene	<0.01
2-Chloronaphthalene	<0.05	Benzo(k)fluoranthene	<0.01
2-Nitroaniline	<0.25	Indeno(1,2,3-cd)pyrene	<0.01
Dimethyl phthalate	<0.5	Dibenz(a,h)anthracene	<0.01
Acenaphthylene	<0.01	Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW-1-20	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	002400-04 1/5
Date Analyzed:	02/27/20	Data File:	022716.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	79	50	150
Phenol-d6	86	50	150
Nitrobenzene-d5	76	50	150
2-Fluorobiphenyl	91	50	150
2,4,6-Tribromophenol	78	50	150
Terphenyl-d14	87	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.5	2,6-Dinitrotoluene	<0.25
Bis(2-chloroethyl) ether	<0.05	3-Nitroaniline	<5
2-Chlorophenol	<0.5	Acenaphthene	<0.01
1,3-Dichlorobenzene	<0.05	2,4-Dinitrophenol	<1.5
1,4-Dichlorobenzene	<0.05	Dibenzofuran	<0.05
1,2-Dichlorobenzene	<0.05	2,4-Dinitrotoluene	<0.25
Benzyl alcohol	<0.5	4-Nitrophenol	<1.5
2,2'-Oxybis(1-chloropropane)	<0.05	Diethyl phthalate	<0.5
2-Methylphenol	<0.5	Fluorene	<0.01
Hexachloroethane	<0.05	4-Chlorophenyl phenyl ether	<0.05
N-Nitroso-di-n-propylamine	<0.05	N-Nitrosodiphenylamine	<0.05
3-Methylphenol + 4-Methylphenol	<1	4-Nitroaniline	<5
Nitrobenzene	<0.05	4,6-Dinitro-2-methylphenol	<1.5
Isophorone	<0.05	4-Bromophenyl phenyl ether	<0.05
2-Nitrophenol	<0.5	Hexachlorobenzene	<0.05
2,4-Dimethylphenol	<0.5	Pentachlorophenol	<0.25
Benzoic acid	<2.5	Phenanthrene	<0.01
Bis(2-chloroethoxy)methane	<0.05	Anthracene	<0.01
2,4-Dichlorophenol	<0.5	Carbazole	<0.05
1,2,4-Trichlorobenzene	<0.05	Di-n-butyl phthalate	<0.5
Naphthalene	<0.01	Fluoranthene	<0.01
Hexachlorobutadiene	<0.05	Pyrene	<0.01
4-Chloroaniline	<5	Benzyl butyl phthalate	<0.5
4-Chloro-3-methylphenol	<0.5	Benz(a)anthracene	<0.01
2-Methylnaphthalene	<0.01	Chrysene	<0.01
1-Methylnaphthalene	<0.01	Bis(2-ethylhexyl) phthalate	<0.8
Hexachlorocyclopentadiene	<0.15	Di-n-octyl phthalate	<0.5
2,4,6-Trichlorophenol	<0.5	Benzo(a)pyrene	<0.01
2,4,5-Trichlorophenol	<0.5	Benzo(b)fluoranthene	<0.01
2-Chloronaphthalene	<0.05	Benzo(k)fluoranthene	<0.01
2-Nitroaniline	<0.25	Indeno(1,2,3-cd)pyrene	<0.01
Dimethyl phthalate	<0.5	Dibenz(a,h)anthracene	<0.01
Acenaphthylene	<0.01	Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	MW-1-30	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	002400-05 1/5
Date Analyzed:	02/27/20	Data File:	022717.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	76	50	150
Phenol-d6	83	50	150
Nitrobenzene-d5	72	50	150
2-Fluorobiphenyl	89	50	150
2,4,6-Tribromophenol	74	50	150
Terphenyl-d14	82	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.5	2,6-Dinitrotoluene	<0.25
Bis(2-chloroethyl) ether	<0.05	3-Nitroaniline	<5
2-Chlorophenol	<0.5	Acenaphthene	<0.01
1,3-Dichlorobenzene	<0.05	2,4-Dinitrophenol	<1.5
1,4-Dichlorobenzene	<0.05	Dibenzofuran	<0.05
1,2-Dichlorobenzene	<0.05	2,4-Dinitrotoluene	<0.25
Benzyl alcohol	<0.5	4-Nitrophenol	<1.5
2,2'-Oxybis(1-chloropropane)	<0.05	Diethyl phthalate	<0.5
2-Methylphenol	<0.5	Fluorene	<0.01
Hexachloroethane	<0.05	4-Chlorophenyl phenyl ether	<0.05
N-Nitroso-di-n-propylamine	<0.05	N-Nitrosodiphenylamine	<0.05
3-Methylphenol + 4-Methylphenol	<1	4-Nitroaniline	<5
Nitrobenzene	<0.05	4,6-Dinitro-2-methylphenol	<1.5
Isophorone	<0.05	4-Bromophenyl phenyl ether	<0.05
2-Nitrophenol	<0.5	Hexachlorobenzene	<0.05
2,4-Dimethylphenol	<0.5	Pentachlorophenol	<0.25
Benzoic acid	<2.5	Phenanthrene	<0.01
Bis(2-chloroethoxy)methane	<0.05	Anthracene	<0.01
2,4-Dichlorophenol	<0.5	Carbazole	<0.05
1,2,4-Trichlorobenzene	<0.05	Di-n-butyl phthalate	<0.5
Naphthalene	<0.01	Fluoranthene	<0.01
Hexachlorobutadiene	<0.05	Pyrene	<0.01
4-Chloroaniline	<5	Benzyl butyl phthalate	<0.5
4-Chloro-3-methylphenol	<0.5	Benz(a)anthracene	<0.01
2-Methylnaphthalene	<0.01	Chrysene	<0.01
1-Methylnaphthalene	<0.01	Bis(2-ethylhexyl) phthalate	<0.8
Hexachlorocyclopentadiene	<0.15	Di-n-octyl phthalate	<0.5
2,4,6-Trichlorophenol	<0.5	Benzo(a)pyrene	<0.01
2,4,5-Trichlorophenol	<0.5	Benzo(b)fluoranthene	<0.01
2-Chloronaphthalene	<0.05	Benzo(k)fluoranthene	<0.01
2-Nitroaniline	<0.25	Indeno(1,2,3-cd)pyrene	<0.01
Dimethyl phthalate	<0.5	Dibenz(a,h)anthracene	<0.01
Acenaphthylene	<0.01	Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270E

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	00-480 mb
Date Analyzed:	02/27/20	Data File:	022709.D
Matrix:	Soil	Instrument:	GCMS8
Units:	mg/kg (ppm) Dry Weight	Operator:	VM

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
2-Fluorophenol	76	50	150
Phenol-d6	85	50	150
Nitrobenzene-d5	76	50	150
2-Fluorobiphenyl	91	50	150
2,4,6-Tribromophenol	74	50	150
Terphenyl-d14	89	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Phenol	<0.1	2,6-Dinitrotoluene	<0.05
Bis(2-chloroethyl) ether	<0.01	3-Nitroaniline	<1
2-Chlorophenol	<0.1	Acenaphthene	<0.002
1,3-Dichlorobenzene	<0.01	2,4-Dinitrophenol	<0.3
1,4-Dichlorobenzene	<0.01	Dibenzofuran	<0.01
1,2-Dichlorobenzene	<0.01	2,4-Dinitrotoluene	<0.05
Benzyl alcohol	<0.1	4-Nitrophenol	<0.3
2,2'-Oxybis(1-chloropropane)	<0.01	Diethyl phthalate	<0.1
2-Methylphenol	<0.1	Fluorene	<0.002
Hexachloroethane	<0.01	4-Chlorophenyl phenyl ether	<0.01
N-Nitroso-di-n-propylamine	<0.01	N-Nitrosodiphenylamine	<0.01
3-Methylphenol + 4-Methylphenol	<0.2	4-Nitroaniline	<1
Nitrobenzene	<0.01	4,6-Dinitro-2-methylphenol	<0.3
Isophorone	<0.01	4-Bromophenyl phenyl ether	<0.01
2-Nitrophenol	<0.1	Hexachlorobenzene	<0.01
2,4-Dimethylphenol	<0.1	Pentachlorophenol	<0.05
Benzoic acid	<0.5	Phenanthrene	<0.002
Bis(2-chloroethoxy)methane	<0.01	Anthracene	<0.002
2,4-Dichlorophenol	<0.1	Carbazole	<0.01
1,2,4-Trichlorobenzene	<0.01	Di-n-butyl phthalate	<0.1
Naphthalene	<0.002	Fluoranthene	<0.002
Hexachlorobutadiene	<0.01	Pyrene	<0.002
4-Chloroaniline	<1	Benzyl butyl phthalate	<0.1
4-Chloro-3-methylphenol	<0.1	Benz(a)anthracene	<0.002
2-Methylnaphthalene	<0.002	Chrysene	<0.002
1-Methylnaphthalene	<0.002	Bis(2-ethylhexyl) phthalate	<0.16
Hexachlorocyclopentadiene	<0.03	Di-n-octyl phthalate	<0.1
2,4,6-Trichlorophenol	<0.1	Benzo(a)pyrene	<0.002
2,4,5-Trichlorophenol	<0.1	Benzo(b)fluoranthene	<0.002
2-Chloronaphthalene	<0.01	Benzo(k)fluoranthene	<0.002
2-Nitroaniline	<0.05	Indeno(1,2,3-cd)pyrene	<0.002
Dimethyl phthalate	<0.1	Dibenz(a,h)anthracene	<0.002
Acenaphthylene	<0.002	Benzo(g,h,i)perylene	<0.002

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-3-15	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/27/20	Lab ID:	002400-01
Date Analyzed:	02/27/20	Data File:	022720.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	108	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-3-15-Dup	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/27/20	Lab ID:	002400-02
Date Analyzed:	02/27/20	Data File:	022721.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	50	150
Toluene-d8	104	50	150
4-Bromofluorobenzene	103	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-3-30	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/27/20	Lab ID:	002400-03
Date Analyzed:	02/27/20	Data File:	022722.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	50	150
Toluene-d8	102	50	150
4-Bromofluorobenzene	102	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-1-20	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/27/20	Lab ID:	002400-04
Date Analyzed:	02/27/20	Data File:	022723.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	50	150
Toluene-d8	98	50	150
4-Bromofluorobenzene	100	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	MW-1-30	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/27/20	Lab ID:	002400-05
Date Analyzed:	02/27/20	Data File:	022724.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	50	150
Toluene-d8	93	50	150
4-Bromofluorobenzene	99	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/27/20	Lab ID:	00-427 mb2
Date Analyzed:	02/27/20	Data File:	022715.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	50	150
Toluene-d8	95	50	150
4-Bromofluorobenzene	101	50	150

