EHS–International, Inc.

PHASE II ENVIRONMENTAL SITE ASSESSMENT

VACANT RESIDENTIAL PARCELS

South Irving Street and Yakima Avenue South

Seattle, Washington

Prepared for:

City of Seattle

Finance and Administrative Services, Real Estate Services

Seattle, Washington 98101

Prepared by:

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April 2017

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

ACRONYMS & ABBREVIATIONS

APS ..... Applied Professional Services, Inc.
bgs ..... below ground surface
Cascade ..... Cascade Drilling, Inc.
Ecology ..... Washington State Department of Ecology
EHSI ..... EHS-International, Inc.
EPA ..... Environmental Protection Agency
ERRG..... Engineering/Remediation Resources Group, Inc.
ESA ..... Environmental Site Assessment
FBI ..... Friedman & Bruya, Inc.
MTCA..... Model Toxics Control Act
mg/kg ..... milligrams per kilogram
mL..... milliliter
PAH..... Polycyclic Aromatic Hydrocarbon
PID ..... photoionization detector
REC ..... Recognized Environmental Condition
TPH ..... Total Petroleum Hydrocarbons
ug/L ..... micrograms per Liter
US ..... United States
USCS ..... Unified Soil Classification System
UST ..... Underground Storage Tank
VOA ..... Volatile Organic Analysis
VOC ..... Volatile Organic Compound

1.0 INTRODUCTION

On behalf of the City of Seattle (client), EHS-International, Inc. (EHSI) completed a Phase II Environmental Site Assessment (ESA) at the vacant residential parcels located at the northeast corner of the intersection of South Irving Street and Yakima Avenue South in Seattle, Washington (subject property). The fieldwork for the Phase II ESA took place on March 1, 2017.

The subject property is located on the northeast corner of the intersection of South Irving Street and Yakima Avenue South in Seattle, Washington (Figure 1). The subject property is comprised of seven tax lots associated with the following parcel numbers and legal descriptions:

- 3644100185 (JACKSON & RAINIER STREETS ADD PLAT BLOCK: 3 PLAT LOT: 5)
- 3644100190 (JACKSON & RAINIER STREETS ADD PLAT BLOCK: 3 PLAT LOT: 6)
- 3644100195 (JACKSON & RAINIER STREETS ADD PLAT BLOCK: 3 PLAT LOT: 7)
- 3644100200 (JACKSON & RAINIER STREETS ADD PLAT BLOCK: 3 PLAT LOT: 8)
- 3644100205 (JACKSON & RAINIER STREETS ADD PLAT BLOCK: 3 PLAT LOT: 9)
- 3644100210 (JACKSON & RAINIER STREETS ADD PLAT BLOCK: 3 PLAT LOT: 10)
- 3644100215 (JACKSON & RAINIER STREETS ADD PLAT BLOCK: 3 PLAT LOT: 11)

A map showing the subject property in relation to surrounding parcels is presented in Figure 2.

The subject parcels are currently vacant and covered with dense vegetation.

1.1 Detailed Scope of Services

The scope of this ESA included drilling two soil borings, one soil test pit, and the analysis of soil and groundwater samples collected from the subject property. The drilling and soil test pit were done in conjunction with a geotechnical study of the property conducted by Engineering/Remediation Resources Group, Inc. (ERRG). ERRG also conducted the utility clearance for the project.

1.2 Background

Prior to beginning the Phase II ESA project, EHSI completed a Phase I ESA (EHSI, 2016) that identified the following Recognized Environmental Conditions (RECs):

- Debris fill is present on the southern portions of the subject property. The fill material is of unknown origin, thickness, and composition; construction debris observed at the surface of the fill layer includes brick, concrete rubble, guy wire, pipe, and suspected asbestos-coated pipe.

- Five residences on the same block as the subject property were historically heated with oil-burning equipment. Four of the five residences are situated up-slope from the subject property at 1305, 1315, 1323, and 1325 30th Avenue South. Current King County records indicate that all five homes have been converted to natural gas-sourced heating systems. Although heating fuel underground storage tanks (USTs) reportedly have been completely removed (rather than closed in-place) from at least two of those up-slope residences, the historical use and up-slope proximity pose a risk of impairment to subsurface soil and groundwater media on the subject property.

- Historical gasoline service station and automotive repair activities were documented between 1935 and 1975 at 1366-1374 31st Avenue South. UST removal and soil and groundwater remediation activities have been underway at that location from October 1992 through at least 2012 (WDOT Bradner Place Apartments/Texaco Downstream). Since the time that benzene appeared in groundwater at the westernmost monitoring well MW-7 in 1998, the overall groundwater flow direction at this facility has shifted southwest toward the underlying I-90 Tunnel. However, benzene concentrations in groundwater were never monitored after benzene's first appearance in 1998 in monitoring well MW-7.

- Historical gasoline station and automotive repair activities were documented at 1301 31st Avenue South/3007 Judkins between 1930 and 1970. Regulatory databases do not indicate whether potential impacts from those activities have been investigated or ruled out. The former gasoline service station and auto repair activities at 1301 31st Avenue South/3007 South Judkins Street are comparable in scope and history. If a release had occurred at 1301 31st Avenue South/3007 South Judkins Street that was comparable or worse than the documented release at 1366-1374 31st Avenue South, then that release could have migrated as far west as the subject property

EHSI recommended conducting a Phase II ESA to evaluate the REC's identified in the Phase I.

2.0 PROJECT OBJECTIVES

Project objectives were as follows:

- Drill two soil borings and collect soil and/or groundwater samples (if present) for laboratory analysis.
- Collect shallow soil samples from a soil test pit for laboratory analysis.
- Prepare a final written report of the Phase II ESA field activities and sampling and testing results.

3.0 REGIONAL AND SITE HYDROGEOLOGY

The subject property lies on the western-facing slope of an elongate north- to south-trending hill. The mapped materials for the area of the subject property are Pre-Olympia fine-grained deposits (Pleistocene). The fine-grained deposits consist of layers of silt that are massively to finely bedded (Troost et al, 2005).

The principal groundwater aquifers in the area generally occur within sands and gravels underlying the silt. Groundwater beneath the subject property was encountered at approximately 10 feet bgs at boring B1 and was not encountered to a depth of 50 feet bgs at boring B2. Groundwater beneath the site has an inferred west to southwestward flow direction.

4.0 FIELD INVESTIGATION

4.1 Soil Borings

Borings B1 and B2 were drilled on March 1, 2017 by Cascade Drilling, Inc. (Cascade) using a track-mounted hollow-stem auger drill rig. The borings were drilled on a steep hillside along an access track that was excavated earlier. The boring locations are shown on Figure 2. The borings were drilled to 50 feet below-

ground surface (bgs). Discrete samples were collected at five-foot intervals from each boring and logged by a licensed geologist, who assigned a Unified Soil Classification System (USCS) 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 logs provided in Appendix A.

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

- B1 was positioned to sample soil and groundwater at the northeast quadrant of the property at the closest practical approach to the neighboring up-slope residences and former retail gasoline stations.
- B2 was placed to sample soil at the central part of the subject property to sample shallow possible fill material and deeper soil down-slope from the row of residences adjacent to the east.

4.2 Shallow Test Pit

Shallow soil samples were collected using a trackhoe from the upper four feet of soil. The shallow soil test pit is shown on Figure 3 and is detailed below:

Test pit TP1 was positioned to sample shallow soils on the southern portion of the subject property in an area of discarded debris.

4.3 Soil Sampling

Soil samples were collected at 5-foot intervals from each boring location and near the surface at the test pit. The soil samples were collected for chemical analysis using EPA 5035 Volatile Organic Compound (VOC) sampling kits and 4-ounce glassware provided by the laboratory. Information details on the soil samples is presented in Table 1.

4.4 Groundwater Sampling

EHSI collected a groundwater sample from soil boring B1. There was insufficient water in boring B2 to collect a sample. Groundwater samples were collected from the within the auger flights using a disposable plastic bailer. Three, 40 milliliter (mL) Volatile Organic Analysis (VOA) vials and a 500 mL amber bottle were filled from the boring. Details on the groundwater sample are presented in Table 2.

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:

Test Boring \ Sample Depth: For example, sample B2-5 is a sample collected from soil boring B2 (B2) at the sample interval depth of 5.0 feet bgs (5).

Test Pit \ Sample Depth: For example, sample TP1-3 is a sample collected from Test Pit TP1 (TP1) at a depth of approximately three feet bgs (3).

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

Boring number/sample type: For example, sample B1-GWS is the shallow (S) groundwater (GW) sample collected from boring B1.

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

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

- 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.

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 Blue Ice. 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 to the Friedman and Bruya, Inc. (FBI) Seattle, Washington laboratory for analyses.

4.8 Laboratory Analyses

EHSI submitted six soil samples and one groundwater sample to FBI for analysis. FBI analyzed the samples for gasoline-range total petroleum hydrocarbons (TPH) using Northwest Test Method NWTPH-Gx, for diesel- to oil-range TPH by Northwest Test Method NWTPH-Dx, for VOCs using United States (US) Environmental Protection Agency (EPA) Test Method 8260C, for polyaromatic hydrocarbons (PAHs) using EPA Test Method 8270D SIM, and for Model Toxics Control Act (MTCA) 5 Metals and lead using EPA Test Method 200.8.

5.0 INVESTIGATION RESULTS

5.1 Field Observations

No evidence of contamination was observed in the soil and groundwater samples collected from the soil borings and soil test pit.

5.2 Soil Conditions

The site is underlain by silt to a depth of approximately 50 feet bgs. The materials were consistent with glacial lake deposits (glaciolacustrine). Details on the subsurface geology and sampling are documented on the boring and test pit logs in Appendix A.

5.3 Groundwater Conditions

Groundwater was encountered at approximately 10 feet bgs at boring B1. No groundwater was encountered to 50 feet bgs at boring B2 or to four feet bgs at test pit TP1. The inferred direction of groundwater flow is towards the west-southwest following local topography.

5.4 Analytical Results

5.4.1 Soil

FBI analyzed six soil samples from the soil borings and shallow soil test pit (Table 1). The soil testing results are summarized below:

- Sample B1-5 had 1.89 milligrams per kilogram (mg/kg) lead.
- Sample B1-10 had 3.91 mg/kg lead.
- Sample TP1-3 had 14.6 mg/kg chromium, 1.23 mg/kg arsenic, and 1.96 mg/kg lead.
- Soil sample B2-5 returned results of 5.02 mg/kg lead.
- Soil sample B2-10 returned results of 3.22 mg/kg lead.
- TPH, PAH compounds, and VOCs were not present above the laboratory method detection limits in the soil samples analyzed.

Summaries of the soil analytical data are presented in Tables 3, 5, 7, and 8. Copies of the analytical laboratory reports are provided in Appendix B.

5.4.2 Groundwater

No gasoline-range TPH, BTEX, diesel-range TPH, oil-range TPH, or VOCs were present above the laboratory detection limits in the groundwater sample B1-GWS, collected from boring B1.

Summaries of the groundwater analytical data are presented in Tables 4 and 6. Copies of the analytical reports are included in Appendix B.

