ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

6347 Seaview Avenue Northwest
Seattle, Washington 98107
Telephone 206-781-1449
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May 15, 2017

State of Washington Department of Ecology
Northwest Regional Office
Toxic Cleanup Program
3190 160th Ave SE
Bellevue, WA 98008-5452

RE: Removal of Diesel Impacted Soil
Swedish Edmonds Hospital Campus
21601 76th Avenue West
Edmonds, Washington
ATC Project Number: 252EM00072

Dear Mr. Herrygers:

On behalf of Herrygers Environmental Services, LLC (Herrygers Environmental), ATC Group Services, LLC (ATC) has prepared this report describing the assessment, removal and disposal of petroleum contaminated soil impacted by the release of diesel on December 22, 2016 during refilling of a 3,000-gallon diesel above ground storage tank (AST) located at Swedish Edmonds Hospital Campus at 21601 76th Avenue West, Edmonds, Washington (Site [**Figure 1**]).

The objective of the activities described in this report was to remove all impacted soil until conditions were verified to be in accordance with the Model Toxics Control Act (MTCA) and its implementation regulations defined in Revised Code of Washington (RCW) Chapter 70.105D and Washington Administrative Code (WAC) Chapter 173-340. Furthermore, removed soil was disposed of in accordance to Table 12.1: Guidance for the Reuse of Petroleum Contaminated Soil, as described in Washington State Department of Ecology (Ecology) Publication 10-09-057, *Guidance for Remediation of Petroleum Contaminated Sites*, revised June, 2016.

SITE DESCRIPTION AND BACKGROUND

The Site is located on the southwest portion of the Swedish Edmonds Hospital Campus in Edmonds, Snohomish County, Washington, just west of the emergency room entrance.

The surrounding area use is primarily utilized for residential and commercial purposes. The general topography of the property and surrounding area is sloped to the west.

INITIAL REMEDIAL ACTIVITIES

On December 22, 2016 the Swedish Hospital contracted National Response Corporation (NRC) to respond to an approximate five (5) gallon diesel spill reported at the Site. Reportedly, the release occurred by overfilling the AST which sprayed fuel on the surrounding trees and soil. NRC utilized a chainsaw to cut down cedar trees, in order to access and vactor the uppermost layer of contaminated soil on-site. NRC vactored 3.0 tons of soil and leaf litter on December 22 and 23, 2016 and transported it off-site for disposal.

On December 23, 2016 NRC collected four soil samples, designated No. 1 through No. 4, at unspecified locations and sent them to a laboratory to be analyzed for diesel (fuel oil) and heavy oil using Ecology Method NWTPHDx/Extented and volatile organic compounds (VOC) using Environmental Protection Agency (EPA) Method 8260C.

Detections of diesel in soil samples labeled No. 2 and No. 3 both had detections above the MTCA Method

A cleanup level of 2,000 milligrams per kilogram (mg/kg) for diesel in soil.

On January 23, 2017 NRC returned to the Site to remove more diesel impacted soil (4.6 tons) utilizing a vactor truck. NRC collect two more soil samples, designated No. 1 and No. 2, at unspecified location and sent them to a laboratory to be analyzed for diesel (fuel oil) and heavy oil using Ecology Method NWTPHDx/Extented.

NRC removed a total of 7.6 tons of soil and debris from the Site. The area of soil removed by NRC is shown on **Figure 2**. The laboratory analytical reports from the initial remedial activities are attached as **Appendix A**.

OBJECTIVE AND SCOPE OF WORK

As directed by Herrygers Environmental, ATC performed the scope of work described below. ATC collected discrete soil samples to assess and delineate the presence of diesel impacted soil in the vicinity of the AST on March 9, 2017 and submitted them to an Ecology accredited laboratory for analysis of Ecology Method NWTPHDx/Extended.

Based on the results of the March 9, 2017 soil assessment, ATC contracted Wyser to perform a remedial excavation to remove and disposal of all soil impacted above MTCA cleanup levels. Waste soil exhibiting evidence of petroleum impacts was transported at the direction of ATC to a disposal facility that treated the petroleum impacts through thermal desorption. Confirmation soil samples were collected along the sidewalls and base of the remedial excavation for laboratory analysis in order to assess, through comparison to MTCA Method A soil cleanup levels, if the affected soil had been removed.