Compounds:	Concentration mg/kg (ppm)	Compounds:	Concentration mg/kg (ppm)
Dichlorodifluoromethane	<0.5	1,3-Dichloropropane	<0.05
Chloromethane	<0.5	Tetrachloroethene	<0.025
Vinyl chloride	<0.05	Dibromochloromethane	<0.05
Bromomethane	<0.5	1,2-Dibromoethane (EDB)	<0.05
Chloroethane	<0.5	Chlorobenzene	<0.05
Trichlorofluoromethane	<0.5	Ethylbenzene	<0.05
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	<0.1
Hexane	<0.25	o-Xylene	<0.05
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	<0.05
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	<0.05
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	<0.05
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	<0.05
2-Butanone (MEK)	<0.5	1,2,3-Trichloropropane	<0.05
1,2-Dichloroethane (EDC)	<0.05	2-Chlorotoluene	<0.05
1,1,1-Trichloroethane	<0.05	4-Chlorotoluene	<0.05
1,1-Dichloropropene	<0.05	tert-Butylbenzene	<0.05
Carbon tetrachloride	<0.05	1,2,4-Trimethylbenzene	<0.05
Benzene	<0.03	sec-Butylbenzene	<0.05
Trichloroethene	<0.02	p-Isopropyltoluene	<0.05
1,2-Dichloropropane	<0.05	1,3-Dichlorobenzene	<0.05
Bromodichloromethane	<0.05	1,4-Dichlorobenzene	<0.05
Dibromomethane	<0.05	1,2-Dichlorobenzene	<0.05
4-Methyl-2-pentanone	<0.5	1,2-Dibromo-3-chloropropane	<0.5
cis-1,3-Dichloropropene	<0.05	1,2,4-Trichlorobenzene	<0.25
Toluene	<0.05	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	<0.05
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Trip Blank	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/27/20	Lab ID:	002400-06
Date Analyzed:	02/27/20	Data File:	022721.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	57	121
Toluene-d8	95	63	127
4-Bromofluorobenzene	101	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For Volatile Compounds By EPA Method 8260D

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/27/20	Lab ID:	00-482 mb2
Date Analyzed:	02/27/20	Data File:	022714.D
Matrix:	Water	Instrument:	GCMS4
Units:	ug/L (ppb)	Operator:	MS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	57	121
Toluene-d8	92	63	127
4-Bromofluorobenzene	97	60	133

Compounds:	Concentration ug/L (ppb)	Compounds:	Concentration ug/L (ppb)
Dichlorodifluoromethane	<1	1,3-Dichloropropane	<1
Chloromethane	<10	Tetrachloroethene	<1
Vinyl chloride	<0.2	Dibromochloromethane	<1
Bromomethane	<1	1,2-Dibromoethane (EDB)	<1
Chloroethane	<1	Chlorobenzene	<1
Trichlorofluoromethane	<1	Ethylbenzene	<1
Acetone	<50	1,1,1,2-Tetrachloroethane	<1
1,1-Dichloroethene	<1	m,p-Xylene	<2
Hexane	<1	o-Xylene	<1
Methylene chloride	<5	Styrene	<1
Methyl t-butyl ether (MTBE)	<1	Isopropylbenzene	<1
trans-1,2-Dichloroethene	<1	Bromoform	<1
1,1-Dichloroethane	<1	n-Propylbenzene	<1
2,2-Dichloropropane	<1	Bromobenzene	<1
cis-1,2-Dichloroethene	<1	1,3,5-Trimethylbenzene	<1
Chloroform	<1	1,1,2,2-Tetrachloroethane	<1
2-Butanone (MEK)	<10	1,2,3-Trichloropropane	<1
1,2-Dichloroethane (EDC)	<1	2-Chlorotoluene	<1
1,1,1-Trichloroethane	<1	4-Chlorotoluene	<1
1,1-Dichloropropene	<1	tert-Butylbenzene	<1
Carbon tetrachloride	<1	1,2,4-Trimethylbenzene	<1
Benzene	<0.35	sec-Butylbenzene	<1
Trichloroethene	<1	p-Isopropyltoluene	<1
1,2-Dichloropropane	<1	1,3-Dichlorobenzene	<1
Bromodichloromethane	<1	1,4-Dichlorobenzene	<1
Dibromomethane	<1	1,2-Dichlorobenzene	<1
4-Methyl-2-pentanone	<10	1,2-Dibromo-3-chloropropane	<10
cis-1,3-Dichloropropene	<1	1,2,4-Trichlorobenzene	<1
Toluene	<1	Hexachlorobutadiene	<1
trans-1,3-Dichloropropene	<1	Naphthalene	<1
1,1,2-Trichloroethane	<1	1,2,3-Trichlorobenzene	<1
2-Hexanone	<10		

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	MW-3-15	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	002400-01 1/6
Date Analyzed:	02/27/20	Data File:	022707.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	69	23	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	MW-3-15-Dup	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	002400-02 1/6
Date Analyzed:	02/27/20	Data File:	022711.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	66	23	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	MW-3-30	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	002400-03 1/6
Date Analyzed:	02/27/20	Data File:	022712.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	71	23	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	MW-1-20	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	002400-04 1/6
Date Analyzed:	02/27/20	Data File:	022713.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	73	23	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	MW-1-30	Client:	EHSI
Date Received:	02/26/20	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	002400-05 1/6
Date Analyzed:	02/27/20	Data File:	022714.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	84	23	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Analysis For PCBs By EPA Method 8082A

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	WSDOT Poulsbo RV Phase II ESA
Date Extracted:	02/26/20	Lab ID:	00-478 mb 1/6
Date Analyzed:	02/27/20	Data File:	022704.D
Matrix:	Soil	Instrument:	GC7
Units:	mg/kg (ppm) Dry Weight	Operator:	IJL

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
TCMX	87	23	127

Compounds:	Concentration mg/kg (ppm)
Aroclor 1221	<0.02
Aroclor 1232	<0.02
Aroclor 1016	<0.02
Aroclor 1242	<0.02
Aroclor 1248	<0.02
Aroclor 1254	<0.02
Aroclor 1260	<0.02
Aroclor 1262	<0.02
Aroclor 1268	<0.02

Date of Report: 03/04/20
Date Received: 02/26/20
Project: WSDOT Poulsbo RV Phase II ESA 11361-03, F&BI 002400

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 002398-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<5	<5	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	110	61-153

Date of Report: 03/04/20
Date Received: 02/26/20
Project: WSDOT Poulsbo RV Phase II ESA 11361-03, F&BI 002400

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TPH AS GASOLINE USING METHOD NWTPH-Gx

Laboratory Code: 002442-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	ug/L (ppb)	1,000	104	69-134

Date of Report: 03/04/20
Date Received: 02/26/20
Project: WSDOT Poulsbo RV Phase II ESA 11361-03, F&BI 002400

QUALITY ASSURANCE RESULTS FROM THE ANALYSIS OF SOIL SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: 002371-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	mg/kg (ppm)	5,000	52	87	87	63-146	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	86	79-144

Date of Report: 03/04/20
Date Received: 02/26/20
Project: WSDOT Poulsbo RV Phase II ESA 11361-03, F&BI 002400

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 6020B

Laboratory Code: 002393-01 x5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/kg (ppm)	10	<5	85	83	75-125	2
Barium	mg/kg (ppm)	50	95.3	131 b	106 b	75-125	21 b
Cadmium	mg/kg (ppm)	10	<5	99	99	75-125	0
Chromium	mg/kg (ppm)	50	10.3	91	90	75-125	1
Lead	mg/kg (ppm)	50	21.2	90	100	75-125	11
Mercury	mg/kg (ppm	5	<5	96	91	75-125	5
Selenium	mg/kg (ppm)	5	<5	83	86	75-125	4
Silver	mg/kg (ppm)	10	<5	91	92	75-125	1

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	86	80-120
Barium	mg/kg (ppm)	50	95	80-120
Cadmium	mg/kg (ppm)	10	96	80-120
Chromium	mg/kg (ppm)	50	92	80-120
Lead	mg/kg (ppm)	50	94	80-120
Mercury	mg/kg (ppm)	5	91	80-120
Selenium	mg/kg (ppm)	5	98	80-120
Silver	mg/kg (ppm)	10	93	80-120

Date of Report: 03/04/20
Date Received: 02/26/20
Project: WSDOT Poulsbo RV Phase II ESA 11361-03, F&BI 002400