6.0 REGULATORY REVIEW

None of the soil and groundwater samples exceeded the MTCA Method A Cleanup Levels.

7.0 CONCLUSIONS

The shallow soil from test pit TP1 beneath surficial debris on the southern portion of the subject property did not contain contaminants of concern above regulatory cleanup levels. The debris appears to be limited to the surface and no fill material was encountered beneath the debris.

Petroleum and VOC contaminants of concern were not detected in groundwater on the northeastern portion of the subject property. This finding indicates that the up-slope former gasoline stations and heating oil USTs have not affected site groundwater.

No contaminants of concern were detected above regulatory cleanup levels in soil samples from borings B1 and B2. This information indicates that up-slope contaminant sources and/or fill material have not led to contamination of the subject property.

8.0 RECOMMENDATIONS

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

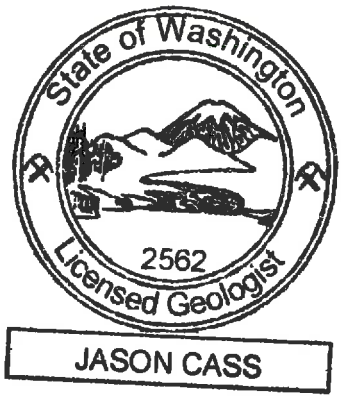
9.0 REFERENCES

EHSI, 2016. Phase I Environmental Site Assessment, Vacant Residential Parcels, South Irving Street and Yakima Avenue South, Seattle, Washington.

Troost and others, 2005, The Geologic Map of Seattle – A Progress Report. Open File Report 2005-1552.

10.0 SIGNATURES

This Phase II ESA Report was prepared by the undersigned.



Jason Cass

4/7/17

Jason Cass
Washington Licensed Geologist

Date

Kurt Easthouse, L.G.
Washington Licensed Geologist; License #0929.

4/7/17

Date

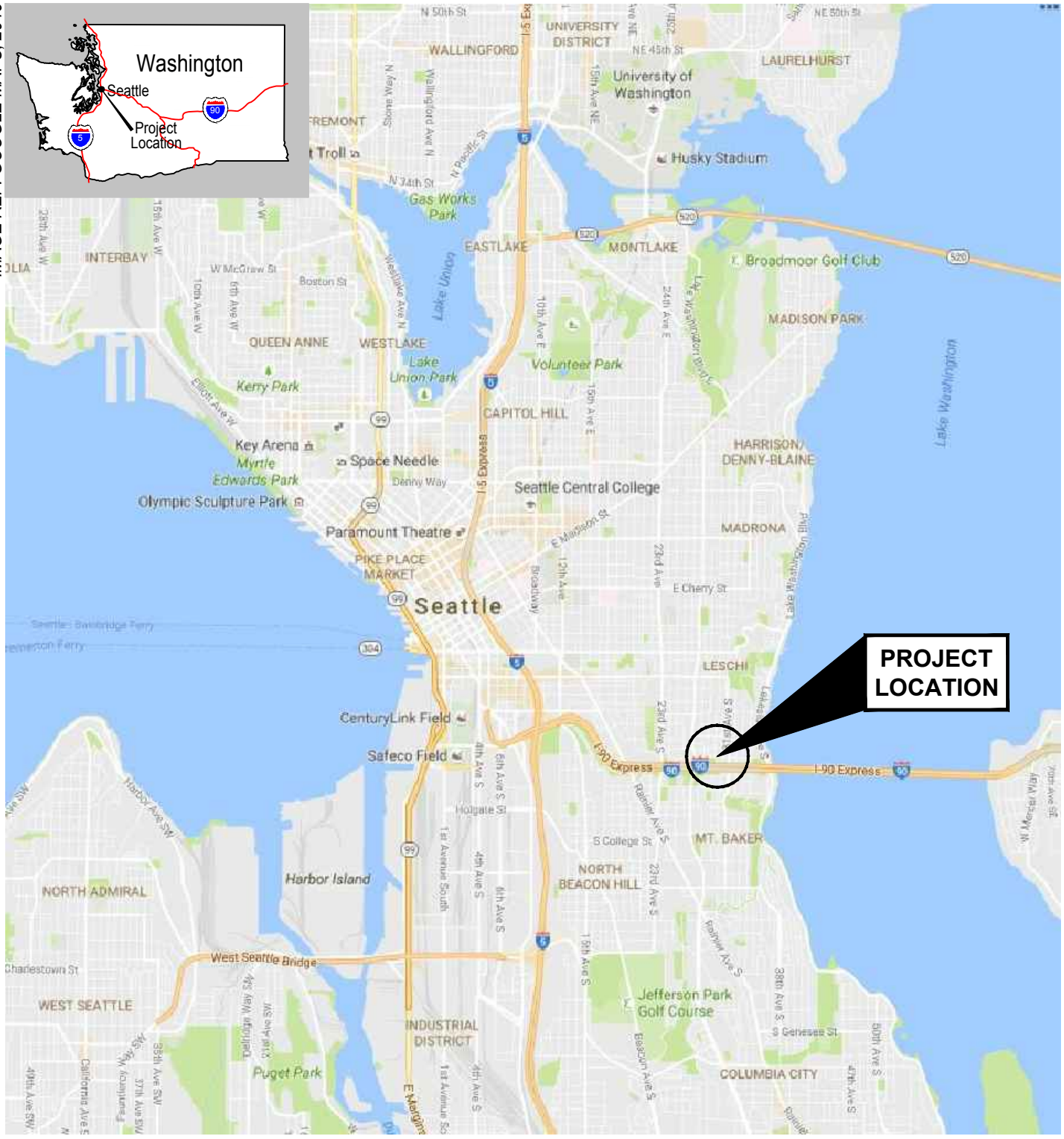
11.0 PROJECT LIMITATIONS

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, City of Seattle. Opinions and conclusions presented herein apply to site conditions existing at the time of execution of our Phase II ESA and do not necessarily apply to future changes or other prior conditions at the site of which EHSI is not aware of 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 re-use 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

IMAGE REF: GOOGLE MAPS, 2016



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SCALE in MILES

FOR ILLUSTRATIVE PURPOSES ONLY.

NORTH

SHEET/FIGURE 1	PROJECT MANAGER:	K. EASTHOUSE	VACANT RESIDENTIAL PARCELS S IRVING ST AND YAKIMA AVE S (1300 BLOCK YAKIMA AVE S) SEATTLE, WA SITE LOCATION MAP	EHS-International, Inc. 1011 SW Klickitat Way, Suite 104 Seattle, Washington 98134 Ph: 206.381.1128 Fax: 206.254.4279
	EHSI PROJECT #:	10737g-01		
	PREPARED BY:	F. DIMALANTA		
	ISSUE DATE:	03/28/17		
	SCALE:	SHOWN		

SHEET/FIGURE 2	PROJECT MANAGER:	K. EASTHOUSE	VACANT RESIDENTIAL PARCELS S IRVING ST AND YAKIMA AVE S (1300 BLOCK YAKIMA AVE S) SEATTLE, WA SITE SAMPLING MAP
	EHSI PROJECT #:	10737g-01	
	PREPARED BY:	F. DIMALANTA	
	ISSUE DATE:	03/28/17	
	SCALE:	SHOWN	

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TABLES

TABLE 1: SOIL SAMPLE SOURCE INFORMATION	
SOIL SAMPLE	**SOURCE LOCATION**
B1-5	Boring B1 at 5’ BGS
B1-10	Boring B1 at 10’ BGS
B1-50	Boring B1 at 50’ BGS
B2-5	Boring B2 at 5’ BGS
B2-10	Boring B2 at 10’ BGS
B2-15	Boring B2 at 15’ BGS
B2-50	Boring B2 at 50’ BGS
TP1-1	Test Pit TP1 at 1’ BGS
TP1-3	Test Pit TP1 at 3’ BGS

TABLE 2: GROUNDWATER SAMPLE SOURCE INFORMATION	
GROUNDWATER SAMPLE	**SOURCE LOCATION**
B1-GWS	Boring B1, northeast portion of site.

Table 3: Total Petroleum Hydrocarbons
Soil Sampling Results (I)

Vacant Residential Parcels, Project #10737g
Seattle, Washington

Sample Number	Date	Gasoline Range*	Diesel Range **	Motor Oil Range **	Benzene ***	Toluene ***	Ethylbenzene ***	Total Xylenes ***
B1-5	3/1/2017	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
B1-10	3/1/2017	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
B2-5	3/1/2017	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
B2-10	3/1/2017	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
TP1-1	3/1/2017	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
TP1-3	3/1/2017	<2	<50	<250	<0.02	<0.02	<0.02	<0.06
MTCA Cleanup Levels: Unrestricted Land Use								
Soil, Method A		30* / 100	2,000.00	2,000.00	0.03	7.00	6.00	9.00
Soil, Method B, Cancer		NS	NS	NS	18.20	NS	NS	NS
Soil, Method B, Non-cancer		NS	NS	NS	320.00	6,400.00	8,000.00	16,000.00

Notes:
(I): Sampling results compared to MTCA Method A cleanup levels.
Concentrations are reported in mg/kg (ppm)
Results above MTCA cleanup levels are bolded.
*: Samples Analyzed by Method NWTPH-Gx
**: Samples Analyzed by Method NWTPH-Dx
***: Samples Analyzed by EPA Method 8260C
Samples analyzed by Friedman & Bruya, Inc.

Table 4: Total Petroleum Hydrocarbons
Groundwater Sampling Results (I)

Vacant Residential Parcels, Project #10737g
Seattle, Washington

Sample Number	Date	Gasoline Range*	Diesel Range**	Motor Oil Range**	Benzene ***	Toluene ***	Ethyl benzene ***	Total Xylenes ***
B1-GWS	3/1/2017	<100	<80	<400	<1	<1	<1	<3
MTCA Cleanup Levels: Unrestricted Land Use								
Groundwater, Method A		800^ / 1000	500.00	500.00	5.00	1,000.00	700.00	1,000.00
Groundwater, Method B, Cancer		NS	NS	NS	0.795	NS	NS	NS
Groundwater, Method B, Non-cancer		NS	NS	NS	32.00	640.00	800.00	1,600.00

Notes:
(I): Sampling results compared to MTCA Method A cleanup levels.
Concentrations are reported in µg/L (ppb)
Results above MTCA cleanup levels are **bolded**

*: Samples Analyzed by Method NWTPH-Gx
**: Samples Analyzed by Method NWTPH-Dx
***: Samples Analyzed by EPA Method 8260C
Samples analyzed by Friedman & Bruya, Inc.