REMOVAL OF DIESEL IMPACTED SOIL

Site Health and Safety

A site specific health and safety plan was developed for this project in accordance with Occupational Safety and Health Administration and state regulations. The site specific HASP was implemented during all phases of field activities.

Prior to initiating any subsurface work, ATC evaluated the area of concern for the presence of subsurface structures and utilities by contacting a service that notifies public and private utilities of the proposed subsurface investigation and requests their participation in identifying subsurface utilities.

March, 2017 Additional Assessment

On March 9, 2017 an ATC representative advanced seven (7) soil borings with a hand auger, designated HA-1 through HA-7 in the locations shown on Figure 2. The hand auger borings were advanced to selected depths, no deeper than 1.5 feet below ground surface (bgs). Soil samples were collected at terminal depths of each soil boring. The seven soil samples were sent to Fremont Analytical of Seattle, Washington, an Ecology accredited laboratory, to be analyzed for diesel (fuel oil) and heavy oil using Ecology Method NWTPHDx/Extended. Laboratory analysis indicated that three (3) out of the seven (7) soil sample results had detections of diesel greater than the MTCA Method A clean up level of 2,000 mg/kg (**Table 1**). Soil sample HA-02-0.5-1 collected at a depth of one (1) foot bgs from soil boring HA-02 contained 7,290 mg/kg of diesel, soil sample HA-03-0.5-1 collected at a depth of one (1) foot bgs from soil boring HA-03 contained 3,050 mg/kg of diesel and soil sample HA-06-0-0.5 collected at a depth of 0.5 foot bgs from soil boring HA-06 contained 2,030 mg/kg of diesel (**Figure 2**).

Based on the confirmation of soil impacted with concentrations above MTCA cleanup levels, Herrygers requested ATC to oversee the removal of all soil impacted with diesel above MTCA Method A cleanup levels at the site, and through the collection of discrete soil samples, confirm the removal of the diesel impacted soil. Since site redevelopment required the soil to be removed, soil reuse would be limited to manufacture of asphalt or daily cover in a lined municipal solid waste or limited purpose landfill as per Table 12.1 of Ecology Publication 10-09-057, *Guidance for the Remediation of Petroleum Contaminated*

Sites.

Soil Removal and Disposal Activities

On April 12, 2017, Wyser began excavating diesel impacted soil under the supervision of ATC. Wyser removed approximately 19.86 tons of soil. The excavation was approximately 20 feet by 30 feet in area and no greater than two feet bgs. The removed soil was directly loaded into truck and trailers and hauled to Cemex of Everett, Washington for disposal by thermal desorption. Soil was removed until odor, visual staining and sheen, and organic vapors measured by a photo ionization detector (PID) indicated an absence of petroleum hydrocarbons.

Wyser's Export Materials Log and individual weight tickets are presented in **Appendix B**.

SITE ASSESSMENT ACTIVITIES

To determine if the remedial excavation successfully removed all soil above MTCA Method A cleanup levels, soil samples were collected along sidewalls and within the base of the excavation. To map the soil sample locations, a superimposed reference grid (**Figure 3**) was constructed. The grid consisted of 10 foot by 10 foot grids in four east-west oriented rows, designated one (1) through four (4) accompanied by five north-south oriented columns, designated A through E with column A located along the western boundary of the site.

A decontaminated stainless steel spoon or trowel was used to collect each soil sample. The soil samples were collected several inches below the surface to ensure material sampled was representative and not subject to immediate volatilization. Nitrile gloves were worn during sampling and were changed between sample collection points to reduce potential for cross contamination. After collection of each soil sample, the spoon or trowel was decontaminated using a biodegradable detergent and potable water wash followed by a clean potable water rinse and a final rinse with distilled water.

Soil samples were collected in glass jars provided by the analytical laboratory. After filling the jar with the sample, the jar was capped, bagged, and placed in a cooler on ice.