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: 002372-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Phenol	mg/kg (ppm)	0.17	<0.1	75	50-150
Bis(2-chloroethyl) ether	mg/kg (ppm)	0.17	<0.01	69	50-150
2-Chlorophenol	mg/kg (ppm)	0.17	<0.1	71	50-150
1,3-Dichlorobenzene	mg/kg (ppm)	0.17	<0.01	66	50-150
1,4-Dichlorobenzene	mg/kg (ppm)	0.17	<0.01	65	50-150
1,2-Dichlorobenzene	mg/kg (ppm)	0.17	<0.01	67	50-150
Benzyl alcohol	mg/kg (ppm)	0.33	<0.1	77	50-150
2,2'-Oxybis(1-chloropropane)	mg/kg (ppm)	0.17	<0.01	72	50-150
2-Methylphenol	mg/kg (ppm)	0.17	<0.1	75	50-150
Hexachloroethane	mg/kg (ppm)	0.17	<0.01	66	50-150
N-Nitroso-di-n-propylamine	mg/kg (ppm)	0.17	<0.01	85	50-150
3-Methylphenol + 4-Methylphenol	mg/kg (ppm)	0.17	<0.2	76	50-150
Nitrobenzene	mg/kg (ppm)	0.17	<0.01	75	50-150
Isophorone	mg/kg (ppm)	0.17	<0.01	86	50-150
2-Nitrophenol	mg/kg (ppm)	0.17	<0.1	80	50-150
2,4-Dimethylphenol	mg/kg (ppm)	0.17	<0.1	75	50-150
Benzoic acid	mg/kg (ppm)	0.25	<0.5	98	50-150
Bis(2-chloroethoxy)methane	mg/kg (ppm)	0.17	<0.01	81	50-150
2,4-Dichlorophenol	mg/kg (ppm)	0.17	<0.1	76	50-150
1,2,4-Trichlorobenzene	mg/kg (ppm)	0.17	<0.01	70	50-150
Naphthalene	mg/kg (ppm)	0.17	<0.002	69	50-150
Hexachlorobutadiene	mg/kg (ppm)	0.17	<0.01	66	50-150
4-Chloroaniline	mg/kg (ppm)	0.33	<1	59	50-150
4-Chloro-3-methylphenol	mg/kg (ppm)	0.17	<0.1	79	50-150
2-Methylnaphthalene	mg/kg (ppm)	0.17	<0.002	74	50-150
1-Methylnaphthalene	mg/kg (ppm)	0.17	<0.002	74	50-150
Hexachlorocyclopentadiene	mg/kg (ppm)	0.17	<0.03	81	50-150
2,4,6-Trichlorophenol	mg/kg (ppm)	0.17	<0.1	88	50-150
2,4,5-Trichlorophenol	mg/kg (ppm)	0.17	<0.1	83	50-150
2-Chloronaphthalene	mg/kg (ppm)	0.17	<0.01	78	50-150
2-Nitroaniline	mg/kg (ppm)	0.33	<0.05	80	50-150
Dimethyl phthalate	mg/kg (ppm)	0.17	<0.1	87	50-150
Acenaphthylene	mg/kg (ppm)	0.17	<0.002	84	50-150
2,6-Dinitrotoluene	mg/kg (ppm)	0.17	<0.05	82	50-150
3-Nitroaniline	mg/kg (ppm)	0.33	<1	66	50-150
Acenaphthene	mg/kg (ppm)	0.17	<0.002	80	50-150
2,4-Dinitrophenol	mg/kg (ppm)	0.17	<0.3	85	50-150
Dibenzofuran	mg/kg (ppm)	0.17	<0.01	78	50-150
2,4-Dinitrotoluene	mg/kg (ppm)	0.17	<0.05	79	50-150
4-Nitrophenol	mg/kg (ppm)	0.17	<0.3	80	50-150
Diethyl phthalate	mg/kg (ppm)	0.17	<0.1	82	50-150
Fluorene	mg/kg (ppm)	0.17	<0.002	81	50-150
4-Chlorophenyl phenyl ether	mg/kg (ppm)	0.17	<0.01	78	50-150
N-Nitrosodiphenylamine	mg/kg (ppm)	0.17	<0.01	85	50-150
4-Nitroaniline	mg/kg (ppm)	0.33	<1	63	50-150
4,6-Dinitro-2-methylphenol	mg/kg (ppm)	0.17	<0.3	91	50-150
4-Bromophenyl phenyl ether	mg/kg (ppm)	0.17	<0.01	86	50-150
Hexachlorobenzene	mg/kg (ppm)	0.17	<0.01	86	50-150
Pentachlorophenol	mg/kg (ppm)	0.17	<0.05	94	50-150
Phenanthrene	mg/kg (ppm)	0.17	<0.002	87	50-150
Anthracene	mg/kg (ppm)	0.17	<0.002	84	50-150
Carbazole	mg/kg (ppm)	0.17	<0.01	93	50-150
Di-n-butyl phthalate	mg/kg (ppm)	0.17	<0.1	103	50-150
Fluoranthene	mg/kg (ppm)	0.17	<0.002	91	50-150
Pyrene	mg/kg (ppm)	0.17	<0.002	86	50-150
Benzyl butyl phthalate	mg/kg (ppm)	0.17	<0.1	94	50-150
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.002	90	50-150
Chrysene	mg/kg (ppm)	0.17	<0.002	90	50-150
Bis(2-ethylhexyl) phthalate	mg/kg (ppm)	0.17	<0.16	90	50-150
Di-n-octyl phthalate	mg/kg (ppm)	0.17	<0.1	88	50-150
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.002	76	50-150
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.002	77	50-150
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.002	78	50-150
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.002	79	50-150
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.002	75	50-150
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.002	76	50-150

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Project: WSDOT Poulsbo RV Phase II ESA 11361-03, F&BI 002400

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR SEMIVOLATILES BY EPA METHOD 8270E

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Phenol	mg/kg (ppm)	0.17	78	86	70-130	10
Bis(2-chloroethyl) ether	mg/kg (ppm)	0.17	72	80	70-130	11
2-Chlorophenol	mg/kg (ppm)	0.17	74	82	70-130	10
1,3-Dichlorobenzene	mg/kg (ppm)	0.17	68	77	62-115	12
1,4-Dichlorobenzene	mg/kg (ppm)	0.17	66	75	63-114	13
1,2-Dichlorobenzene	mg/kg (ppm)	0.17	69	77	68-113	11
Benzyl alcohol	mg/kg (ppm)	0.33	78	87	70-130	11
2,2'-Oxybis(1-chloropropane)	mg/kg (ppm)	0.17	75	83	70-130	10
2-Methylphenol	mg/kg (ppm)	0.17	77	85	70-130	10
Hexachloroethane	mg/kg (ppm)	0.17	71	79	70-130	11
N-Nitroso-di-n-propylamine	mg/kg (ppm)	0.17	88	94	70-130	7
3-Methylphenol + 4-Methylphenol	mg/kg (ppm)	0.17	77	88	70-130	13
Nitrobenzene	mg/kg (ppm)	0.17	76	85	70-130	11
Isophorone	mg/kg (ppm)	0.17	85	93	70-130	9
2-Nitrophenol	mg/kg (ppm)	0.17	78	91	70-130	15
2,4-Dimethylphenol	mg/kg (ppm)	0.17	75	84	58-118	11
Benzoic acid	mg/kg (ppm)	0.25	97	118	61-153	20
Bis(2-chloroethoxy)methane	mg/kg (ppm)	0.17	83	91	70-130	9
2,4-Dichlorophenol	mg/kg (ppm)	0.17	75	87	70-130	15
1,2,4-Trichlorobenzene	mg/kg (ppm)	0.17	73	81	70-130	10
Naphthalene	mg/kg (ppm)	0.17	71	77	70-130	8
Hexachlorobutadiene	mg/kg (ppm)	0.17	71	78	70-130	9
4-Chloroaniline	mg/kg (ppm)	0.33	14	29	10-90	70 vo
4-Chloro-3-methylphenol	mg/kg (ppm)	0.17	73	83	70-130	13
2-Methylnaphthalene	mg/kg (ppm)	0.17	74	80	70-130	8
1-Methylnaphthalene	mg/kg (ppm)	0.17	74	81	70-130	9
Hexachlorocyclopentadiene	mg/kg (ppm)	0.17	87	112	48-154	25 vo
2,4,6-Trichlorophenol	mg/kg (ppm)	0.17	88	99	70-130	12
2,4,5-Trichlorophenol	mg/kg (ppm)	0.17	79	95	70-130	18
2-Chloronaphthalene	mg/kg (ppm)	0.17	80	87	70-130	8
2-Nitroaniline	mg/kg (ppm)	0.33	77	87	70-130	12
Dimethyl phthalate	mg/kg (ppm)	0.17	82	88	70-130	7
Acenaphthylene	mg/kg (ppm)	0.17	84	92	70-130	9
2,6-Dinitrotoluene	mg/kg (ppm)	0.17	78	85	70-130	9
3-Nitroaniline	mg/kg (ppm)	0.33	57	66	54-104	15
Acenaphthene	mg/kg (ppm)	0.17	80	86	70-130	7
2,4-Dinitrophenol	mg/kg (ppm)	0.17	79	98	51-159	21 vo
Dibenzofuran	mg/kg (ppm)	0.17	77	86	70-130	11
2,4-Dinitrotoluene	mg/kg (ppm)	0.17	75	83	70-130	10
4-Nitrophenol	mg/kg (ppm)	0.17	75	88	60-146	16
Diethyl phthalate	mg/kg (ppm)	0.17	77	81	63-133	5
Fluorene	mg/kg (ppm)	0.17	78	84	70-130	7
4-Chlorophenyl phenyl ether	mg/kg (ppm)	0.17	74	81	70-130	9
N-Nitrosodiphenylamine	mg/kg (ppm)	0.17	81	89	70-130	9
4-Nitroaniline	mg/kg (ppm)	0.33	64	80	50-124	22 vo
4,6-Dinitro-2-methylphenol	mg/kg (ppm)	0.17	86	103	68-139	18
4-Bromophenyl phenyl ether	mg/kg (ppm)	0.17	86	91	43-167	6
Hexachlorobenzene	mg/kg (ppm)	0.17	88	91	70-130	3
Pentachlorophenol	mg/kg (ppm)	0.17	90	106	61-136	16
Phenanthrene	mg/kg (ppm)	0.17	85	90	70-130	6
Anthracene	mg/kg (ppm)	0.17	82	87	70-130	6
Carbazole	mg/kg (ppm)	0.17	89	99	70-130	11
Di-n-butyl phthalate	mg/kg (ppm)	0.17	97	93	70-130	4
Fluoranthene	mg/kg (ppm)	0.17	87	95	70-130	9
Pyrene	mg/kg (ppm)	0.17	86	90	70-130	5
Benzyl butyl phthalate	mg/kg (ppm)	0.17	85	93	70-130	9
Benz(a)anthracene	mg/kg (ppm)	0.17	87	93	70-130	7
Chrysene	mg/kg (ppm)	0.17	88	93	70-130	6
Bis(2-ethylhexyl) phthalate	mg/kg (ppm)	0.17	81	90	70-130	11
Di-n-octyl phthalate	mg/kg (ppm)	0.17	80	87	57-156	8
Benzo(a)pyrene	mg/kg (ppm)	0.17	73	79	70-130	8
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	77	79	70-130	3
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	78	81	70-130	4
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	71	84	63-145	17
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	69	80	60-150	15
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	70	83	57-144	17

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Project: WSDOT Poulsbo RV Phase II ESA 11361-03, F&BI 002400

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 002400-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	33	39	10-56	17
Chloromethane	mg/kg (ppm)	2.5	<0.5	56	64	10-90	13
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	56	65	10-91	15
Bromomethane	mg/kg (ppm)	2.5	<0.5	65	77	10-110	17
Chloroethane	mg/kg (ppm)	2.5	<0.5	64	76	10-101	17
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	63	75	10-95	17
Acetone	mg/kg (ppm)	12.5	<0.5	78	84	11-141	7
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	74	84	22-107	13
Hexane	mg/kg (ppm)	2.5	<0.25	76	76	10-95	0
Methylene chloride	mg/kg (ppm)	2.5	<0.5	115	111	14-128	4
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	89	96	17-134	8
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	83	88	13-112	6
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	87	91	23-115	4
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	94	105	18-117	11
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	91	94	25-120	3
Chloroform	mg/kg (ppm)	2.5	<0.05	92	98	29-117	6
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	85	83	20-133	2
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	88	94	22-124	7
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	90	101	27-112	12
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	91	93	26-107	2
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	87	98	28-126	12
Benzene	mg/kg (ppm)	2.5	<0.03	89	91	26-114	2
Trichloroethene	mg/kg (ppm)	2.5	<0.02	85	87	30-112	2
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	93	95	31-119	2
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	86	96	31-131	11
Dibromomethane	mg/kg (ppm)	2.5	<0.05	86	92	27-124	7
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	88	98	16-147	11
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	85	92	28-137	8
Toluene	mg/kg (ppm)	2.5	<0.05	92	95	34-112	3
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	87	91	30-136	4
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	91	93	32-126	2
2-Hexanone	mg/kg (ppm)	12.5	<0.5	91	94	17-147	3
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	91	97	29-125	6
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	90	94	25-114	4
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	89	93	32-143	4
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	91	93	32-126	2
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	90	92	37-113	2
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	93	96	34-115	3
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	101	108	35-126	7
m,p-Xylene	mg/kg (ppm)	5	<0.1	96	99	25-125	3
o-Xylene	mg/kg (ppm)	2.5	<0.05	96	102	27-126	6
Styrene	mg/kg (ppm)	2.5	<0.05	96	99	39-121	3
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	100	106	34-123	6
Bromoform	mg/kg (ppm)	2.5	<0.05	85	90	18-155	6
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	98	100	31-120	2
Bromobenzene	mg/kg (ppm)	2.5	<0.05	91	93	40-115	2
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	102	106	24-130	4
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	96	99	27-148	3
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	97	99	33-123	2
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	95	98	39-110	3
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	95	97	39-111	2
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	102	103	36-116	1
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	101	105	35-116	4
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	104	107	33-118	3
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	101	104	32-119	3
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	94	97	38-111	3
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	92	95	39-109	3
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	93	97	40-111	4
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	95	103	44-112	8
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	105	106	31-121	1
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	104	105	24-128	1
Naphthalene	mg/kg (ppm)	2.5	<0.05	107	108	24-139	1
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	107	110	35-117	3