Table 5: Volatile Compounds
Soil Sampling Results (I)

Vacant Residential Parcels , Project #10737g
Seattle, Washington

Sample Number	Date	Dichloro difluoro methane	Chloromethane	Vinyl chloride	Bromomethane	Chloroethane	Trichloro fluoro methane	Acetone
B1-5	3/1/2017	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
B1-10	3/1/2017	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
B2-5	3/1/2017	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
B2-10	3/1/2017	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
TP1-3	3/1/2017	<0.5	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5
MTCA Cleanup Levels: Unrestricted Land Use								
Soil, Method A		NS	NS	NS	NS	NS	NS	NS
Soil, Method B, Cancer		NS	NS	NS	NS	NS	NS	NS
Soil, Method B, Non-cancer		16,000.00	NS	240.00	112.00	NS	24,000.00	72,000.00

Table 5: Volatile Compounds
Soil Sampling Results (I)

Vacant Residential Parcels , Project #10737g
Seattle, Washington

Sample Number	Date	1, 1-Dichloro ethene	Hexane	Methylene Chloride	Methyl t-butyl Ether (MTBE)	Trans-1,2-Dichloroethene	1,1-Dichloro ethane	2,2-Dichloropropane
B1-5	3/1/2017	<0.05	<0.25	<0.5	<0.05	<0.05	<0.05	<0.05
B1-10	3/1/2017	<0.05	<0.25	<0.5	<0.05	<0.05	<0.05	<0.05
B2-5	3/1/2017	<0.05	<0.25	<0.5	<0.05	<0.05	<0.05	<0.05
B2-10	3/1/2017	<0.05	<0.25	<0.5	<0.05	<0.05	<0.05	<0.05
TP1-3	3/1/2017	<0.05	<0.25	<0.5	<0.05	<0.05	<0.05	<0.05
MTCA Cleanup Levels: Unrestricted Land Use								
Soil, Method A		NS	NS	0.02	0.10	NS	NS	NS
Soil, Method B, Cancer		NS	NS	500.00	556.00	NS	175.00	NS
Soil, Method B, Non-cancer		4,000.00	4,800.00	480.00	NS	1,600.00	16,000.00	NS

Table 5: Volatile Compounds
Soil Sampling Results (I)

Vacant Residential Parcels , Project #10737g
Seattle, Washington

Sample Number	Date	cis-1,2-Dichloroethene	Chloroform	1,1,1-Trichloroethane	Carbon Tetrachloride	1,1-Dichloro propane	1,2-Dichloroethane	Trichloroethene
B1-5	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02
B1-10	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02
B2-5	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02
B2-10	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02
TP1-3	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.02
MTCA Cleanup Levels: Unrestricted Land Use								
Soil, Method A		NS	NS	2.00	NS	NS	NS	0.03
Soil, Method B, Cancer		NS	32.30	NS	14.30	27.80	NS	12.00
Soil, Method B, Non-cancer		160.00	800.00	160,000.00	320.00	7,200.00	480.00	40.00

Table 5: Volatile Compounds
Soil Sampling Results (I)

Vacant Residential Parcels , Project #10737g
Seattle, Washington

Sample Number	Date	1,2-Dichloro propane	Dibromo methane	Bromodichlorom ethane	cis-1,3-Dichloro propane	Trans-1,3-Dichloro propane	1,1,2-Trichloroethane	Tetrachloro ethane
B1-5	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.025
B1-10	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.025
B2-5	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.025
B2-10	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.025
TP1-3	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.025
MTCA Cleanup Levels: Unrestricted Land Use								
Soil, Method A		NS	NS	NS	NS	NS	NS	0.05
Soil, Method B, Cancer		27.80	NS	16.10	10.00	10.00	17.50	476.00
Soil, Method B, Non-cancer		7,200.00	800.00	1,600.00	2,400.00	2,400.00	320.00	480.00

Table 5: Volatile Compounds
Soil Sampling Results (I)

Vacant Residential Parcels , Project #10737g
Seattle, Washington

Sample Number	Date	1,3-Dichloro propane	Dibromochloro methane	1,2-Dibromoethane	Chlorobenzene	1,1,1,2-Tetrachloro ethane	Styrene	Bromoform
B1-5	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B1-10	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B2-5	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B2-10	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP1-3	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MTCA Cleanup Levels: Unrestricted Land Use								
Soil, Method A		NS	NS	0.005	NS	NS	NS	NS
Soil, Method B, Cancer		NS	11.90	0.50	NS	38.50	NS	127.00
Soil, Method B, Non-cancer		NS	1,600.00	720.00	1,600.00	2,400.00	16,000.00	1,600.00

Table 5: Volatile Compounds
Soil Sampling Results (I)

Vacant Residential Parcels , Project #10737g
Seattle, Washington

Sample Number	Date	Isopropyl benzene	1,2,3 Trichloro propane	Bromobenzene	1,1,2,2-Tetrachloro ethane	n-Propylbenzene	2-Chlorotoluene	4-Chlorotoluene
B1-5	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B1-10	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B2-5	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B2-10	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP1-3	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MTCA Cleanup Levels: Unrestricted Land Use								
Soil, Method A		NS	NS	NS	NS	NS	NS	NS
Soil, Method B, Cancer		NS	0.03	NS	5.0	NS	NS	NS
Soil, Method B, Non-cancer		8,000.00	320.00	NS	2,400.00	8,000.00	1,600.00	NS

Table 5: Volatile Compounds
Soil Sampling Results (I)

Vacant Residential Parcels , Project #10737g
Seattle, Washington

Sample Number	Date	1,3,5-Trimethyl benzene	tert-Butyl benzene	1,2,4-Trimethyl benzene	sec-Butylbenzene	1,3-Dichloro benzene	Isopropyl toluene	1,4-Dichlorobenzene
B1-5	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B1-10	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B2-5	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
B2-10	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP1-3	3/1/2017	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MTCA Cleanup Levels: Unrestricted Land Use								
Soil, Method A		NS	NS	NS	NS	NS	NS	NS
Soil, Method B, Cancer		NS	NS	NS	NS	NS	NS	185.00
Soil, Method B, Non-cancer		800.00	8,000.00	NS	8,000.00	NS	NS	5,600.00

Table 5: Volatile Compounds
Soil Sampling Results (I)

Vacant Residential Parcels , Project #10737g
Seattle, Washington

Sample Number	Date	1,2-Dichloro benzene	n-Butylbenzene	1,2-Dibromo-3-Chloropropane	1,2,4-Trichloro benzene	Hexachloro-1,3-butadiene	Naphthalene	1,2,3-Trichlorobenzene
B1-5	3/1/2017	<0.05	<0.05	<0.5	<0.25	<0.25	<0.05	<0.25
B1-10	3/1/2017	<0.05	<0.05	<0.5	<0.25	<0.25	<0.05	<0.25
B2-5	3/1/2017	<0.05	<0.05	<0.5	<0.25	<0.25	<0.05	<0.25
B2-10	3/1/2017	<0.05	<0.05	<0.5	<0.25	<0.25	<0.05	<0.25
TP1-3	3/1/2017	<0.05	<0.05	<0.5	<0.25	<0.25	<0.05	<0.25
MTCA Cleanup Levels: Unrestricted Land Use								
Soil, Method A		NS	NS	NS	NS	NS	5.00	NS
Soil, Method B, Cancer		NS	NS	1.25	NS	12.80	NS	NS
Soil, Method B, Non-cancer		7,200.00	4,000.00	16.00	7,200.00	80.00	1,600.00	NS

Table 5: Volatile Compounds
Soil Sampling Results (I)

Vacant Residential Parcels , Project #10737g
Seattle, Washington

Sample Number	Date	2-Butanone (MEK)	4-Methyl-2-pentanone	2-Hexanone				
B1-5	3/1/2017	<0.5	<0.5	<0.5				
B1-10	3/1/2017	<0.5	<0.5	<0.5				
B2-5	3/1/2017	<0.5	<0.5	<0.5				
B2-10	3/1/2017	<0.5	<0.5	<0.5				
TP1-3	3/1/2017	<0.5	<0.5	<0.5				
MTCA Cleanup Levels: Unrestricted Land Use								
Soil, Method A		NS	NS	NS				
Soil, Method B, Cancer		48,000.00	6,400.00	NS				
Soil, Method B, Non-cancer		NS	NS	NS				

Notes:
(I): Sampling results compared to MTCA Method A cleanup levels. If Method A cleanup levels were not available, data was compared to MTCA Method B cleanup levels
Concentrations are reported in mg/kg (ppm)
Results above MTCA cleanup levels are bolded
Dup: Duplicate
N/T: Not Tested
NS: No Standard
Samples analyzed by EPA Test Method 8260C
Samples analyzed by Friedman & Bruya, Inc.

Table 6: Volatile Compounds
Groundwater Sampling Results (I)

Vacant Residential Parcels, Project #10737g
Seattle, Washington

Sample Number	Date	Dichloro difluoro methane	Chloro methane	Vinyl chloride	Bromo methane	Chloroethane	Trichloro fluoro methane	Acetone
B1-GWS	3/1/2017	<1	<10	<0.2	<1	<1	<1	<10
MTCA Cleanup Levels: Unrestricted Land Use								
Groundwater, Method A		NS	NS	0.20	NS	NS	NS	NS
Groundwater, Method B, Cancer		NS	NS	Ecology Guidance	NS	NS	NS	NS
Groundwater, Method B, Non cancer		1600	NS	24.00	11.20	NS	2400	7,200

Table 6: Volatile Compounds
Groundwater Sampling Results (I)

Vacant Residential Parcels, Project #10737g
Seattle, Washington

Sample Number	Date	1, 1-Dichloro ethene	Hexane	Methylene Chloride	Methyl t-butyl Ether (MTBE)	Trans-1,2-Dichloro ethene	1,1-Dichloro ethane
B1-GWS	3/1/2017	<1	<1	<5	<1	<1	<1
MTCA Cleanup Levels: Unrestricted Land Use							
Groundwater, Method A		NS	NS	5.00	20.00	NS	NS
Groundwater, Method B, Cancer		NS	NS	21.88	24.31	NS	7.68
Groundwater, Method B, Non cancer		400	480	48.00	NS	160	1600

Table 6: Volatile Compounds
Groundwater Sampling Results (I)

Vacant Residential Parcels, Project #10737g
Seattle, Washington

Sample Number	Date	2,2-Dichloro propane	cis-1,2-Dichloro ethene	Chloroform	2-Butanone (MEK)	1,2-Dichloro ethane (EDC)	1,1,1-Trichloro ethane	1,1-Dichloro propene
B1-GWS	3/1/2017	<1	<1	<1	<10	<1	<1	<1
MTCA Cleanup Levels: Unrestricted Land Use								
Groundwater, Method A		NS	NS	NS	NS	5.00	200.00	NS
Groundwater, Method B, Cancer		NS	NS	1.41	NS	0.48	NS	NS
Groundwater, Method B, Non cancer		NS	16.00	80.00	4800	48.00	16000	NS

Table 6: Volatile Compounds
Groundwater Sampling Results (I)

Vacant Residential Parcels, Project #10737g
Seattle, Washington

Sample Number	Date	Carbontetra chloride	Trichloro ethene	1,2-Dichloro propane	Bromo dichloro methane	Dibromo methane	4-Methyl-2-pentanone
B1-GWS	3/1/2017	<1	<1	<1	<1	<1	<10
MTCA Cleanup Levels: Unrestricted Land Use							
Groundwater, Method A		NS	5.00	NS	NS	NS	NS
Groundwater, Method B, Cancer		0.63	0.54	1.22	0.71	NS	NS
Groundwater, Method B, Non cancer		32.00	4.00	720	160	80.00	640