Each soil sample was monitored for the presence of volatile organic compounds (VOC) using a Photoionization Detector (PID). The VOC headspace readings were recorded in the field and documented on the soil sampling log (**Appendix C**).

After completion of the April 12, 2017 remedial excavation, ATC collected a total of 12 soil samples. Soil samples were designated by number 01 to 12 and upon collection were plotted onto the grid system described above so that soil sample locations could be found if a sample were to have detected concentrations of chemicals of concern (COC) above MTCA Method A cleanup levels (**Table 2**). A total of seven (7) samples were collected from the base of the excavation and five (5) samples were collected from the side walls of the excavation (**Figure 3**).

Analytical Methods

Soil samples collected for laboratory analysis were submitted to Fremont Analytical. Soil samples were analyzed for diesel and heavy oil using Ecology Method NWTPH-Dx/Dx Extended as well as benzene, toluene, ethylbenzene and xylenes (BTEX) using EPA Method 8260C.

Analytical Results

Of the 12 soil samples taken to confirm the removal of the diesel contaminated soil no samples had detections above MTCA Method A cleanup levels, seven of the samples did however have detections above the laboratory method minimum reporting limit. Samples with detectable concentrations of COC include 02 and 04 through 09.

A summary of the laboratory analytical results for the collected soil samples is presented in **Table 2** and a copy of the laboratory analytical report and chain-of-custody document are presented in **Appendix D**.

CONCLUSIONS

Soil samples collected from the sidewalls and excavation base after the removal of 19.86 tons of diesel impacted soil were analyzed for the presence of diesel, heavy oil and BTEX. None of the confirmation soil samples had detectable concentrations above MTCA Method A cleanup levels.

Based on the analytical results of the April 12, 2017 excavation confirmation soil samples, soil impacted by diesel from the December 22, 2016 diesel fuel release above MTCA Method A Cleanup levels were removed from the site and no further investigation is warranted.

LIMITATIONS AND RELIANCE

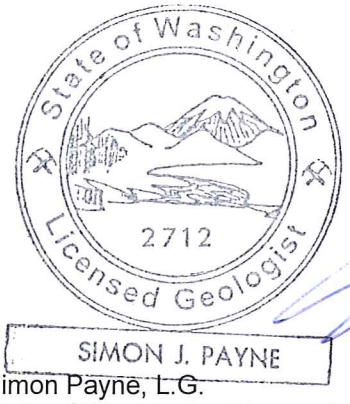
This report was prepared in accordance with the scope of work outlined in ATC's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of Herrygers Environmental, for the express purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to ATC. To the extent this report is based on information provided to ATC by third parties, ATC may have made efforts to verify this third party information, but ATC cannot guarantee the completeness or accuracy of this third party information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied are made by ATC.

CERTIFICATION

The information provided in this Removal of Diesel Impacted Soil (dated May 15, 2017), at the Swedish Edmonds Hospital Campus located at 21601 76th Avenue West Edmonds, Snohomish County, Washington was prepared under the supervision of an ATC State of Washington Licensed Geologist.
A professional geologist's certification of conditions comprises a declaration of his or her professional judgement. It does not constitute a warranty or guarantee, expressed or implied, nor does it relieve any other party of its responsibility to abide by contract documents, applicable codes, standards, regulations and ordinances.

We appreciate the opportunity to be of service in this matter. If you have questions regarding this report, please contact us at (206) 781-1449.

Sincerely,
ATC Group Services LLC



Nicholas Turner
Staff Scientist

Simon Payne, L.G.
State of Washington Licensed Geologist
Project Geologist

Attachments:

Table 1 – Summary of Soil Assessment Laboratory Analytical Results
Table 2 – Summary of Confirmation Soil Laboratory Analytical Results

Figure 1 – Site Vicinity Map
Figure 2 – Site Plan
Figure 3 – Soil Sample Location Map

Appendix A – Laboratory Analytical Reports and Chain of Custody Documentations from Initial Remedial Activities
Appendix B – Export Materials Log and Weight Tickets
Appendix C – Soil Sample Log
Appendix D – Laboratory Analytical Reports and Chain of Custody Documentation