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	51	10-76
Chloromethane	mg/kg (ppm)	2.5	71	34-98
Vinyl chloride	mg/kg (ppm)	2.5	74	42-107
Bromomethane	mg/kg (ppm)	2.5	77	46-113
Chloroethane	mg/kg (ppm)	2.5	77	47-115
Trichlorofluoromethane	mg/kg (ppm)	2.5	79	53-112
Acetone	mg/kg (ppm)	12.5	96	39-147
1,1-Dichloroethene	mg/kg (ppm)	2.5	81	65-110
Hexane	mg/kg (ppm)	2.5	97	55-107
Methylene chloride	mg/kg (ppm)	2.5	113	50-127
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	93	72-122
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	89	71-113
1,1-Dichloroethane	mg/kg (ppm)	2.5	94	74-109
2,2-Dichloropropane	mg/kg (ppm)	2.5	104	63-145
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	95	73-110
Chloroform	mg/kg (ppm)	2.5	97	76-110
2-Butanone (MEK)	mg/kg (ppm)	12.5	103	60-121
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	102	73-111
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	100	72-116
1,1-Dichloropropene	mg/kg (ppm)	2.5	104	72-112
Carbon tetrachloride	mg/kg (ppm)	2.5	96	67-123
Benzene	mg/kg (ppm)	2.5	101	72-106
Trichloroethene	mg/kg (ppm)	2.5	97	72-107
1,2-Dichloropropane	mg/kg (ppm)	2.5	107	74-115
Bromodichloromethane	mg/kg (ppm)	2.5	105	75-126
Dibromomethane	mg/kg (ppm)	2.5	102	76-116
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	109	80-128
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	111	71-138
Toluene	mg/kg (ppm)	2.5	108	74-111
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	111	73-124
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	108	76-118
2-Hexanone	mg/kg (ppm)	12.5	113	67-123
1,3-Dichloropropane	mg/kg (ppm)	2.5	111	75-118
Tetrachloroethene	mg/kg (ppm)	2.5	100	73-111
Dibromochloromethane	mg/kg (ppm)	2.5	109	64-152
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	107	77-117
Chlorobenzene	mg/kg (ppm)	2.5	101	76-109
Ethylbenzene	mg/kg (ppm)	2.5	104	75-112
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	111	75-129
m,p-Xylene	mg/kg (ppm)	5	107	77-115
o-Xylene	mg/kg (ppm)	2.5	109	76-115
Styrene	mg/kg (ppm)	2.5	106	76-119
Isopropylbenzene	mg/kg (ppm)	2.5	108	76-120
Bromoform	mg/kg (ppm)	2.5	104	50-174
n-Propylbenzene	mg/kg (ppm)	2.5	106	77-115
Bromobenzene	mg/kg (ppm)	2.5	100	76-112
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	112	77-121
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	108	74-121
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	107	73-117
2-Chlorotoluene	mg/kg (ppm)	2.5	102	75-113
4-Chlorotoluene	mg/kg (ppm)	2.5	104	77-115
tert-Butylbenzene	mg/kg (ppm)	2.5	117	77-123
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	109	77-119
sec-Butylbenzene	mg/kg (ppm)	2.5	116	78-120
p-Isopropyltoluene	mg/kg (ppm)	2.5	112	77-120
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	103	76-112
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	101	74-109
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	100	75-114
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	111	68-122
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	109	75-122
Hexachlorobutadiene	mg/kg (ppm)	2.5	109	74-130
Naphthalene	mg/kg (ppm)	2.5	113	73-122
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	112	75-117

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: 002402-01 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<1	110	10-172
Chloromethane	ug/L (ppb)	50	<10	104	25-166
Vinyl chloride	ug/L (ppb)	50	<0.2	103	36-166
Bromomethane	ug/L (ppb)	50	<1	110	47-169
Chloroethane	ug/L (ppb)	50	<1	101	46-160
Trichlorofluoromethane	ug/L (ppb)	50	<1	106	44-165
Acetone	ug/L (ppb)	250	<50	89	10-182
1,1-Dichloroethene	ug/L (ppb)	50	<1	106	60-136
Hexane	ug/L (ppb)	50	<1	94	52-150
Methylene chloride	ug/L (ppb)	50	<5	96	67-132
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	99	74-127
trans-1,2-Dichloroethene	ug/L (ppb)	50	<1	96	72-129
1,1-Dichloroethane	ug/L (ppb)	50	<1	94	70-128
2,2-Dichloropropane	ug/L (ppb)	50	<1	102	36-154
cis-1,2-Dichloroethene	ug/L (ppb)	50	<1	99	71-127
Chloroform	ug/L (ppb)	50	1.9	97	65-132
2-Butanone (MEK)	ug/L (ppb)	250	<10	82	10-129
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	84	48-149
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	101	60-146
1,1-Dichloropropene	ug/L (ppb)	50	<1	92	69-133
Carbon tetrachloride	ug/L (ppb)	50	<1	110	56-152
Benzene	ug/L (ppb)	50	<0.35	90	76-125
Trichloroethene	ug/L (ppb)	50	<1	88	66-135
1,2-Dichloropropane	ug/L (ppb)	50	<1	93	78-125
Bromodichloromethane	ug/L (ppb)	50	<1	100	61-150
Dibromomethane	ug/L (ppb)	50	<1	94	66-141
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	96	10-185
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	96	72-132
Toluene	ug/L (ppb)	50	<1	103	76-122
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	108	76-130
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	106	68-131
2-Hexanone	ug/L (ppb)	250	<10	96	10-185
1,3-Dichloropropane	ug/L (ppb)	50	<1	100	71-128
Tetrachloroethene	ug/L (ppb)	50	<1	104	10-226
Dibromochloromethane	ug/L (ppb)	50	<1	118	70-139
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	105	69-134
Chlorobenzene	ug/L (ppb)	50	<1	101	77-122
Ethylbenzene	ug/L (ppb)	50	<1	104	69-135
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	128	73-137
m,p-Xylene	ug/L (ppb)	100	<2	105	69-135
o-Xylene	ug/L (ppb)	50	<1	109	60-140
Styrene	ug/L (ppb)	50	<1	107	71-133
Isopropylbenzene	ug/L (ppb)	50	<1	113	65-142
Bromoform	ug/L (ppb)	50	<1	115	65-142
n-Propylbenzene	ug/L (ppb)	50	<1	108	58-144
Bromobenzene	ug/L (ppb)	50	<1	102	75-124
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	111	66-137
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	109	51-154
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	101	53-150
2-Chlorotoluene	ug/L (ppb)	50	<1	106	66-127
4-Chlorotoluene	ug/L (ppb)	50	<1	103	65-130
tert-Butylbenzene	ug/L (ppb)	50	<1	114	65-137
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	111	59-146
sec-Butylbenzene	ug/L (ppb)	50	<1	112	64-140
p-Isopropyltoluene	ug/L (ppb)	50	<1	112	65-141
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	103	72-123
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	100	69-126
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	106	69-128
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	116	32-164
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	120	66-136
Hexachlorobutadiene	ug/L (ppb)	50	<1	117	60-143
Naphthalene	ug/L (ppb)	50	<1	121	44-164
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	119	69-148