Table 6: Volatile Compounds
Groundwater Sampling Results (I)

Vacant Residential Parcels, Project #10737g
Seattle, Washington

Sample Number	Date	cis-1,3-Dichloro propene	trans-1,3-Dichloro propene	1,1,2-Trichloro ethane	2-Hexanone	1,3-Dichloro propane	Tetrachloro ethene	Dibromo chloro methane
B1-GWS	3/1/2017	<1	<1	<1	<10	<1	<1	<1
MTCA Cleanup Levels: Unrestricted Land Use								
Groundwater, Method A		NS	NS	NS	NS	NS	5.00	NS
Groundwater, Method B, Cancer		0.44	0.44	0.77	NS	NS	20.83	0.52
Groundwater, Method B, Non cancer		240	240	32.00	NS	NS	48.00	160.00

Table 6: Volatile Compounds
Groundwater Sampling Results (I)

Vacant Residential Parcels, Project #10737g
Seattle, Washington

Sample Number	Date	1,2-Dibromo ethane (EDB)	Chloro benzene	1,1,1,2-Tetra chloro ethane	Styrene	Isopropyl benzene	Bromoform
B1-GWS	3/1/2017	<1	<1	<1	<1	<1	<1
MTCA Cleanup Levels: Unrestricted Land Use							
Groundwater, Method A		0.01	NS	NS	NS	NS	NS
Groundwater, Method B, Cancer		0.02	NS	1.68	NS	NS	5.54
Groundwater, Method B, Non cancer		72.00	160.00	240.00	1,600.00	800.00	160.00

Table 6: Volatile Compounds
Groundwater Sampling Results (I)

Vacant Residential Parcels, Project #10737g
Seattle, Washington

Sample Number	Date	n-Propyl benzene	Bromo benzene	1,3,5-Trimethyl benzene	1,1,2,2-Tetrachloro ethane	1,2,3-Trichloro propane	2-Chloro toluene	4-Chloro toluene
B1-GWS	3/1/2017	<1	<1	<1	<1	<1	<1	<1
MTCA Cleanup Levels: Unrestricted Land Use								
Groundwater, Method A		NS	NS	NS	NS	NS	NS	NS
Groundwater, Method B, Cancer		NS	NS	NS	0.22	0.00146	NS	NS
Groundwater, Method B, Non cancer		800.00	NS	80.00	160.00	32.00	160.00	NS

Table 6: Volatile Compounds
Groundwater Sampling Results (I)

Vacant Residential Parcels, Project #10737g
Seattle, Washington

Sample Number	Date	tert-Butyl benzene	1,2,4-Trimethyl benzene	sec-Butyl benzene	Isopropyl toluene	1,3-Dichloro benzene	1,4-Dichloro benzene
B1-GWS	3/1/2017	<1	<1	<1	<1	<1	<1
MTCA Cleanup Levels: Unrestricted Land Use							
Groundwater, Method A		NS	NS	NS	NS	NS	NS
Groundwater, Method B, Cancer		NS	NS	NS	NS	NS	8.10
Groundwater, Method B, Non cancer		800.00	NS	800.00	NS	NS	560.00

Table 6: Volatile Compounds
Groundwater Sampling Results (I)

Vacant Residential Parcels, Project #10737g
Seattle, Washington

Sample Number	Date	1,2-Dichloro benzene	n-Butyl benzene	1,2-Dibromo-3-chloro propane	1,2,4-Trichloro benzene	Hexachloro-1, 3-butadiene	Naphthalene	1,2,3-Trichloro benzene
B1-GWS	3/1/2017	<1	<1	<10	<2	<1	<1	<1
MTCA Cleanup Levels: Unrestricted Land Use								
Groundwater, Method A		NS	NS	NS	NS	NS	160	NS
Groundwater, Method B, Cancer		NS	NS	0.05	1.51	0.56	NS	NS
cancer		720	400	1.60	80.00	8.00	160	NS

Notes:
(I): Sampling results compared to MTCA Method A cleanup levels. If Method A cleanup levels were not available, data was compared to MTCA Method B cleanup levels
Concentrations are reported in µg/L (ppb)
Results above MTCA cleanup levels are bolded
Samples analyzed by EPA Test Method 8260c
Samples analyzed by Friedman and Bruya.
NS: No Standard

Table 7: Total Metals
Soil Sampling Results (I)

Vacant Residential Parcels, Project #10737g
Seattle, Washington

Sample Number	Date	Chromium	Arsenic	Selenium	Silver	Cadmium	Barium	Lead	Mercury
B1-5	3/1/2017	N/T	N/T	N/T	N/T	N/T	N/T	1.89	N/T
B1-10	3/1/2017	N/T	N/T	N/T	N/T	N/T	N/T	3.91	N/T
B2-5	3/1/2017	N/T	N/T	N/T	N/T	N/T	N/T	5.02	N/T
B2-10	3/1/2017	N/T	N/T	N/T	N/T	N/T	N/T	3.22	N/T
TP1-3	3/1/2017	14.6	1.23	N/T	N/T	<1	N/T	1.96	<1
MTCA Cleanup Levels: Unrestricted Land Use									
Soil, Method A		19 Cr VI/ 2,000 Cr III	20	NS	NS	2	NS	250	2
Soil, Method B, Cancer		NS	0.667	NS	NS	NS	NS	NS	NS
Soil, Method B, Non-cancer		240 Cr VI / 120,000 Cr III	24.00	400.00	400.00	80.00	16,000	NS	NS

Notes:
(I): Sampling results compared to MTCA Method A cleanup levels. If Method A cleanup levels were not available, data was compared to MTCA Method B cleanup levels
Concentrations are reported in mg/kg (ppm)
Results above MTCA cleanup levels are shaded
Samples analyzed by Friedman & Bruya, Inc.
N/T: Not Tested
NS: No Standard
*: Sample analyzed for Total Mercury by EPA Method 1631E

Table 8: Semivolatile Organic Compounds (PAHs via SIM)
Soil Sampling Results (I)

Vacant Residential Parcels , Project #10737g
Seattle, Washington

Sample Number	Date	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene	Anthracene	Fluoranthene
B1-5	3/1/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
B1-10	1/31/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
B2-5	1/31/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
B2-10	1/31/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
TP1-3	1/31/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MTCA Cleanup Levels: Unrestricted Land Use								
Soil, Method A		5.00	NS	NS	NS	NS	NS	NS
Soil, Method B, Cancer		NS	NS	NS	NS	NS	NS	NS
Soil, Method B, Non-cancer		1,600.00	NS	4,800.00	3,200.00	NS	24,000.00	3,200.00

Table 8: Semivolatile Organic Compounds (PAHs via SIM)
Soil Sampling Results (I)

Vacant Residential Parcels , Project #10737g
Seattle, Washington

Sample Number	Date	Pyrene	Benz(a) anthracene	Chrysene	Benzo(a) pyrene	Benzo(b) fluoranthene	Benzo(k) fluoranthene	Indeno (1,2,3-cd) pyrene
B1-5	3/1/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
B1-10	1/31/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
B2-5	1/31/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
B2-10	1/31/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
TP1-3	1/31/2017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
MTCA Cleanup Levels: Unrestricted Land Use								
Soil, Method A		NS	NS	NS	0.10	NS	NS	NS
Soil, Method B, Cancer		NS	1.37	137	0.137	1.37	13.7	1.37
Soil, Method B, Non-cancer		2,400.00	NS	NS	NS	NS	NS	NS

Table 8: Semivolatile Organic Compounds (PAHs via SIM)
Soil Sampling Results (I)

Vacant Residential Parcels , Project #10737g
Seattle, Washington

Sample Number	Date	Dibenz(a,h) anthracene	Benzo(g,h,i) perylene
B1-5	3/1/2017	<0.01	<0.01
B1-10	1/31/2017	<0.01	<0.01
B2-5	1/31/2017	<0.01	<0.01
B2-10	1/31/2017	<0.01	<0.01
TP1-3	1/31/2017	<0.01	<0.01

MTCA Cleanup Levels: Unrestricted Land Use

Soil, Method A	NS	NS
Soil, Method B, Cancer	0.137	NS
Soil, Method B, Non-cancer	NS	NS

Notes:
(I): Sampling results compared to MTCA Method A cleanup levels. If Method A cleanup levels were not available, data was compared to MTCA Method B
Concentrations are reported in mg/kg (ppm)
Results above MTCA cleanup levels are bolded
NS: No Standard
Samples analyzed by EPA Method 8270D SIM Friedman & Bruya, Inc.

APPENDIX A

BORING AND TEST PIT LOGS

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

PROJECT: **Vacant Residential Property**		PROJECT NUMBER: **10737g-01**	
LOCATION: **Northeast quadrant of site.**		BOREHOLE ID: **B1**	
DRILLING CONTRACTOR: **Cascade**		CORE SIZE: **2"**	HAMMER DATA: **140 lb.**
DRILLING EQUIPMENT: **Hollow-stem Auger**		GROUND SURFACE ELEV.:	BOREHOLE BACKFILL: **Bentonite**
DRILLING METHOD: **Track rig**		TOTAL DEPTH: **50'**	DEPTH TO WATER: **10'**
LOGGED BY: **JSC**	SAMPLING METHOD: **Discrete**	DATE STARTED: **3/1/17**	DATE COMPLETED: **3/1/17**

Depth (feet)	Groundwater Depth	USCS	Lithologic / Soil Description	Sample ID	PID Reading (ppm)	Blows / foot	% Recovery
0			Brown topsoil.				
		SP	Fine to medium sand, brown, moist, no odor.	B1-5	0.0		
	▽	ML	Silt, dark gray, low plasticity, very moist, no odor.	B1-10	0.0		
		ML	Silt, dark gray, low plasticity, wet, no odor.		0.0		
20							
		ML	Silt, dark gray, low plasticity, moist, no odor.		0.0		
			Becomes dry.				
40							
		ML	Silt, dark gray, low plasticity, slightly moist, no odor.	B1-50	0.0		

NOTES:

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

PROJECT: **Vacant Residential Property**		PROJECT NUMBER: **10737g-01**	
LOCATION: **Central portion of site.**		BOREHOLE ID: **B2**	
DRILLING CONTRACTOR: **Cascade**	CORE SIZE: **2"**		HAMMER DATA: **140 lb.**
DRILLING EQUIPMENT: **Hollow-stem Auger**	GROUND SURFACE ELEV.:		BOREHOLE BACKFILL: **Bentonite**
DRILLING METHOD: **Track rig**	TOTAL DEPTH: **50'**		DEPTH TO WATER: **Not encountered.**
LOGGED BY: **JSC**	SAMPLING METHOD: **Discrete**	DATE STARTED: **3/1/17**	DATE COMPLETED: **3/1/17**

Depth (feet)	Groundwater Depth	USCS	Lithologic / Soil Description	Sample ID	PID Reading (ppm)	Blows / foot	% Recovery
0			Brown topsoil.				
		ML	Silt, tan, low plasticity, moist, no odor	B2-5	0.0		
		ML	Silt with lense of fine sand, dark gray, low plasticity, very moist, no odor.	B2-10	0.0		
		ML	Silt, dark gray, low plasticity, dry, no odor.	B2-15	0.0		
20							
		ML	Silt, dark gray, low plasticity, dry, no odor.		0.0		
40							
		ML	Silt, dark gray, low plasticity, slightly moist, no odor.	B2-50	0.0		

NOTES: No groundwater to 50' bgs.