Cc: Ron Herrygers - Herrygers Environmental Services, LLC, 214 Beltrees Drive, Lexington, SC 29072

TABLES

Table 1 - Summary of Soil Assessment Laboratory Analytical Results
Swedish Edmonds Campus
21601 76th Avenue West
Edmonds, Washington
ATC Project No. 252 EM 00072

Boring ID	Sample ID	Sample Depth Interval (feet below ground surface [bgs])	Sample Date	Total Petroleum Hydrocarbons[1] in mg/kg		Volatile Organic Compounds[2] in mg/kg			
				Diesel (Fuel Oil)	Heavy Oil	Benzene	Toluene	Ethylbenzene	Xylenes
HA-01	HA-01-1-1.5	0.5	3/9/2017	<19.1	<47.8	<0.0433	<0.0433	<0.0649	<0.0433
HA-02	HA-02-0.5-1	0.0	3/9/2017	**7,290**	<47.4	<0.0252	<0.0252	**6.39**	**35.5**
HA-03	HA-03-0.5-1	1.0	3/9/2017	**3,050**	<57.2	<0.0357	<0.0357	1.52	6.27
HA-04	HA-04-0.5-1	1.0	3/9/2017	<20.3	<50.8	<0.0420	<0.0420	<0.0630	<0.0420
HA-05	HA-05-0.5-1	1.0	3/9/2017	<21.3	<53.4	<0.0237	<0.0237	<0.0355	<0.0237
HA-06	HA-06-0-0.5	1.0	3/9/2017	**2,030**	<51.2	<0.0163	<0.0163	2.56	**9.77**
HA-07	HA-07-0.5-1	2.0	3/9/2017	<25.5	<63.8	<0.0248	<0.0248	<0.0372	<0.0248
MTCA-Method A Cleanup Level				**2,000**	**2,000**	**0.03**	**7**	**6**	**9**