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260D

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	ug/L (ppb)	50	96	99	25-158	3
Chloromethane	ug/L (ppb)	50	95	97	45-156	2
Vinyl chloride	ug/L (ppb)	50	95	97	50-154	2
Bromomethane	ug/L (ppb)	50	103	104	55-143	1
Chloroethane	ug/L (ppb)	50	92	92	58-146	0
Trichlorofluoromethane	ug/L (ppb)	250	101	95	50-150	6
Acetone	ug/L (ppb)	250	84	77	53-131	9
1,1-Dichloroethene	ug/L (ppb)	50	102	94	67-136	8
Hexane	ug/L (ppb)	50	90	86	57-137	5
Methylene chloride	ug/L (ppb)	50	96	92	39-148	4
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	96	94	64-147	2
trans-1,2-Dichloroethene	ug/L (ppb)	50	94	90	68-128	4
1,1-Dichloroethane	ug/L (ppb)	50	94	90	79-121	4
2,2-Dichloropropane	ug/L (ppb)	50	92	90	55-143	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	96	94	80-123	2
Chloroform	ug/L (ppb)	50	97	93	80-121	4
2-Butanone (MEK)	ug/L (ppb)	250	89	85	57-149	5
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	89	85	73-132	5
1,1,1-Trichloroethane	ug/L (ppb)	50	100	96	81-125	4
1,1-Dichloropropene	ug/L (ppb)	50	95	91	77-129	4
Carbon tetrachloride	ug/L (ppb)	50	108	104	75-158	4
Benzene	ug/L (ppb)	50	93	88	69-134	6
Trichloroethene	ug/L (ppb)	50	91	87	79-113	4
1,2-Dichloropropane	ug/L (ppb)	50	97	94	77-123	3
Bromodichloromethane	ug/L (ppb)	50	107	102	81-133	5
Dibromomethane	ug/L (ppb)	50	99	96	82-125	3
4-Methyl-2-pentanone	ug/L (ppb)	250	104	100	65-138	4
cis-1,3-Dichloropropene	ug/L (ppb)	50	106	99	82-132	7
Toluene	ug/L (ppb)	50	104	99	72-122	5
trans-1,3-Dichloropropene	ug/L (ppb)	50	119	112	80-136	6
1,1,2-Trichloroethane	ug/L (ppb)	50	113	107	75-124	5
2-Hexanone	ug/L (ppb)	250	109	102	60-136	7
1,3-Dichloropropane	ug/L (ppb)	50	109	103	76-126	6
Tetrachloroethene	ug/L (ppb)	50	103	98	76-121	5
Dibromochloromethane	ug/L (ppb)	50	124	119	84-133	4
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	114	108	82-115	5
Chlorobenzene	ug/L (ppb)	50	105	99	83-114	6
Ethylbenzene	ug/L (ppb)	50	105	101	77-124	4
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	122	118	84-127	3
m,p-Xylene	ug/L (ppb)	100	105	101	81-112	4
o-Xylene	ug/L (ppb)	50	104	101	81-121	3
Styrene	ug/L (ppb)	50	111	106	84-119	5
Isopropylbenzene	ug/L (ppb)	50	109	104	80-117	5
Bromoform	ug/L (ppb)	50	122	116	74-136	5
n-Propylbenzene	ug/L (ppb)	50	109	104	74-126	5
Bromobenzene	ug/L (ppb)	50	108	103	80-121	5
1,3,5-Trimethylbenzene	ug/L (ppb)	50	110	105	78-123	5
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	116	109	66-126	6
1,2,3-Trichloropropane	ug/L (ppb)	50	110	102	67-124	8
2-Chlorotoluene	ug/L (ppb)	50	108	102	77-127	6
4-Chlorotoluene	ug/L (ppb)	50	107	102	78-128	5
tert-Butylbenzene	ug/L (ppb)	50	111	108	80-123	3
1,2,4-Trimethylbenzene	ug/L (ppb)	50	110	105	79-122	5
sec-Butylbenzene	ug/L (ppb)	50	108	105	80-116	3
p-Isopropyltoluene	ug/L (ppb)	50	109	105	81-123	4
1,3-Dichlorobenzene	ug/L (ppb)	50	106	101	83-113	5
1,4-Dichlorobenzene	ug/L (ppb)	50	103	99	83-107	4
1,2-Dichlorobenzene	ug/L (ppb)	50	103	101	84-112	2
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	117	113	57-141	3
1,2,4-Trichlorobenzene	ug/L (ppb)	50	106	107	72-130	1
Hexachlorobutadiene	ug/L (ppb)	50	103	103	53-141	0
Naphthalene	ug/L (ppb)	50	110	109	64-133	1
1,2,3-Trichlorobenzene	ug/L (ppb)	50	106	107	65-136	1

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QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR POLYCHLORINATED BIPHENYLS AS AROCLOR 1016/1260 BY EPA METHOD 8082A

Laboratory Code: 002400-01 1/6 (Matrix Spike) 1/6

Analyte	Reporting Units	Spike Level	Sample Result (Wet Wt)	Percent Recovery MS	Percent Recovery MSD	Control Limits	RPD (Limit 20)
Aroclor 1016	mg/kg (ppm)	0.25	<0.02	78	88	30-123	12
Aroclor 1260	mg/kg (ppm)	0.25	<0.02	88	89	26-131	1

Laboratory Code: Laboratory Control Sample 1/6

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Aroclor 1016	mg/kg (ppm)	0.25	105	55-137
Aroclor 1260	mg/kg (ppm)	0.25	112	51-150

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The analyte is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits due to sample matrix effects.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

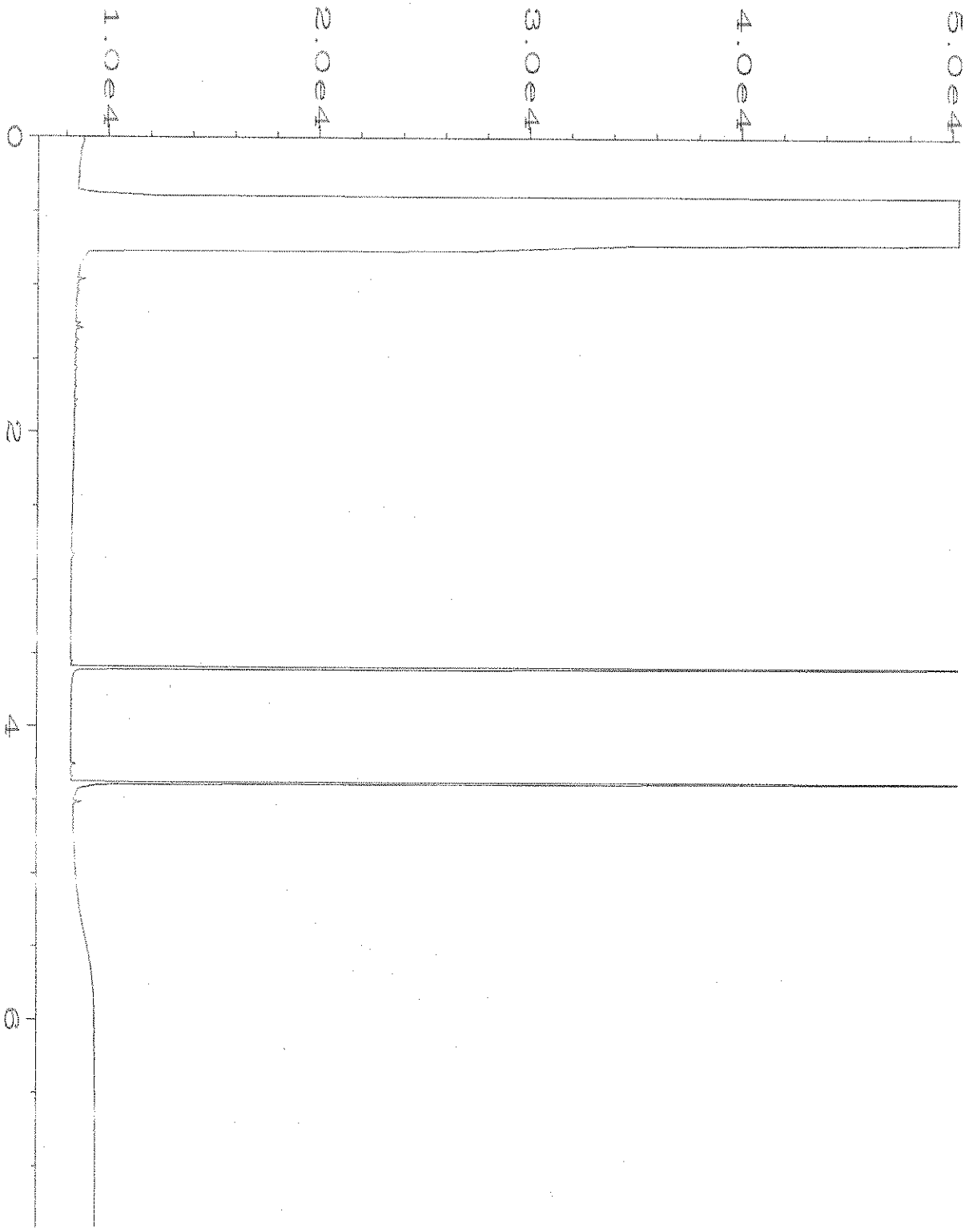
nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

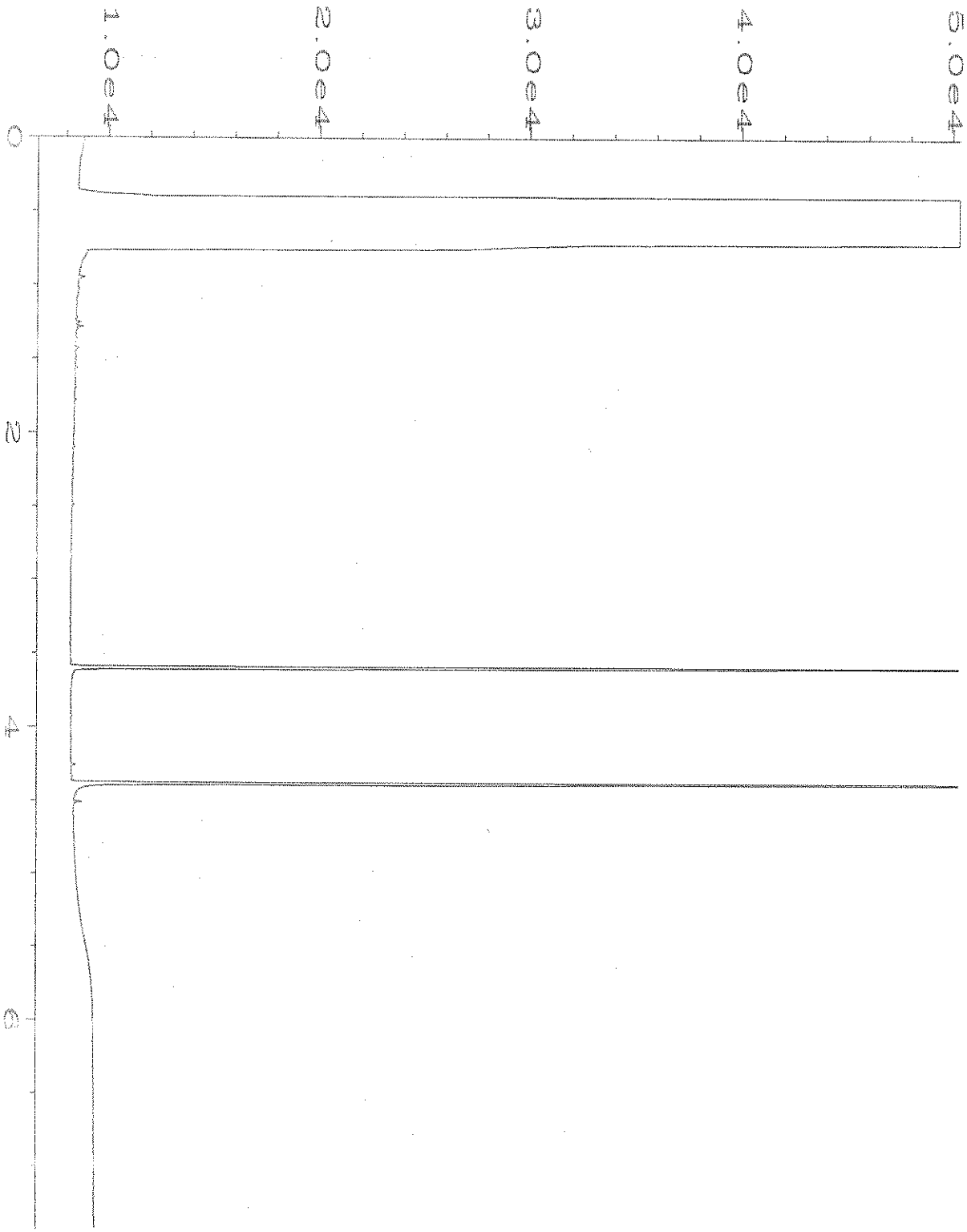
vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