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

PROJECT: **Vacant Residential Property**		PROJECT NUMBER: **10737g-01**	
LOCATION: **Southern portion of site.**		BOREHOLE ID: **TP1**	
DRILLING CONTRACTOR: **ERRG**		CORE SIZE: **NA**	HAMMER DATA:
DRILLING EQUIPMENT: **Mini Excavator**		GROUND SURFACE ELEV.:	BOREHOLE BACKFILL: **Excavated Soil**
DRILLING METHOD: **Excavator**		TOTAL DEPTH: **4'**	DEPTH TO WATER: **Not Encountered**
LOGGED BY: **JSC**	SAMPLING METHOD: **Continuous**	DATE STARTED: **3/1/17**	DATE COMPLETED: **3/1/17**

Depth (feet)	Groundwater Depth	USCS	Lithologic / Soil Description	Sample ID	PID Reading (ppm)	Blows / foot	% Recovery
1		SM	Silty sand topsoil, dry, no odor.	TP1-1	0.0		
2		SP	Fine to medium sand, brown, moist, no odor.	TP1-3	0.0		
3		ML	Silt, tan, low plasticity, dry, no odor.		0.0		
4							

NOTES:

APPENDIX B

COPIES OF ANALYTICAL REPORTS

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
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March 8, 2017

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 1, 2017 from the Irving and Yakima, PO 10737g-01, F&BI 703020 project. There are 30 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. 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: Stephanie Bolton
EHS0308R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 1, 2017 by Friedman & Bruya, Inc. from the EHSI Irving and Yakima, PO 10737g-01, F&BI 703020 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	EHSI
703020 -01	B1-5
703020 -02	B1-10
703020 -03	B1-GW5
703020 -04	B1-50
703020 -05	B2-5
703020 -06	B2-10
703020 -07	B2-15
703020 -08	B2-50
703020 -09	TP1-1
703020 -10	TP1-3

All quality control requirements were acceptable.

Date of Report: 03/08/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020
Date Extracted: 03/02/17
Date Analyzed: 03/02/17

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)
B1-GW5 703020-03	<100	90
Method Blank 07-385 MB	<100	91

Date of Report: 03/08/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020
Date Extracted: 03/02/17
Date Analyzed: 03/02/17

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)
B1-5 703020-01	<2	115
B1-10 703020-02	<2	116
TP1-1 703020-09	<2	113
TP1-3 703020-10	<2	114
Method Blank 07-418 MB	<2	117

Date of Report: 03/08/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020
Date Extracted: 03/02/17
Date Analyzed: 03/02/17

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)
B1-5 703020-01	<50	<250	113
B1-10 703020-02	<50	<250	110
TP1-1 703020-09	<50	<250	103
TP1-3 703020-10	<50	<250	112
Method Blank 07-432 MB	<50	<250	118

Date of Report: 03/08/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020
Date Extracted: 03/02/17
Date Analyzed: 03/02/17

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)
B1-GW5 703020-03 1/1.6	<80	<400	116
Method Blank 07-413 MB2	<50	<250	105

Analysis For Total Metals By EPA Method 200.8

Client ID:	B1-5	Client:	EHSI
Date Received:	03/01/17	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/02/17	Lab ID:	703020-01
Date Analyzed:	03/02/17	Data File:	703020-01.080
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	1.89

Analysis For Total Metals By EPA Method 200.8

Client ID:	B1-10	Client:	EHSI
Date Received:	03/01/17	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/02/17	Lab ID:	703020-02
Date Analyzed:	03/02/17	Data File:	703020-02.081
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	3.91

Analysis For Total Metals By EPA Method 200.8

Client ID:	TP1-3	Client:	EHSI
Date Received:	03/01/17	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/02/17	Lab ID:	703020-10
Date Analyzed:	03/02/17	Data File:	703020-10.082
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	1.23
Cadmium	<1
Chromium	14.6
Lead	1.96
Mercury	<1

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	EHSI
Date Received:	NA	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/02/17	Lab ID:	I7-104 mb
Date Analyzed:	03/02/17	Data File:	I7-104 mb.051
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Arsenic	<1
Cadmium	<1
Chromium	<5
Lead	<1
Mercury	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B1-5	Client:	EHSI
Date Received:	03/01/17	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/03/17	Lab ID:	703020-01
Date Analyzed:	03/03/17	Data File:	030333.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	103	62	142
Toluene-d8	104	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 8260C

Client Sample ID:	B1-10	Client:	EHSI
Date Received:	03/01/17	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/03/17	Lab ID:	703020-02
Date Analyzed:	03/03/17	Data File:	030334.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	62	142
Toluene-d8	104	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 8260C

Client Sample ID:	TP1-3	Client:	EHSI
Date Received:	03/01/17	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/03/17	Lab ID:	703020-10
Date Analyzed:	03/03/17	Data File:	030335.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	62	142
Toluene-d8	105	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 8260C

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/03/17	Lab ID:	07-440 mb
Date Analyzed:	03/03/17	Data File:	030323.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	62	142
Toluene-d8	104	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 8260C

Client Sample ID:	B1-GW5	Client:	EHSI
Date Received:	03/01/17	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/02/17	Lab ID:	703020-03
Date Analyzed:	03/02/17	Data File:	030226.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	99	85	117
Toluene-d8	99	91	108
4-Bromofluorobenzene	102	76	126

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	<10	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 8260C

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/02/17	Lab ID:	07-364 mb
Date Analyzed:	03/02/17	Data File:	030208.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	100	91	108
4-Bromofluorobenzene	99	76	126

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	<10	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 Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	B1-5	Client:	EHSI
Date Received:	03/01/17	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/02/17	Lab ID:	703020-01 1/5
Date Analyzed:	03/06/17	Data File:	030603.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	84	31	163
Benzo(a)anthracene-d12	99	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	B1-10	Client:	EHSI
Date Received:	03/01/17	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/02/17	Lab ID:	703020-02 1/5
Date Analyzed:	03/06/17	Data File:	030605.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	81	31	163
Benzo(a)anthracene-d12	89	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	TP1-3	Client:	EHSI
Date Received:	03/01/17	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/02/17	Lab ID:	703020-10 1/5
Date Analyzed:	03/06/17	Data File:	030606.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	85	31	163
Benzo(a)anthracene-d12	100	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/02/17	Lab ID:	07-435 mb 1/5
Date Analyzed:	03/03/17	Data File:	030311.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	88	31	163
Benzo(a)anthracene-d12	95	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Date of Report: 03/08/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020

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

Laboratory Code: 703013-01 (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	101	69-134

Date of Report: 03/08/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020

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

Laboratory Code: 703026-01 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	110	110	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	95	71-131

Date of Report: 03/08/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020

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

Laboratory Code: 703020-01 (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	96	63-146	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	103	79-144

Date of Report: 03/08/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020

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	88	95	61-133	8

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Project: Irving and Yakima, PO 10737g-01, F&BI 703020

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 703019-01 (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	1.40	96	92	70-130	4
Cadmium	mg/kg (ppm)	10	<1	102	97	70-130	5
Chromium	mg/kg (ppm)	50	204	50 b	42 b	70-130	17 b
Lead	mg/kg (ppm)	50	19.4	95	92	70-130	3
Mercury	mg/kg (ppm	10	<1	94	91	70-130	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/kg (ppm)	10	94	85-115
Cadmium	mg/kg (ppm)	10	100	85-115
Chromium	mg/kg (ppm)	50	99	85-115
Lead	mg/kg (ppm)	50	99	85-115
Mercury	mg/kg (ppm)	10	92	85-115

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Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020

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

Laboratory Code: 702165-10 (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	17	17	10-142	0
Chloromethane	mg/kg (ppm)	2.5	<0.5	47	44	10-126	7
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	43	42	10-138	2
Bromomethane	mg/kg (ppm)	2.5	<0.5	64	58	10-163	10
Chloroethane	mg/kg (ppm)	2.5	<0.5	57	57	10-176	0
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	54	54	10-176	0
Acetone	mg/kg (ppm)	12.5	<0.5	83	80	10-163	4
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	64	62	10-160	3
Hexane	mg/kg (ppm)	2.5	<0.25	46	52	10-137	12
Methylene chloride	mg/kg (ppm)	2.5	<0.5	74	75	10-156	1
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	77	77	21-145	0
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	68	68	14-137	0
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	70	71	19-140	1
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	99	98	10-158	1
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	77	78	25-135	1
Chloroform	mg/kg (ppm)	2.5	<0.05	75	75	21-145	0
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	90	84	19-147	7
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	74	74	12-160	0
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	73	74	10-156	1
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	72	73	17-140	1
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	73	73	9-164	0
Benzene	mg/kg (ppm)	2.5	<0.03	74	74	29-129	0
Trichloroethene	mg/kg (ppm)	2.5	0.062	71	70	21-139	1
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	72	73	30-135	1
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	78	76	23-155	3
Dibromomethane	mg/kg (ppm)	2.5	<0.05	80	79	23-145	1
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	84	81	24-155	4
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	84	81	28-144	4
Toluene	mg/kg (ppm)	2.5	<0.05	74	75	35-130	1
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	75	76	26-149	1
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	73	73	10-205	0
2-Hexanone	mg/kg (ppm)	12.5	<0.5	78	77	15-166	1
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	75	75	31-137	0
Tetrachloroethene	mg/kg (ppm)	2.5	0.34	68	69	20-133	1
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	76	76	28-150	0
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	78	78	28-142	0
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	72	73	32-129	1
Ethylbenzene	mg/kg (ppm)	2.5	<0.05	75	75	32-137	0
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	81	81	31-143	0
m,p-Xylene	mg/kg (ppm)	5	<0.1	76	76	34-136	0
o-Xylene	mg/kg (ppm)	2.5	<0.05	75	75	33-134	0
Styrene	mg/kg (ppm)	2.5	<0.05	76	76	35-137	0
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	77	76	31-142	1
Bromoform	mg/kg (ppm)	2.5	<0.05	68	67	21-156	1
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	75	75	23-146	0
Bromobenzene	mg/kg (ppm)	2.5	<0.05	76	76	34-130	0
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	77	76	18-149	1
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	77	74	28-140	4
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	77	75	25-144	3
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	75	73	31-134	3
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	77	76	31-136	1
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	75	75	30-137	0
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	76	75	10-182	1
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	76	75	23-145	1
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	78	77	21-149	1
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	72	71	30-131	1
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	72	70	29-129	3
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	74	72	31-132	3
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	78	76	11-161	3
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	78	76	22-142	3
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	84	83	10-142	1
Naphthalene	mg/kg (ppm)	2.5	<0.05	75	73	14-157	3
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	76	75	20-144	1

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Project: Irving and Yakima, PO 10737g-01, F&BI 703020