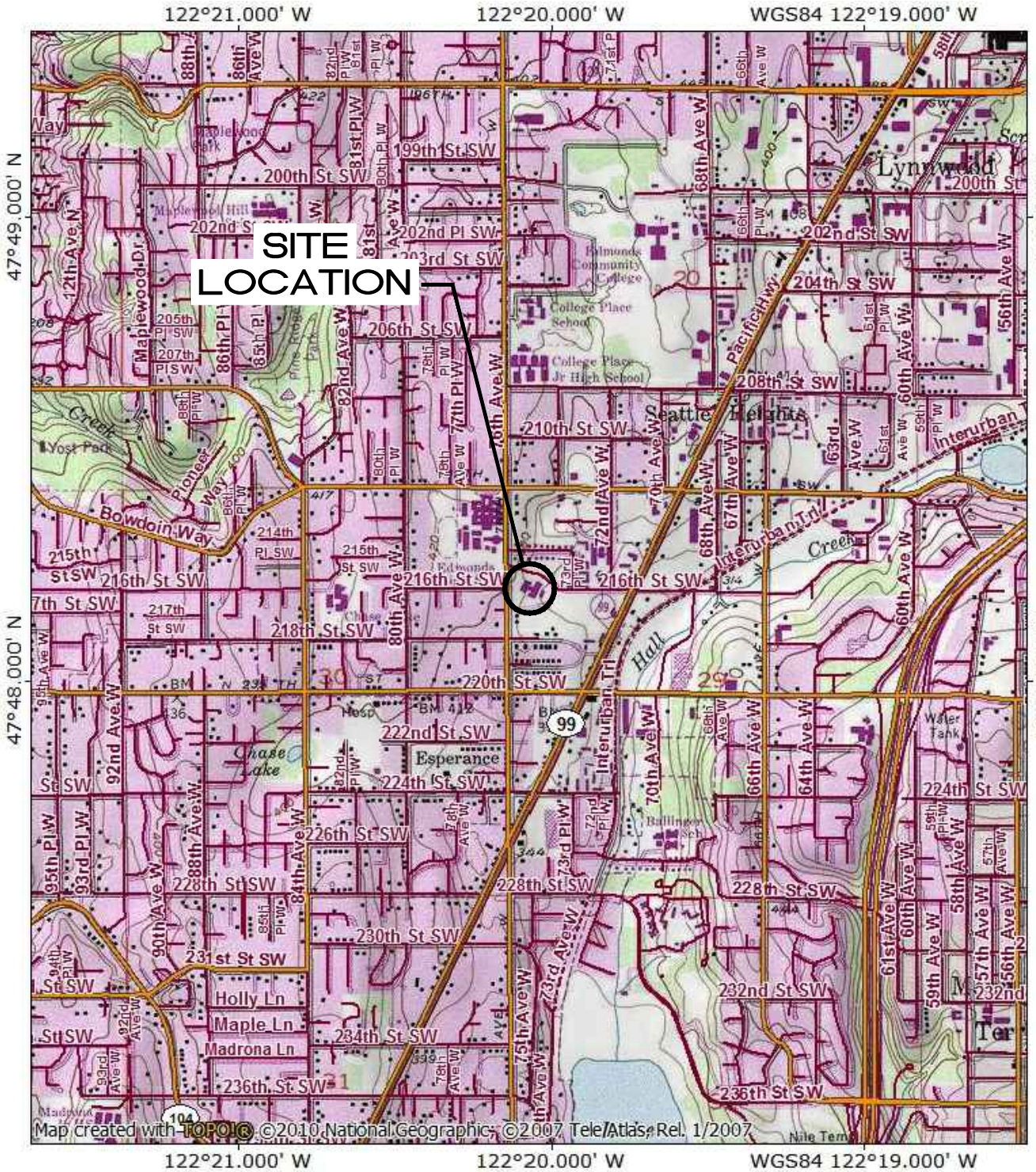
Notes:
mg/kg = milligram per kilogram
ND = Analyte not detected above laboratory Method reporting limit
MTCA - Washington State Department of Ecology Model Toxics Control Act
Bold denotes concentration at or above regulatory cleanup level
1 = Analytical results by gas chromatography and mass spectrometry by Ecology Method NWTPH-Dx/Extended
2 = Analytical results by gas chromatography and mass spectrometry by United States Environmental Protection Agency Method 8260C
All analytical results reported in mg/kg equivalent to parts per million (ppm)

Table 2 - Summary of Confirmation Soil Laboratory Analytical Results
Swedish Edmonds Campus
21601 76th Avenue West
Edmonds, Washington
ATC Project No. 252 EM 00072

Sample ID	Sample Depth Interval (feet below ground surface [bgs])	Sample Date	Sample Location	Total Petroleum Hydrocarbons[1] in mg/kg		Volatile Organic Compounds[2] in mg/kg			
				Diesel (Fuel Oil)	Heavy Oil	Benzene	Toluene	Ethylbenzene	Xylenes
01	0.5	4/12/2017	Grid E3; excavation base; 0.5 feet bgs; see sample location 01 on map	<21.4	<53.6	<0.00891	<0.00891	<0.0134	<0.00891
02	0.0	4/12/2017	Grid E3; eastern extent of excavation; 0.0 feet bgs; see sample location 02 on map	33.0	<63.0	<0.0122	<0.0122	<0.0184	<0.0122