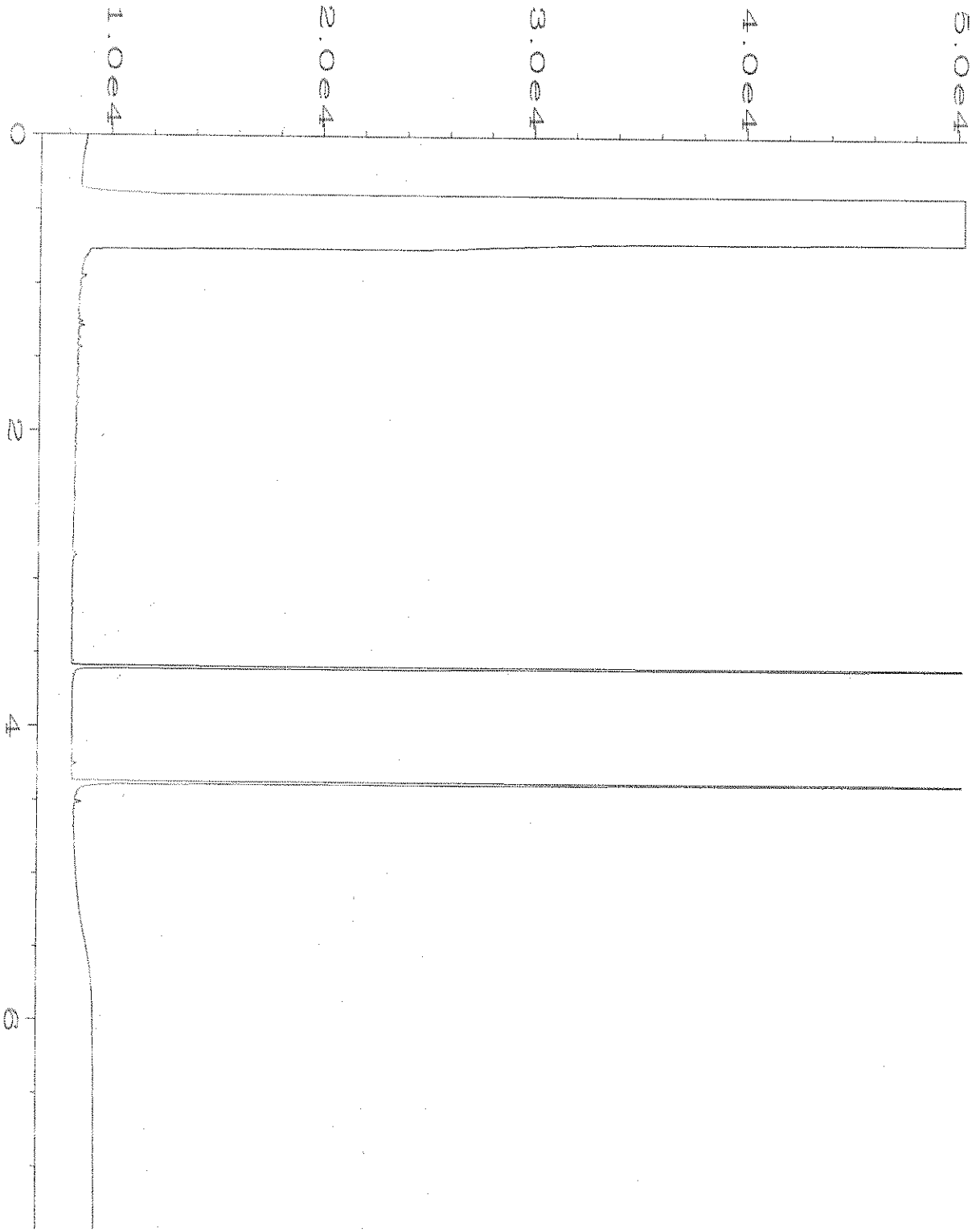
Data File Name : C:\HPCHEM\1\DATA\02-26-20\029F0801.D
Operator : TL
Instrument : GC1
Sample Name : 002400-01
Run Time Bar Code:
Acquired on : 26 Feb 20 04:42 PM
Report Created on: 27 Feb 20 08:17 AM

Page Number : 1
Vial Number : 29
Injection Number : 1
Sequence Line : 8
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



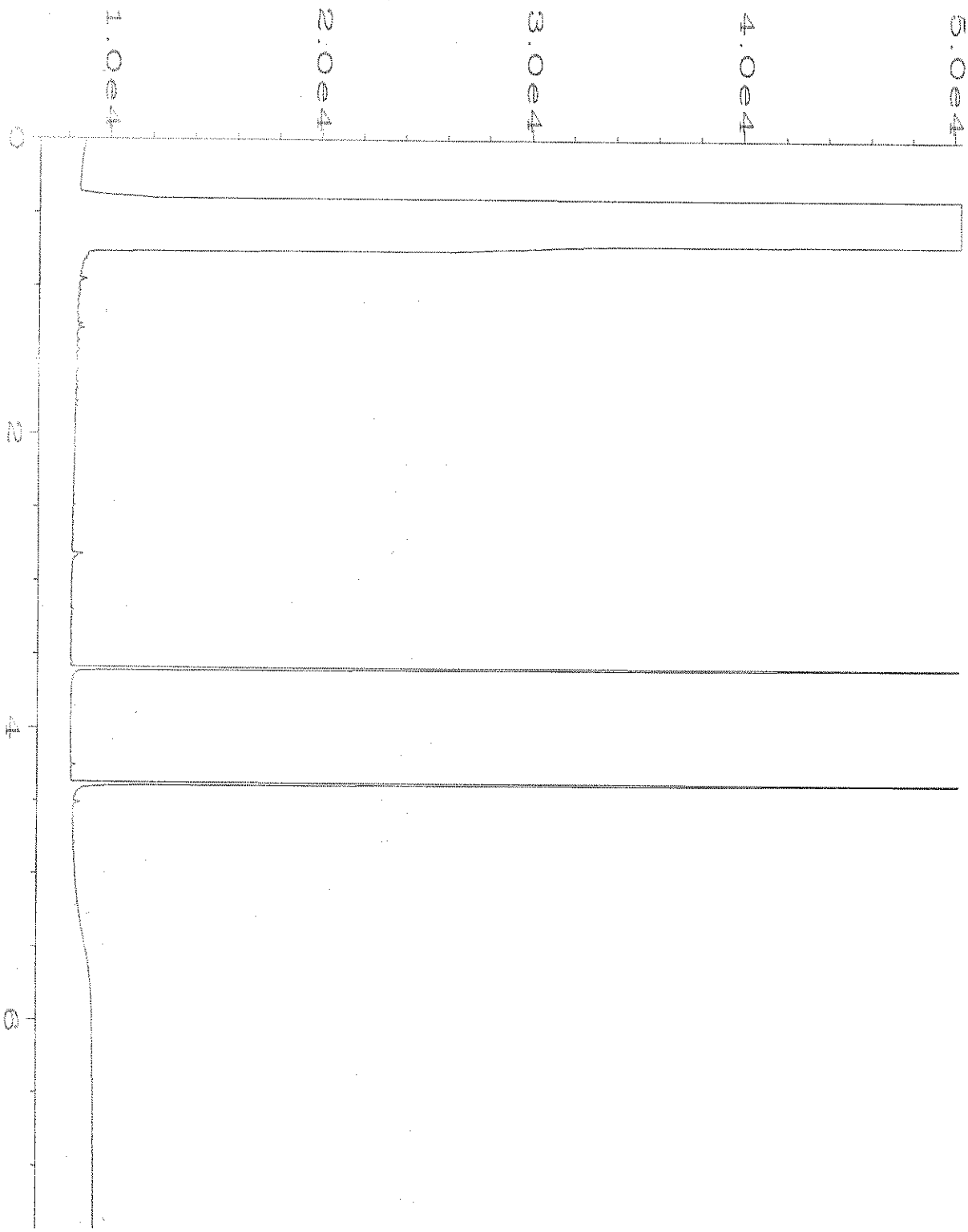
Data File Name : C:\HPCHEM\1\DATA\02-26-20\030F0801.D
Operator : TL
Instrument : GC1
Sample Name : 002400-02
Run Time Bar Code:
Acquired on : 26 Feb 20 04:54 PM
Report Created on: 27 Feb 20 08:17 AM

Page Number : 1
Vial Number : 30
Injection Number : 1
Sequence Line : 8
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



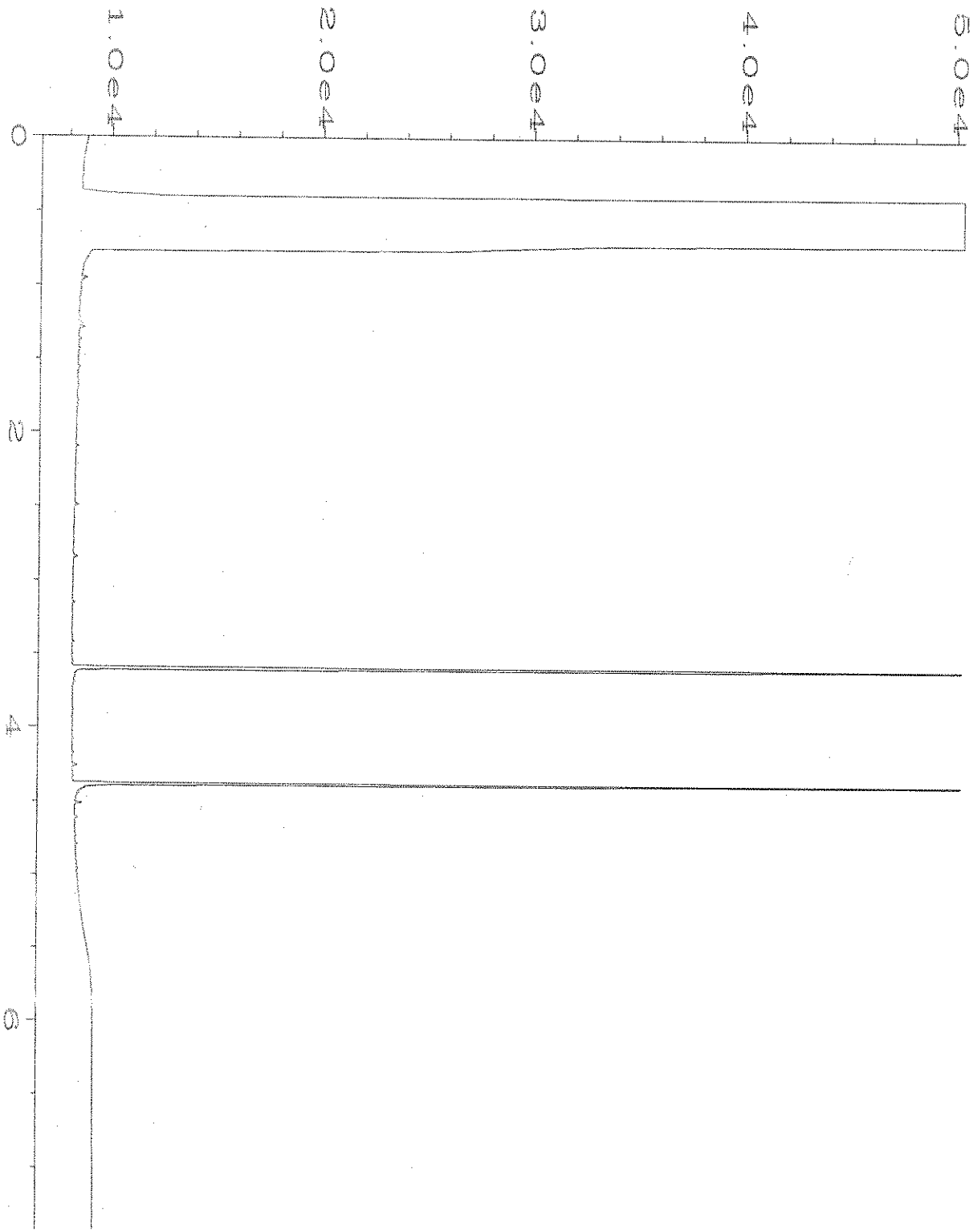
Data File Name : C:\HPCHEM\1\DATA\02-26-20\031F0801.D
Operator : TL
Instrument : GC1
Sample Name : 002400-03
Run Time Bar Code:
Acquired on : 26 Feb 20 05:05 PM
Report Created on: 27 Feb 20 08:17 AM