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	54	10-146
Chloromethane	mg/kg (ppm)	2.5	70	27-133
Vinyl chloride	mg/kg (ppm)	2.5	75	22-139
Bromomethane	mg/kg (ppm)	2.5	92	38-114
Chloroethane	mg/kg (ppm)	2.5	93	10-163
Trichlorofluoromethane	mg/kg (ppm)	2.5	96	10-196
Acetone	mg/kg (ppm)	12.5	103	52-141
1,1-Dichloroethene	mg/kg (ppm)	2.5	96	47-128
Hexane	mg/kg (ppm)	2.5	107	43-142
Methylene chloride	mg/kg (ppm)	2.5	92	42-132
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	95	60-123
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	91	67-127
1,1-Dichloroethane	mg/kg (ppm)	2.5	92	68-115
2,2-Dichloropropane	mg/kg (ppm)	2.5	128	52-170
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	98	72-113
Chloroform	mg/kg (ppm)	2.5	95	66-120
2-Butanone (MEK)	mg/kg (ppm)	12.5	105	57-123
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	93	56-135
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	95	62-131
1,1-Dichloropropene	mg/kg (ppm)	2.5	97	69-128
Carbon tetrachloride	mg/kg (ppm)	2.5	97	60-139
Benzene	mg/kg (ppm)	2.5	95	68-114
Trichloroethene	mg/kg (ppm)	2.5	90	64-117
1,2-Dichloropropane	mg/kg (ppm)	2.5	89	72-127
Bromodichloromethane	mg/kg (ppm)	2.5	96	72-130
Dibromomethane	mg/kg (ppm)	2.5	100	70-120
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	97	45-145
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	102	75-136
Toluene	mg/kg (ppm)	2.5	93	66-126
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	93	72-132
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	89	75-113
2-Hexanone	mg/kg (ppm)	12.5	91	33-152
1,3-Dichloropropane	mg/kg (ppm)	2.5	91	72-130
Tetrachloroethene	mg/kg (ppm)	2.5	91	72-114
Dibromochloromethane	mg/kg (ppm)	2.5	97	74-125
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	97	74-132
Chlorobenzene	mg/kg (ppm)	2.5	90	76-111
Ethylbenzene	mg/kg (ppm)	2.5	94	64-123
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	101	69-135
m,p-Xylene	mg/kg (ppm)	5	96	78-122
o-Xylene	mg/kg (ppm)	2.5	94	77-124
Styrene	mg/kg (ppm)	2.5	95	74-126
Isopropylbenzene	mg/kg (ppm)	2.5	96	76-127
Bromoform	mg/kg (ppm)	2.5	85	56-132
n-Propylbenzene	mg/kg (ppm)	2.5	91	74-124
Bromobenzene	mg/kg (ppm)	2.5	92	72-122
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	95	76-126
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	93	56-143
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	92	61-137
2-Chlorotoluene	mg/kg (ppm)	2.5	90	74-121
4-Chlorotoluene	mg/kg (ppm)	2.5	93	75-122
tert-Butylbenzene	mg/kg (ppm)	2.5	93	73-130
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	93	76-125
sec-Butylbenzene	mg/kg (ppm)	2.5	94	71-130
p-Isopropyltoluene	mg/kg (ppm)	2.5	96	70-132
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	89	75-121
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	88	74-117
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	90	76-121
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	97	58-138
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	94	64-135
Hexachlorobutadiene	mg/kg (ppm)	2.5	103	50-153
Naphthalene	mg/kg (ppm)	2.5	90	63-140
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	91	63-138

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

Laboratory Code: 703019-06 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	ug/L (ppb)	50	<1	103	55-137
Chloromethane	ug/L (ppb)	50	<10	94	61-120
Vinyl chloride	ug/L (ppb)	50	120	104 b	61-139
Bromomethane	ug/L (ppb)	50	<1	95	20-265
Chloroethane	ug/L (ppb)	50	<1	105	55-149
Trichlorofluoromethane	ug/L (ppb)	50	<1	102	71-128
Acetone	ug/L (ppb)	250	<10	107	48-149
1,1-Dichloroethene	ug/L (ppb)	50	1.6	104	71-123
Hexane	ug/L (ppb)	50	<1	93	61-127
Methylene chloride	ug/L (ppb)	50	<5	109	61-126
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	<1	102	68-125
trans-1,2-Dichloroethene	ug/L (ppb)	50	3.5	98	72-122
1,1-Dichloroethane	ug/L (ppb)	50	<1	101	79-113
2,2-Dichloropropane	ug/L (ppb)	50	<1	89	58-132
cis-1,2-Dichloroethene	ug/L (ppb)	50	250 ve	138 b	63-126
Chloroform	ug/L (ppb)	50	<1	99	79-113
2-Butanone (MEK)	ug/L (ppb)	250	<10	112	69-123
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	103	70-119
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	101	75-121
1,1-Dichloropropene	ug/L (ppb)	50	<1	103	67-121
Carbon tetrachloride	ug/L (ppb)	50	<1	101	70-132
Benzene	ug/L (ppb)	50	<0.35	100	78-108
Trichloroethene	ug/L (ppb)	50	31	106 b	75-109
1,2-Dichloropropane	ug/L (ppb)	50	<1	103	80-111
Bromodichloromethane	ug/L (ppb)	50	<1	103	78-117
Dibromomethane	ug/L (ppb)	50	<1	101	73-125
4-Methyl-2-pentanone	ug/L (ppb)	250	<10	105	79-123
cis-1,3-Dichloropropene	ug/L (ppb)	50	<1	103	76-120
Toluene	ug/L (ppb)	50	<1	102	73-117
trans-1,3-Dichloropropene	ug/L (ppb)	50	<1	105	75-122
1,1,2-Trichloroethane	ug/L (ppb)	50	<1	101	81-116
2-Hexanone	ug/L (ppb)	250	<10	106	74-127
1,3-Dichloropropane	ug/L (ppb)	50	<1	102	80-113
Tetrachloroethene	ug/L (ppb)	50	<1	99	72-113
Dibromochloromethane	ug/L (ppb)	50	<1	107	69-129
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	<1	103	79-120
Chlorobenzene	ug/L (ppb)	50	<1	99	75-115
Ethylbenzene	ug/L (ppb)	50	<1	101	71-120
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	<1	101	76-130
m,p-Xylene	ug/L (ppb)	100	<2	100	63-128
o-Xylene	ug/L (ppb)	50	<1	100	64-129
Styrene	ug/L (ppb)	50	<1	102	56-142
Isopropylbenzene	ug/L (ppb)	50	<1	100	77-122
Bromoform	ug/L (ppb)	50	<1	105	49-138
n-Propylbenzene	ug/L (ppb)	50	<1	104	74-117
Bromobenzene	ug/L (ppb)	50	<1	102	70-121
1,3,5-Trimethylbenzene	ug/L (ppb)	50	<1	103	60-138
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	<1	104	79-120
1,2,3-Trichloropropane	ug/L (ppb)	50	<1	105	62-125
2-Chlorotoluene	ug/L (ppb)	50	<1	102	70-123
4-Chlorotoluene	ug/L (ppb)	50	<1	102	79-113
tert-Butylbenzene	ug/L (ppb)	50	<1	106	78-124
1,2,4-Trimethylbenzene	ug/L (ppb)	50	<1	103	74-118
sec-Butylbenzene	ug/L (ppb)	50	<1	104	77-118
p-Isopropyltoluene	ug/L (ppb)	50	<1	105	64-132
1,3-Dichlorobenzene	ug/L (ppb)	50	<1	103	79-109
1,4-Dichlorobenzene	ug/L (ppb)	50	<1	97	78-110
1,2-Dichlorobenzene	ug/L (ppb)	50	<1	101	81-111
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	<10	107	69-129
1,2,4-Trichlorobenzene	ug/L (ppb)	50	<1	101	66-123
Hexachlorobutadiene	ug/L (ppb)	50	<1	95	67-120
Naphthalene	ug/L (ppb)	50	<1	107	62-140
1,2,3-Trichlorobenzene	ug/L (ppb)	50	<1	105	59-130

Date of Report: 03/08/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020

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

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	105	106	54-149	1
Chloromethane	ug/L (ppb)	50	94	97	67-133	3
Vinyl chloride	ug/L (ppb)	50	95	96	70-119	1
Bromomethane	ug/L (ppb)	50	96	99	62-188	3
Chloroethane	ug/L (ppb)	50	105	107	66-149	2
Trichlorofluoromethane	ug/L (ppb)	50	102	103	70-132	1
Acetone	ug/L (ppb)	250	105	102	44-145	3
1,1-Dichloroethene	ug/L (ppb)	50	103	99	75-119	4
Hexane	ug/L (ppb)	50	105	102	51-153	3
Methylene chloride	ug/L (ppb)	50	105	106	63-132	1
Methyl t-butyl ether (MTBE)	ug/L (ppb)	50	103	104	70-122	1
trans-1,2-Dichloroethene	ug/L (ppb)	50	98	99	76-118	1
1,1-Dichloroethane	ug/L (ppb)	50	100	101	80-116	1
2,2-Dichloropropane	ug/L (ppb)	50	100	102	62-141	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	95	97	80-112	2
Chloroform	ug/L (ppb)	50	98	99	81-109	1
2-Butanone (MEK)	ug/L (ppb)	250	105	106	53-140	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	100	101	79-109	1
1,1,1-Trichloroethane	ug/L (ppb)	50	99	102	80-116	3
1,1-Dichloropropene	ug/L (ppb)	50	102	102	78-112	0
Carbon tetrachloride	ug/L (ppb)	50	101	102	72-128	1
Benzene	ug/L (ppb)	50	99	100	81-108	1
Trichloroethene	ug/L (ppb)	50	104	104	77-108	0
1,2-Dichloropropane	ug/L (ppb)	50	101	102	82-109	1
Bromodichloromethane	ug/L (ppb)	50	103	103	76-120	0
Dibromomethane	ug/L (ppb)	50	101	102	80-110	1
4-Methyl-2-pentanone	ug/L (ppb)	250	104	106	59-142	2
cis-1,3-Dichloropropene	ug/L (ppb)	50	107	106	76-128	1
Toluene	ug/L (ppb)	50	102	102	83-108	0
trans-1,3-Dichloropropene	ug/L (ppb)	50	108	111	76-128	3
1,1,2-Trichloroethane	ug/L (ppb)	50	102	101	82-110	1
2-Hexanone	ug/L (ppb)	250	106	104	53-145	2
1,3-Dichloropropane	ug/L (ppb)	50	101	102	83-110	1
Tetrachloroethene	ug/L (ppb)	50	101	101	78-109	0
Dibromochloromethane	ug/L (ppb)	50	110	111	63-140	1
1,2-Dibromoethane (EDB)	ug/L (ppb)	50	106	106	82-118	0
Chlorobenzene	ug/L (ppb)	50	99	100	84-108	1
Ethylbenzene	ug/L (ppb)	50	101	102	83-111	1
1,1,1,2-Tetrachloroethane	ug/L (ppb)	50	101	103	76-125	2
m,p-Xylene	ug/L (ppb)	100	101	101	84-112	0
o-Xylene	ug/L (ppb)	50	100	101	81-117	1
Styrene	ug/L (ppb)	50	104	104	83-121	0
Isopropylbenzene	ug/L (ppb)	50	100	101	81-122	1
Bromoform	ug/L (ppb)	50	113	115	40-161	2
n-Propylbenzene	ug/L (ppb)	50	103	104	81-115	1
Bromobenzene	ug/L (ppb)	50	102	103	80-113	1
1,3,5-Trimethylbenzene	ug/L (ppb)	50	103	104	83-117	1
1,1,2,2-Tetrachloroethane	ug/L (ppb)	50	101	103	79-118	2
1,2,3-Trichloropropane	ug/L (ppb)	50	103	104	74-116	1
2-Chlorotoluene	ug/L (ppb)	50	101	102	79-112	1
4-Chlorotoluene	ug/L (ppb)	50	102	102	81-113	0
tert-Butylbenzene	ug/L (ppb)	50	104	104	81-119	0
1,2,4-Trimethylbenzene	ug/L (ppb)	50	101	103	81-121	2
sec-Butylbenzene	ug/L (ppb)	50	104	105	83-123	1
p-Isopropyltoluene	ug/L (ppb)	50	105	107	81-122	2
1,3-Dichlorobenzene	ug/L (ppb)	50	103	105	82-110	2
1,4-Dichlorobenzene	ug/L (ppb)	50	98	98	81-105	0
1,2-Dichlorobenzene	ug/L (ppb)	50	100	102	83-111	2
1,2-Dibromo-3-chloropropane	ug/L (ppb)	50	104	107	62-133	3
1,2,4-Trichlorobenzene	ug/L (ppb)	50	99	102	77-117	3
Hexachlorobutadiene	ug/L (ppb)	50	104	104	70-116	0
Naphthalene	ug/L (ppb)	50	102	107	72-131	5
1,2,3-Trichlorobenzene	ug/L (ppb)	50	101	106	80-114	5