03	1.0	4/12/2017	Grid D3; excavation sidewall; 1.0 feet bgs; see sample location 03 on map	<20.2	<50.6	<0.0107	<0.0107	<0.0160	<0.0107
04	1.0	4/12/2017	Grid D3; excavation sidewall; 1.0 feet bgs; see sample location 04 on map	53.0	<45.8	<0.0115	<0.0115	<0.0173	<0.0115
05	1.0	4/12/2017	Grid D2; excavation sidewall; 1.0 feet bgs; see sample location 05 on map	<19.5	<48.8	0.0210	0.0237	0.0204	0.0637
06	1.0	4/12/2017	Grid C3; excavation sidewall; 1.0 feet bgs; see sample location 06 on map	<21.4	<53.5	0.0174	0.0132	<0.0181	0.0521
07	2.0	4/12/2017	Grid C2; excavation base; 2.0 feet bgs; see sample location 07 on map	75.4	<48.4	<0.0133	0.338	1.16	6.38
08	1.0	4/12/2017	Grid C2; excavation sidewall; 1.0 feet bgs; see sample location 08 on map	<22.6	<56.4	<0.00974	0.0144	0.0164	0.0607
09	2.0	4/12/2017	Grid D3; excavation base; 2.0 feet bgs; see sample location 09 on map	<20.4	<51.1	<0.0108	0.0251	0.0385	0.178
10	0.5	4/12/2017	Grid B2; excavation base; 0.5 feet bgs; see sample location 10 on map	<19.4	<48.4	<0.00902	<0.00902	<0.0135	<0.00902
11	0.5	4/12/2017	Grid B3; excavation base; 0.5 feet bgs; see sample location 11 on map	<20.7	<51.7	<0.00840	<0.00840	<0.0126	<0.00840
12	0.5	4/12/2017	Grid C3; excavation base; 0.5 feet bgs; see sample location 12 on map	<19.1	<47.8	<0.00946	<0.00946	<0.0142	<0.00946
MTCA-Method A Cleanup Level				**2,000**	**2,000**	**0.03**	**7**	**6**	**9**