Page Number : 1
Vial Number : 31
Injection Number : 1
Sequence Line : 8
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



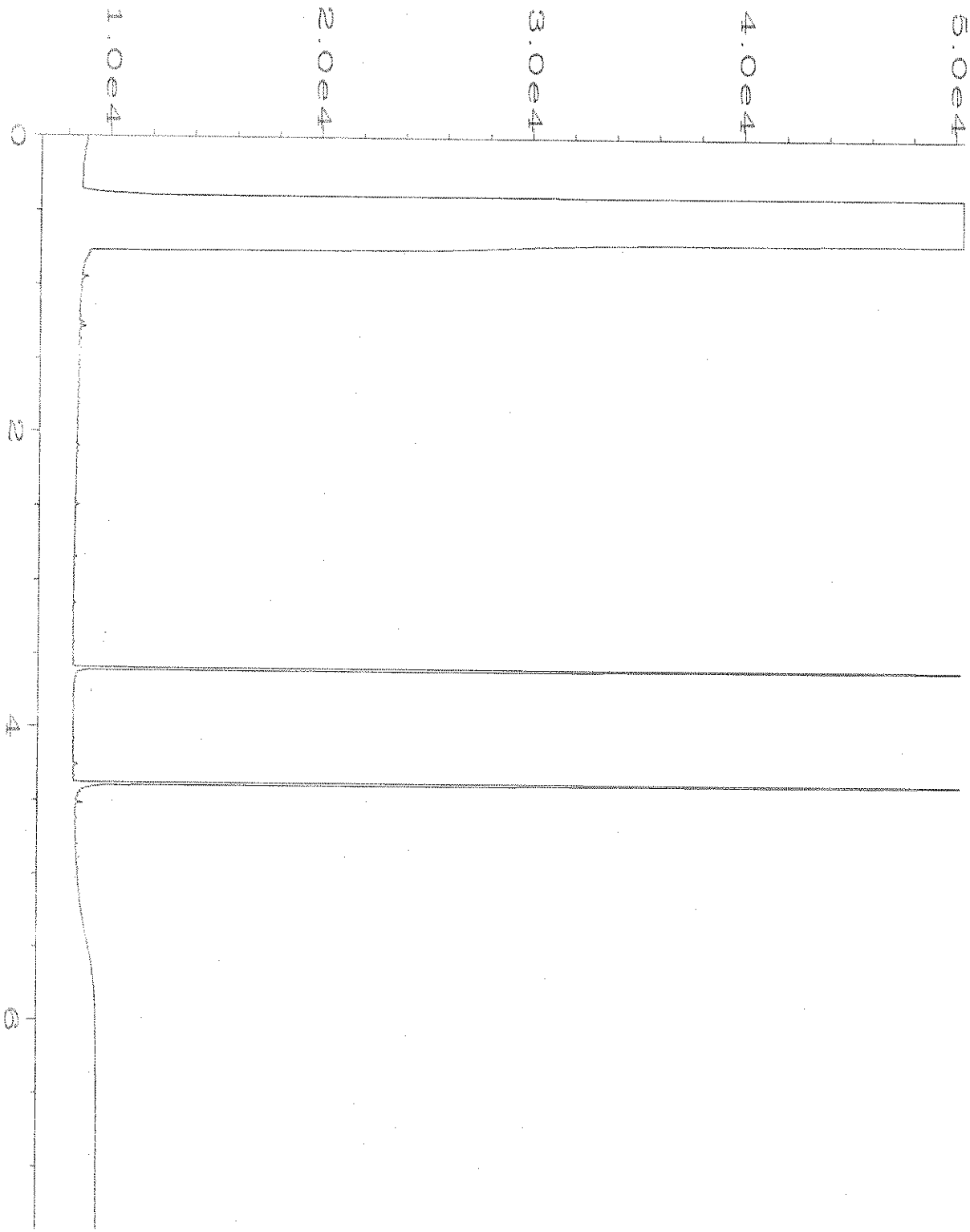
Data File Name : C:\HPCHEM\1\DATA\02-26-20\032F0801.D
Operator : TL
Instrument : GC1
Sample Name : 002400-04
Run Time Bar Code:
Acquired on : 26 Feb 20 05:16 PM
Report Created on: 27 Feb 20 08:17 AM

Page Number : 1
Vial Number : 32
Injection Number : 1
Sequence Line : 8
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



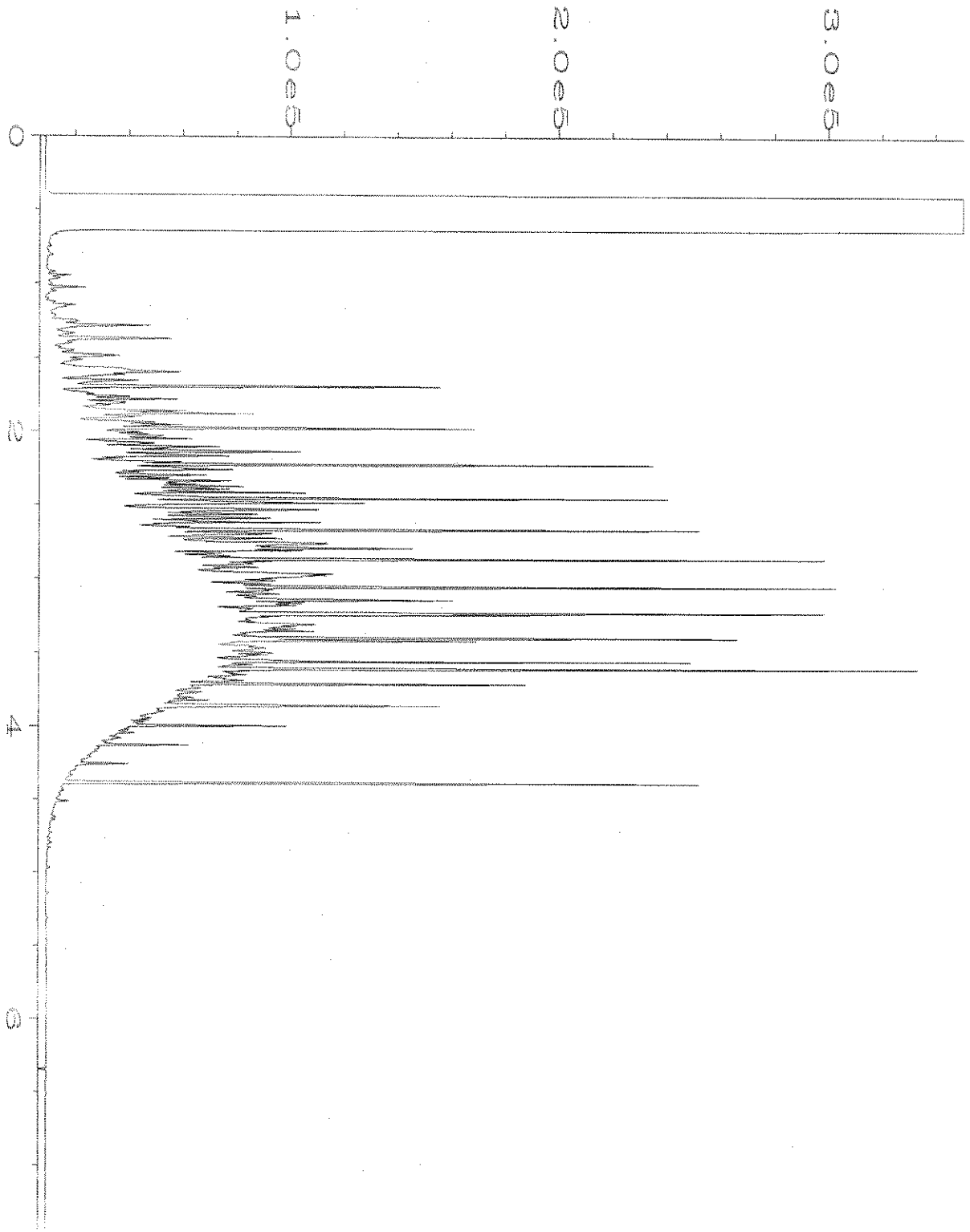
Data File Name : C:\HPCHEM\1\DATA\02-26-20\033F0801.D
Operator : TL
Instrument : GC1
Sample Name : 002400-05
Run Time Bar Code:
Acquired on : 26 Feb 20 05:28 PM
Report Created on: 27 Feb 20 08:17 AM

Page Number : 1
Vial Number : 33
Injection Number : 1
Sequence Line : 8
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name : C:\HPCHEM\1\DATA\02-26-20\016F0301.D
Operator : TL
Instrument : GC1
Sample Name : 00-477 mb
Run Time Bar Code:
Acquired on : 26 Feb 20 01:17 PM
Report Created on: 27 Feb 20 08:18 AM

Page Number : 1
Vial Number : 16
Injection Number : 1
Sequence Line : 3
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH



Data File Name : C:\HPCHEM\1\DATA\02-26-20\005F0501.D
Operator : TL
Instrument : GC1
Sample Name : 1000 Dx 58-146C
Run Time Bar Code:
Acquired on : 26 Feb 20 02:37 PM
Report Created on: 27 Feb 20 08:18 AM