Date of Report: 03/08/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR PAHS BY EPA METHOD 8270D SIM

Laboratory Code: 703020-01 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	<0.01	90	44-129
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	93	52-121
Acenaphthene	mg/kg (ppm)	0.17	<0.01	91	51-123
Fluorene	mg/kg (ppm)	0.17	<0.01	95	37-137
Phenanthrene	mg/kg (ppm)	0.17	<0.01	92	34-141
Anthracene	mg/kg (ppm)	0.17	<0.01	88	32-124
Fluoranthene	mg/kg (ppm)	0.17	<0.01	96	16-160
Pyrene	mg/kg (ppm)	0.17	<0.01	90	10-180
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	95	23-144
Chrysene	mg/kg (ppm)	0.17	<0.01	94	32-149
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	98	23-176
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	102	42-139
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	90	21-163
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	92	23-170
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	92	31-146
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.01	86	37-133

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	92	94	58-121	2
Acenaphthylene	mg/kg (ppm)	0.17	96	99	54-121	3
Acenaphthene	mg/kg (ppm)	0.17	92	94	54-123	2
Fluorene	mg/kg (ppm)	0.17	94	98	56-127	4
Phenanthrene	mg/kg (ppm)	0.17	93	95	55-122	2
Anthracene	mg/kg (ppm)	0.17	90	92	50-120	2
Fluoranthene	mg/kg (ppm)	0.17	90	96	54-129	6
Pyrene	mg/kg (ppm)	0.17	101	101	53-127	0
Benz(a)anthracene	mg/kg (ppm)	0.17	96	98	51-115	2
Chrysene	mg/kg (ppm)	0.17	95	97	55-129	2
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	100	102	56-123	2
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	100	101	54-131	1
Benzo(a)pyrene	mg/kg (ppm)	0.17	93	96	51-118	3
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	99	106	49-148	7
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	102	108	50-141	6
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	95	100	52-131	5

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 compound 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

703020

SAMPLE CHAIN OF CUSTODY

ME 03/01/17 VS2/VW2/BT3

Send Report To Jason Cass

Company EHSI

Address 1011 SW Klickitat Way, #104

City, State, ZIP Seattle, WA 98134

Phone # (206) 381-1128 Fax #

SAMPLERS (signature) Jason Cass

PROJECT NAME/NO. Irving & Yakima

PO # 107379-01

REMARKS

Page # 1 of 1

TURNAROUND TIME
- ☒ Standard (2 Weeks)
- ☐ RUSH

Rush charges authorized by:

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

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	PAH	Lead	MTCA 5 Metals			Notes
B1-5	01 A-E	3/1/17	10:45	Soil	5	X	X		X			X	X				
B1-10	02		10:55		5	X	X		X			X	X				
B1-GWS	03		11:20	H2O	5	X	X		X								
B1-50	04		12:25	Soil	5												
B2-5	05		14:00		5												
B2-10	06		15:25		5												
B2-15	07		15:35		1												
B2-50	08 A-E		16:45		5												
TP1-1	09 A-C		14:30		3	X	X										
TP1-3	10		14:35		3	X	X		X			X		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: Jason Cass	Jason Cass	EHSI	3/1/17	18:00
Received by: [signature]	Jon Shimazu	FB&I	3/1/17	18:00
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

Samples received at 4 °C

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 16, 2017

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

Dear Mr Cass:

Included are the additional results from the testing of material submitted on March 1, 2017 from the Irving and Yakima, PO 10737g-01, F&BI 703020 project. There are 19 pages 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: Stephanie Bolton
EHS0316R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on March 1, 2017 by Friedman & Bruya, Inc. from the EHSI Irving and Yakima, PO 10737g-01, F&BI 703020 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	EHSI
703020 -01	B1-5
703020 -02	B1-10
703020 -03	B1-GWS
703020 -04	B1-50
703020 -05	B2-5
703020 -06	B2-10
703020 -07	B2-15
703020 -08	B2-50
703020 -09	TP1-1
703020 -10	TP1-3

All quality control requirements were acceptable.

Date of Report: 03/16/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020
Date Extracted: 03/10/17
Date Analyzed: 03/10/17

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)
B2-5 703020-05	<2	81
B2-10 703020-06	<2	83
Method Blank 07-491 MB	<2	84

Date of Report: 03/16/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020
Date Extracted: 03/09/17
Date Analyzed: 03/09/17

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)
B2-5 703020-05	<50	<250	121
B2-10 703020-06	<50	<250	110
Method Blank 07-483 MB	<50	<250	106

Analysis For Total Metals By EPA Method 200.8

Client ID:	B2-5	Client:	EHSI
Date Received:	03/01/17	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/14/17	Lab ID:	703020-05
Date Analyzed:	03/14/17	Data File:	703020-05.037
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	5.02

Analysis For Total Metals By EPA Method 200.8

Client ID:	B2-10	Client:	EHSI
Date Received:	03/01/17	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/14/17	Lab ID:	703020-06
Date Analyzed:	03/14/17	Data File:	703020-06.038
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	3.22

Analysis For Total Metals By EPA Method 200.8

Client ID:	Method Blank	Client:	EHSI
Date Received:	NA	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/14/17	Lab ID:	I7-130 mb
Date Analyzed:	03/14/17	Data File:	I7-130 mb.028
Matrix:	Soil	Instrument:	ICPMS2
Units:	mg/kg (ppm) Dry Weight	Operator:	SP

Analyte:	Concentration mg/kg (ppm)
Lead	<1

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	B2-5	Client:	EHSI
Date Received:	03/01/17	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/09/17	Lab ID:	703020-05
Date Analyzed:	03/09/17	Data File:	030936.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	100	85	117
Toluene-d8	101	91	108
4-Bromofluorobenzene	99	76	126

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 8260C

Client Sample ID:	B2-10	Client:	EHSI
Date Received:	03/01/17	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/09/17	Lab ID:	703020-06
Date Analyzed:	03/09/17	Data File:	030937.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	97	85	117
Toluene-d8	100	91	108
4-Bromofluorobenzene	100	76	126

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 8260C

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/09/17	Lab ID:	07-472 mb
Date Analyzed:	03/09/17	Data File:	030906.D
Matrix:	Soil	Instrument:	GCMS9
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	98	89	113
Toluene-d8	100	64	137
4-Bromofluorobenzene	98	81	119

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 Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	B2-5	Client:	EHSI
Date Received:	03/01/17	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/10/17	Lab ID:	703020-05 1/5
Date Analyzed:	03/10/17	Data File:	031028.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	93	31	163
Benzo(a)anthracene-d12	94	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	B2-10	Client:	EHSI
Date Received:	03/01/17	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/10/17	Lab ID:	703020-06 1/5
Date Analyzed:	03/10/17	Data File:	031029.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	90	31	163
Benzo(a)anthracene-d12	88	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Analysis For Semivolatile Compounds By EPA Method 8270D SIM

Client Sample ID:	Method Blank	Client:	EHSI
Date Received:	Not Applicable	Project:	Irving and Yakima, PO 10737g-01
Date Extracted:	03/10/17	Lab ID:	07-503 mb 1/5
Date Analyzed:	03/10/17	Data File:	031012.D
Matrix:	Soil	Instrument:	GCMS6
Units:	mg/kg (ppm) Dry Weight	Operator:	ya

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
Anthracene-d10	106	31	163
Benzo(a)anthracene-d12	103	24	168

Compounds:	Concentration mg/kg (ppm)
Naphthalene	<0.01
Acenaphthylene	<0.01
Acenaphthene	<0.01
Fluorene	<0.01
Phenanthrene	<0.01
Anthracene	<0.01
Fluoranthene	<0.01
Pyrene	<0.01
Benz(a)anthracene	<0.01
Chrysene	<0.01
Benzo(a)pyrene	<0.01
Benzo(b)fluoranthene	<0.01
Benzo(k)fluoranthene	<0.01
Indeno(1,2,3-cd)pyrene	<0.01
Dibenz(a,h)anthracene	<0.01
Benzo(g,h,i)perylene	<0.01

Date of Report: 03/16/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020

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

Laboratory Code: 703020-05 (Duplicate)

Analyte	Reporting Units	Sample Result (Wet Wt)	Duplicate Result (Wet Wt)	RPD (Limit 20)
Gasoline	mg/kg (ppm)	<2	<2	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Gasoline	mg/kg (ppm)	20	80	61-153

Date of Report: 03/16/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020

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

Laboratory Code: 703020-05 (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	92	86	63-146	7

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	90	79-144

Date of Report: 03/16/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR TOTAL METALS USING EPA METHOD 200.8

Laboratory Code: 703077-16 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Lead	mg/kg (ppm)	50	12.8	90	82	70-130	9

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Lead	mg/kg (ppm)	50	101	85-115