Notes:
mg/kg = milligram per kilogram
ND = Analyte not detected above laboratory Method reporting limit
MTCA - Washington State Department of Ecology Model Toxics Control Act
Bold denotes concentration at or above regulatory cleanup level
1 = Analytical results by gas chromatography and mass spectrometry by Ecology Method NWTPH-Dx/Extended
2 = Analytical results by gas chromatography and mass spectrometry by United States Environmental Protection Agency Method 8260C
All analytical results reported in mg/kg equivalent to parts per million (ppm)

FIGURES



NATIONAL GEOGRAPHIC

0.0 0.5 1.0 miles
0.0 0.5 1.0 1.5 km

TN MN 16°

04/25/17

SOURCE: USGS TOPO MAP, EDMONDS EAST, WA QUAD, 1981

SITE VICINITY MAP

SWEDISH EDMONDS HOSPITAL CAMPUS
21601 76TH AVENUE WEST
EDMONDS, WA

PROJECT NUMBER: 252EM00072		DATE: 4/25/17	FIGURE 1
APPROVED BY: NT		DRAWN BY: BK	

ATC
6347 Seaview Avenue NW
Seattle, Washington 98107
Ph: (206) 781-1449 *** Fax: (206) 781-1543

S:\Projects-BST\HERRYGERS ENVIRONMENTAL\252EM00072 SWEDISH EDMONDS\VICINITY.dwg

LEGEND

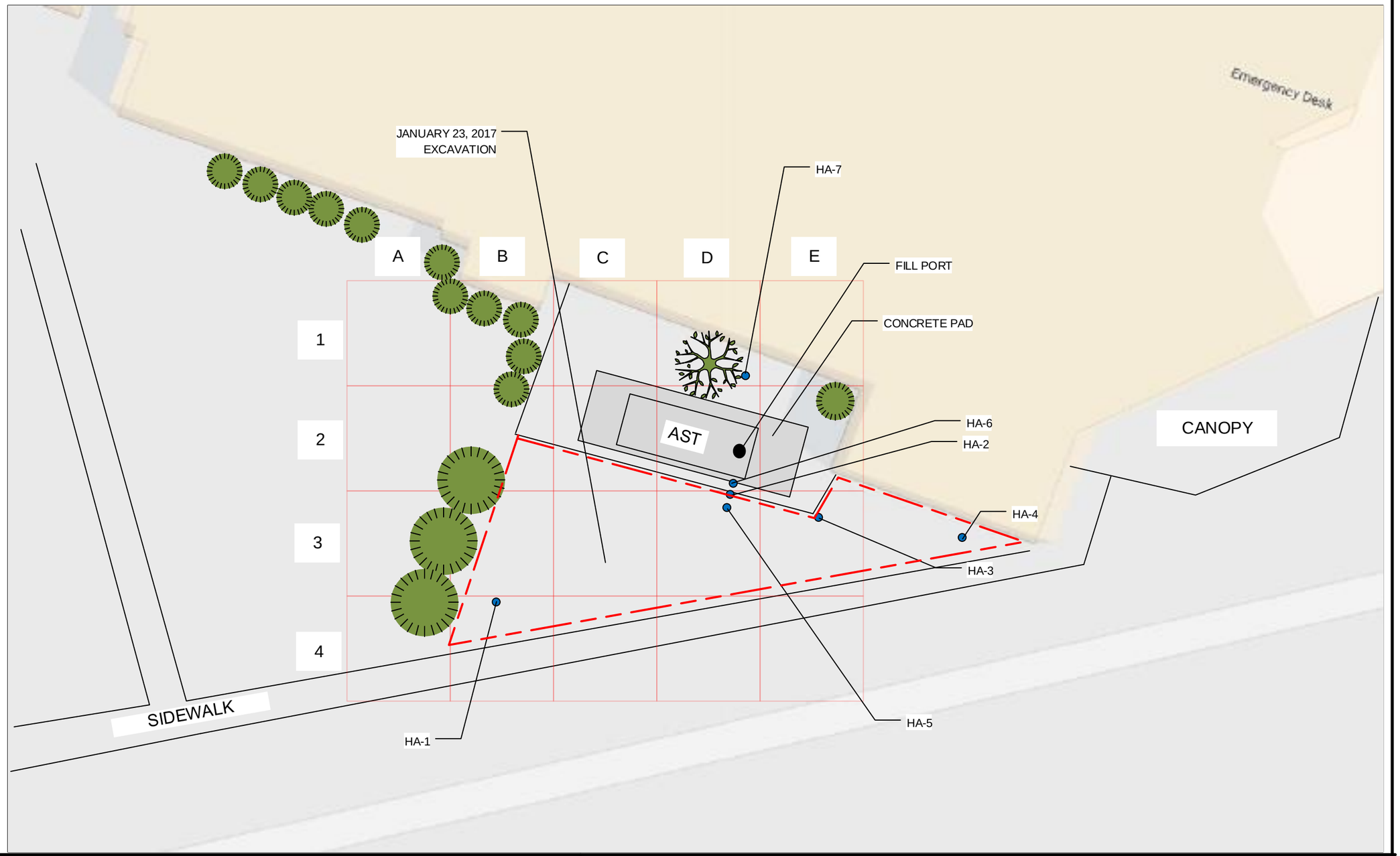
HA-01 (03/09/17)

EXCAVATION BOUNDARY

VEGETATION

CHAIN LINK FENCE

0 ft. 9 ft. 15 ft. 30 ft.