Page Number : 1
Vial Number : 5
Injection Number : 1
Sequence Line : 5
Instrument Method: DX.MTH
Analysis Method : DEFAULT.MTH

002400

SAMPLE CHAIN OF CUSTODY

ME 02/27/20 WO / US-D3 / BT2

Report To Ryan Opitz, Mike Brady

Company EHSI

Address 1101 SW Klickitat way Suite 104

City, State, ZIP Seattle

Phone _____ Email _____

SAMPLERS (*signature*)

PROJECT NAME WSDOT Poulsbo RV Phase II ESA

PO # 11361-03

REMARKS

INVOICE TO

Page # 1 of 1

TURNAROUND TIME
- [x] Standard Turnaround
- [ ] RUSH
- Rush charges authorized by:

SAMPLE DISPOSAL
- [ ] Dispose after 30 days
- [ ] Archive Samples
- [x] Other 60 DAYS

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	PCBs	RCRA 8			Notes
MW-3-15	01 AD	2/25/20	8:40	Soil	4		X	X		X	X		X	X			
MW-3-15-Dup	02	2/25/20	16:40	Soil	4		X	X		X	X		X	X			
MW-3-30	03	2/25/20	9:15	Soil	4		X	X		X	X		X	X			
MW-1-20	04	2/26/20	12:50	Soil	4		X	X		X	X		X	X			
MW-1-30	05	2/26/20	1:15	Soil	4		X	X		X	X		X	X			
TRIP BLANK	06 AB	2/25	—	H_2O	2			X		X							

Samples received at 3 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:	Mike Brady	EHSI	2/26	12:30
Received by:	Nhan Phan	FEBI	2/26/20	1230
Relinquished by:				
Received by:				

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282

3600 Fremont Ave. N.
Seattle, WA 98103
T: (206) 352-3790
F: (206) 352-7178
info@fremontanalytical.com

Friedman & Bruya
Michael Erdahl
3012 16th Ave. W.
Seattle, WA 98119

RE: 002426
Work Order Number: 2003161

March 17, 2020

Attention Michael Erdahl:

Fremont Analytical, Inc. received 2 sample(s) on 3/10/2020 for the analyses presented in the following report.

Hexavalent Chromium by EPA Method 7196
Sample Moisture (Percent Moisture)

This report consists of the following:

- Case Narrative
- Analytical Results
- Applicable Quality Control Summary Reports
- Chain of Custody

All analyses were performed consistent with the Quality Assurance program of Fremont Analytical, Inc. Please contact the laboratory if you should have any questions about the results.

Thank you for using Fremont Analytical.

Sincerely,

Brianna Barnes
Project Manager

Date: *03/17/2020*

CLIENT: Friedman & Bruya
Project: 002426
Work Order: 2003161

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
2003161-001	MW-4-30	02/26/2020 9:20 AM	03/10/2020 4:00 PM
2003161-002	B1-30-DUP	02/27/2020 2:25 PM	03/10/2020 4:00 PM

Case Narrative

WO#: **2003161**

Date: **3/17/2020**

CLIENT: Friedman & Bruya
Project: 002426

I. SAMPLE RECEIPT:
Samples receipt information is recorded on the attached Sample Receipt Checklist.

II. GENERAL REPORTING COMMENTS:
Results are reported on a wet weight basis unless dry-weight correction is denoted in the units field on the analytical report ("mg/kg-dry" or "ug/kg-dry").

Matrix Spike (MS) and MS Duplicate (MSD) samples are tested from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. The sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The LCS and the MB are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

III. ANALYSES AND EXCEPTIONS:
Exceptions associated with this report will be footnoted in the analytical results page(s) or the quality control summary page(s) and/or noted below.

Qualifiers:

* - Flagged value is not within established control limits
B - Analyte detected in the associated Method Blank
D - Dilution was required
E - Value above quantitation range
H - Holding times for preparation or analysis exceeded
I - Analyte with an internal standard that does not meet established acceptance criteria
J - Analyte detected below Reporting Limit
N - Tentatively Identified Compound (TIC)
Q - Analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20% Drift or minimum RRF)
S - Spike recovery outside accepted recovery limits
ND - Not detected at the Reporting Limit
R - High relative percent difference observed

Acronyms:

%Rec - Percent Recovery
CCB - Continued Calibration Blank
CCV - Continued Calibration Verification
DF - Dilution Factor
HEM - Hexane Extractable Material
ICV - Initial Calibration Verification
LCS/LCSD - Laboratory Control Sample / Laboratory Control Sample Duplicate
MB or MBLANK - Method Blank
MDL - Method Detection Limit
MS/MSD - Matrix Spike / Matrix Spike Duplicate
PDS - Post Digestion Spike
Ref Val - Reference Value
RL - Reporting Limit
RPD - Relative Percent Difference
SD - Serial Dilution
SGT - Silica Gel Treatment
SPK - Spike
Surr - Surrogate

Analytical Report

Work Order: **2003161**
Date Reported: **3/17/2020**

CLIENT: Friedman & Bruya
Project: 002426

Lab ID: 2003161-001 **Collection Date:** 2/26/2020 9:20:00 AM
Client Sample ID: **MW-4-30** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R57994		Analyst: EH
Percent Moisture	8.72	0.500		wt%	1	3/13/2020 9:53:11 AM
Hexavalent Chromium by EPA Method 7196				Batch ID: 27781		Analyst: WF
Chromium, Hexavalent	ND	0.527		mg/Kg-dry	1	3/16/2020 5:52:00 PM

Lab ID: 2003161-002 **Collection Date:** 2/27/2020 2:25:00 PM
Client Sample ID: **B1-30-DUP** **Matrix:** Soil

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Sample Moisture (Percent Moisture)				Batch ID: R57994		Analyst: EH
Percent Moisture	12.7	0.500		wt%	1	3/13/2020 9:53:11 AM
Hexavalent Chromium by EPA Method 7196				Batch ID: 27781		Analyst: WF
Chromium, Hexavalent	ND	0.542		mg/Kg-dry	1	3/16/2020 6:10:00 PM

Work Order: 2003161
CLIENT: Friedman & Bruya
Project: 002426

QC SUMMARY REPORT

Hexavalent Chromium by EPA Method 7196

Sample ID: **MB-27781** SampType: **MBLK** Units: **mg/Kg** Prep Date: **3/16/2020** RunNo: **58083**
Client ID: **MBLKS** Batch ID: **27781** Analysis Date: **3/16/2020** SeqNo: **1159916**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.500									

Sample ID: **LCS-27781** SampType: **LCS** Units: **mg/Kg** Prep Date: **3/16/2020** RunNo: **58083**
Client ID: **LCSS** Batch ID: **27781** Analysis Date: **3/16/2020** SeqNo: **1159917**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	2.36	0.500	2.500	0	94.6	65	135				

Sample ID: **2003161-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **3/16/2020** RunNo: **58083**
Client ID: **MW-4-30** Batch ID: **27781** Analysis Date: **3/16/2020** SeqNo: **1159919**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	ND	0.506						0		30	

Sample ID: **2003161-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **3/16/2020** RunNo: **58083**
Client ID: **MW-4-30** Batch ID: **27781** Analysis Date: **3/16/2020** SeqNo: **1159920**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	1.87	0.541	2.706	0.4340	53.2	65	135				S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample ID: **2003161-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **3/16/2020** RunNo: **58083**
Client ID: **MW-4-30** Batch ID: **27781** Analysis Date: **3/16/2020** SeqNo: **1159921**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium, Hexavalent	1.70	0.525	2.623	0.4340	48.3	65	135	1.875	9.73	30	S

NOTES:
S - Outlying spike recovery(ies) observed. A duplicate analysis was performed with similar results indicating a possible matrix effect.

Sample Log-In Check List

Client Name:	**FB**	Work Order Number:	**2003161**
Logged by:	**Carissa True**	Date Received:	**3/10/2020 4:00:00 PM**

Chain of Custody

1.	Is Chain of Custody complete?	Yes	☑	No ☐	Not Present	☐
2.	How was the sample delivered?	FedEx				

Log In

3.	Coolers are present?	Yes	☐	No ☑	NA	☐
		No cooler present				
4.	Shipping container/cooler in good condition?	Yes	☑	No ☐		
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes	☐	No ☑	Not Required	☐
6.	Was an attempt made to cool the samples?	Yes	☑	No ☐	NA	☐
7.	Were all items received at a temperature of >2°C to 6°C *	Yes	☑	No ☐	NA	☐
8.	Sample(s) in proper container(s)?	Yes	☑	No ☐		
9.	Sufficient sample volume for indicated test(s)?	Yes	☑	No ☐		
10.	Are samples properly preserved?	Yes	☑	No ☐		
11.	Was preservative added to bottles?	Yes	☐	No ☑	NA	☐
12.	Is there headspace in the VOA vials?	Yes	☐	No ☐	NA	☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes	☑	No ☐		
14.	Does paperwork match bottle labels?	Yes	☑	No ☐		
15.	Are matrices correctly identified on Chain of Custody?	Yes	☑	No ☐		
16.	Is it clear what analyses were requested?	Yes	☑	No ☐		
17.	Were all holding times able to be met?	Yes	☑	No ☐		

Special Handling (if applicable)

18.	Was client notified of all discrepancies with this order?	Yes	☐	No ☐	NA	☑

Person Notified:		Date:	
By Whom:		Via:	☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:			
Client Instructions:			

19. Additional remarks:

Item Information

Item #	Temp ºC
Sample 1	5.5

* Note: DoD/ELAP and TNI require items to be received at 4°C +/- 2°C

SUBCONTRACT SAMPLE CHAIN OF CUSTODY

2003161

Page # 1 of 1

Send Report To Michael Erdahl
Company Friedman and Bruya, Inc.
Address 3012 16th Ave W
City, State, ZIP Seattle, WA 98119
Phone # (206) 285-8282 merdahl@friedmanandbruya.com

SUBCONTRACTER Fremont

PROJECT NAME/NO.	PO #
002426	B-128

REMARKS

TURNAROUND TIME
☒ Standard TAT
☐ RUSH
Rush charges authorized by:

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Return samples
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Matrix	# of jars	ANALYSES REQUESTED: Dioxins/Furans	EPH	VPH	Cr VI							Notes
MW-4-30		2/26/20	0920	Soil	1				x							
B1-30-DUP		2/27/20	1425	Soil	1				x							

Friedman & Bruya, Inc.
3012 16th Avenue West
Seattle, WA 98119-2029
Ph. (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Michael Erdahl	Friedman & Bruya	3/10/20	12:47
Received by:		Emma Holmes	FAI	3/10/20	1600
Relinquished by:					
Received by:					