Date of Report: 03/16/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020

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

Laboratory Code: 703131-06 (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	22	25	10-56	13
Chloromethane	mg/kg (ppm)	2.5	<0.5	50	54	10-90	8
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	51	55	10-91	8
Bromomethane	mg/kg (ppm)	2.5	<0.5	65	69	10-110	6
Chloroethane	mg/kg (ppm)	2.5	<0.5	66	73	10-101	10
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	64	69	10-95	8
Acetone	mg/kg (ppm)	12.5	<0.5	82	91	11-141	10
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	73	80	11-103	9
Hexane	mg/kg (ppm)	2.5	<0.25	60	66	10-95	10
Methylene chloride	mg/kg (ppm)	2.5	<0.5	81	86	14-128	6
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	89	94	17-134	5
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	81	83	13-112	2
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	85	89	23-115	5
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	83	88	18-117	6
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	85	88	25-120	3
Chloroform	mg/kg (ppm)	2.5	<0.05	87	91	29-117	4
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	92	99	20-133	7
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	90	96	22-124	6
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	85	90	27-112	6
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	86	92	26-107	7
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	83	88	22-115	6
Benzene	mg/kg (ppm)	2.5	<0.03	86	90	26-114	5
Trichloroethene	mg/kg (ppm)	2.5	<0.02	89	95	30-112	7
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	90	96	31-119	6
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	88	94	31-131	7
Dibromomethane	mg/kg (ppm)	2.5	<0.05	88	96	27-124	9
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	96	100	16-147	4
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	94	99	28-137	5
Toluene	mg/kg (ppm)	2.5	0.036	93	97	34-112	4
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	96	99	30-136	3
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	93	97	32-126	4
2-Hexanone	mg/kg (ppm)	12.5	<0.5	97	100	17-147	3
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	94	96	29-125	2
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	90	93	25-114	3
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	94	98	32-143	4
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	94	97	32-126	3
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	91	94	37-113	3
Ethylbenzene	mg/kg (ppm)	2.5	0.074	94	98	34-115	4
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	90	93	35-126	3
m,p-Xylene	mg/kg (ppm)	5	0.33	98	98	25-125	0
o-Xylene	mg/kg (ppm)	2.5	0.069	94	98	27-126	4
Styrene	mg/kg (ppm)	2.5	<0.05	94	99	39-121	5
Isopropylbenzene	mg/kg (ppm)	2.5	<0.05	92	96	34-123	4
Bromoform	mg/kg (ppm)	2.5	<0.05	92	96	18-155	4
n-Propylbenzene	mg/kg (ppm)	2.5	<0.05	96	98	31-120	2
Bromobenzene	mg/kg (ppm)	2.5	<0.05	95	98	40-115	3
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	<0.05	96	99	24-130	3
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	94	97	27-148	3
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	95	101	33-123	6
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	94	99	39-110	5
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	96	99	39-111	3
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	97	99	36-116	2
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	0.052	95	98	35-116	3
sec-Butylbenzene	mg/kg (ppm)	2.5	<0.05	97	100	33-118	3
p-Isopropyltoluene	mg/kg (ppm)	2.5	<0.05	99	100	32-119	1
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	96	100	38-111	4
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	91	94	39-109	3
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	94	97	40-111	3
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	91	93	37-122	2
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	95	97	31-121	2
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	97	98	24-128	1
Naphthalene	mg/kg (ppm)	2.5	<0.05	97	101	24-139	4
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	97	101	35-117	4

Date of Report: 03/16/17
Date Received: 03/01/17
Project: Irving and Yakima, PO 10737g-01, F&BI 703020

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

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	45	10-76
Chloromethane	mg/kg (ppm)	2.5	67	34-98
Vinyl chloride	mg/kg (ppm)	2.5	71	42-107
Bromomethane	mg/kg (ppm)	2.5	80	46-113
Chloroethane	mg/kg (ppm)	2.5	87	47-115
Trichlorofluoromethane	mg/kg (ppm)	2.5	88	53-112
Acetone	mg/kg (ppm)	12.5	102	39-147
1,1-Dichloroethene	mg/kg (ppm)	2.5	91	65-110
Hexane	mg/kg (ppm)	2.5	98	55-107
Methylene chloride	mg/kg (ppm)	2.5	98	50-127
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	105	72-122
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	96	71-113
1,1-Dichloroethane	mg/kg (ppm)	2.5	102	74-109
2,2-Dichloropropane	mg/kg (ppm)	2.5	100	64-151
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	95	73-110
Chloroform	mg/kg (ppm)	2.5	102	76-110
2-Butanone (MEK)	mg/kg (ppm)	12.5	108	60-121
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	107	73-111
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	102	72-116
1,1-Dichloropropene	mg/kg (ppm)	2.5	103	72-112
Carbon tetrachloride	mg/kg (ppm)	2.5	100	67-123
Benzene	mg/kg (ppm)	2.5	101	72-106
Trichloroethene	mg/kg (ppm)	2.5	106	72-107
1,2-Dichloropropane	mg/kg (ppm)	2.5	108	74-115
Bromodichloromethane	mg/kg (ppm)	2.5	105	75-126
Dibromomethane	mg/kg (ppm)	2.5	105	76-116
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	108	80-128
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	108	71-138
Toluene	mg/kg (ppm)	2.5	106	74-111
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	110	77-135
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	106	77-116
2-Hexanone	mg/kg (ppm)	12.5	110	70-129
1,3-Dichloropropane	mg/kg (ppm)	2.5	108	75-115
Tetrachloroethene	mg/kg (ppm)	2.5	104	73-111
Dibromochloromethane	mg/kg (ppm)	2.5	108	64-152
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	108	77-117
Chlorobenzene	mg/kg (ppm)	2.5	102	76-109
Ethylbenzene	mg/kg (ppm)	2.5	106	75-112
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	103	76-125
m,p-Xylene	mg/kg (ppm)	5	105	77-115
o-Xylene	mg/kg (ppm)	2.5	103	76-115
Styrene	mg/kg (ppm)	2.5	108	76-119
Isopropylbenzene	mg/kg (ppm)	2.5	105	76-120
Bromoform	mg/kg (ppm)	2.5	105	50-174
n-Propylbenzene	mg/kg (ppm)	2.5	109	77-115
Bromobenzene	mg/kg (ppm)	2.5	108	76-112
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	107	77-121
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	108	74-121
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	111	74-116
2-Chlorotoluene	mg/kg (ppm)	2.5	108	75-113
4-Chlorotoluene	mg/kg (ppm)	2.5	107	77-115
tert-Butylbenzene	mg/kg (ppm)	2.5	110	77-123
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	109	77-119
sec-Butylbenzene	mg/kg (ppm)	2.5	111	78-120
p-Isopropyltoluene	mg/kg (ppm)	2.5	112	77-120
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	108	76-112
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	104	74-109
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	107	75-114
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	106	68-122
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	105	75-122
Hexachlorobutadiene	mg/kg (ppm)	2.5	107	74-130
Naphthalene	mg/kg (ppm)	2.5	107	73-122
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	106	75-117

Date of Report: 03/16/17
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Project: Irving and Yakima, PO 10737g-01, F&BI 703020

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL SAMPLES FOR PAHS BY EPA METHOD 8270D SIM

Laboratory Code: 703174-05 1/5 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Naphthalene	mg/kg (ppm)	0.17	<0.01	81	44-129
Acenaphthylene	mg/kg (ppm)	0.17	<0.01	83	52-121
Acenaphthene	mg/kg (ppm)	0.17	<0.01	82	51-123
Fluorene	mg/kg (ppm)	0.17	<0.01	82	37-137
Phenanthrene	mg/kg (ppm)	0.17	<0.01	82	34-141
Anthracene	mg/kg (ppm)	0.17	<0.01	83	32-124
Fluoranthene	mg/kg (ppm)	0.17	<0.01	83	16-160
Pyrene	mg/kg (ppm)	0.17	<0.01	93	10-180
Benz(a)anthracene	mg/kg (ppm)	0.17	<0.01	81	23-144
Chrysene	mg/kg (ppm)	0.17	<0.01	83	32-149
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	<0.01	91	23-176
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	<0.01	98	42-139
Benzo(a)pyrene	mg/kg (ppm)	0.17	<0.01	81	21-163
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	<0.01	74	23-170
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	<0.01	83	31-146
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	<0.01	72	37-133

Laboratory Code: Laboratory Control Sample 1/5

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Naphthalene	mg/kg (ppm)	0.17	88	88	58-121	0
Acenaphthylene	mg/kg (ppm)	0.17	90	90	54-121	0
Acenaphthene	mg/kg (ppm)	0.17	88	88	54-123	0
Fluorene	mg/kg (ppm)	0.17	90	88	56-127	2
Phenanthrene	mg/kg (ppm)	0.17	88	89	55-122	1
Anthracene	mg/kg (ppm)	0.17	89	93	50-120	4
Fluoranthene	mg/kg (ppm)	0.17	92	91	54-129	1
Pyrene	mg/kg (ppm)	0.17	93	97	53-127	4
Benz(a)anthracene	mg/kg (ppm)	0.17	87	90	51-115	3
Chrysene	mg/kg (ppm)	0.17	90	90	55-129	0
Benzo(b)fluoranthene	mg/kg (ppm)	0.17	94	97	56-123	3
Benzo(k)fluoranthene	mg/kg (ppm)	0.17	101	103	54-131	2
Benzo(a)pyrene	mg/kg (ppm)	0.17	89	88	51-118	1
Indeno(1,2,3-cd)pyrene	mg/kg (ppm)	0.17	87	82	49-148	6
Dibenz(a,h)anthracene	mg/kg (ppm)	0.17	90	88	50-141	2
Benzo(g,h,i)perylene	mg/kg (ppm)	0.17	79	78	52-131	1

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 compound 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. Compounds in the sample matrix interfered with the quantitation of the analyte.

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.

703020

SAMPLE CHAIN OF CUSTODY ME 03/01/17 VS2/VW2/BT3

Send Report To Jason Cass

Company EHSI

Address 1011 SW Klickitat Way, #104

City, State, ZIP Seattle, WA 98134

Phone # (206) 381-1128 Fax #

SAMPLERS (signature) Jason Cass

PROJECT NAME/NO. Irving & Yakima

PO # 107379-61

REMARKS

Page # 1 of 1

TURNAROUND TIME
- [x] Standard (2 Weeks)
- [ ] RUSH

Rush charges authorized by:

SAMPLE DISPOSAL
- [x] Dispose after 30 days
- [ ] Return samples
- [ ] Will call with instructions

ANALYSES REQUESTED

Sample ID	Lab ID	Date	Time	Sample Type	# of containers	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	PAH	Lead	MTCA 5 Metals			Notes
B1-5	01 A-E	3/1/17	10:45	Soil	5	X	X		X			X	X				
B1-10	02		10:55		5	X	X		X			X	X				(X) - per JC 3/8/17 ME
B1-GWS	03		11:20	H2O	5	X	X		X								
B1-50	04		12:25	Soil	5												
B2-5	05		14:00		5	(X)	(X)		(X)			(X)	(X)				
B2-10	06		15:25		5	(X)	(X)		(X)			(X)	(X)				
B2-15	07		15:35		1												
B2-50	08 A-E		16:45		5												
TP1-1	09 A-C		14:30		3	X	X										
TP1-3	10		14:35		3	X	X		X			X		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: Jason Cass	Jason Cass	EHSI	3/1/17	18:00
Received by: [signature]	Jon Shimazu	FB&I	3/1/17	18:00
Relinquished by:				
Received by:				

FORMS\COC\COC.DOC

Samples received at 4 °C