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(206) 781-1449

PROJECT NO.: 252 EM 00072

FIGURE 2

SCALE: NTS	REVIEWED BY: SP
DATE: 04/2017	FILE: APPENDIX B

N

SITE PLAN

SWEDISH EDMONDS CAMPUS FUEL RELEASE
EDMONDS, WASHINGTON

LEGEND

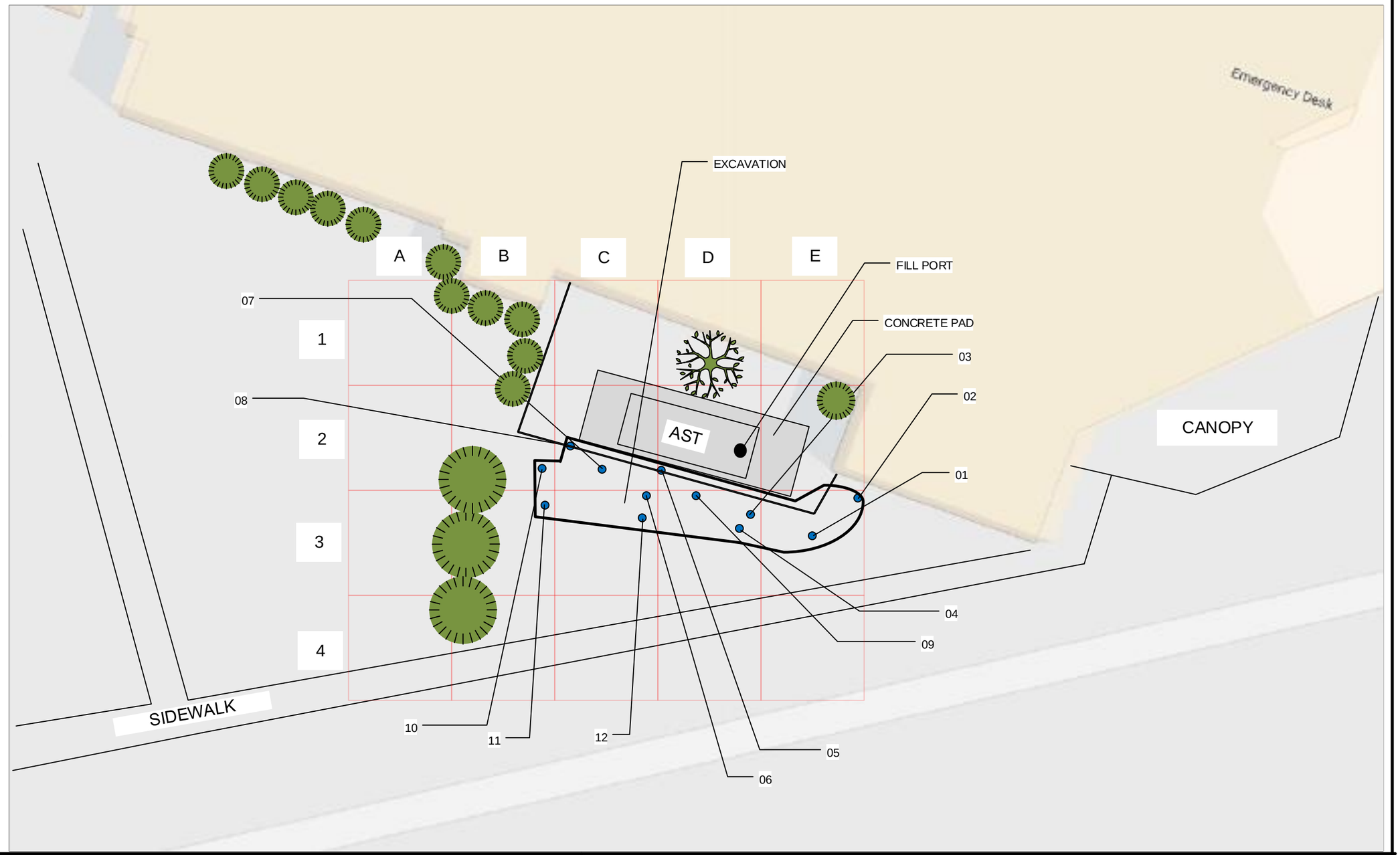
EXCAVATION SAMPLE 01 (04/12/17)

EXCAVATION BOUNDARY

VEGETATION

CHAIN LINK FENCE

0 ft. 9 ft. 15 ft. 30 ft.



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6347 Seaview Avenue NW
Seattle, WA 98107
(206) 781-1449

PROJECT NO.: 252 EM 00072

FIGURE 3

SCALE: NTS	REVIEWED BY: SP
DATE: 04/2017	FILE: APPENDIX B

N

SOIL SAMPLE LOCATION MAP

SWEDISH EDMONDS CAMPUS FUEL RELEASE
EDMONDS, WASHINGTON

APPENDIX A:
LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY DOCUMENTATIONS FROM INITIAL REMEDIAL ACTIVITIES

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.

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Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

January 5, 2017

Kyle Myers, Project Manager
NRC Environmental Services
9520 10th Ave. S., Suite 150
Seattle, WA 98108-5067

Dear Mr Myers:

Included are the results from the testing of material submitted on December 27, 2016 from the Nelson Petroleum, PO 109689, F&BI 612382 project. There are 11 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
NRC0105R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on December 27, 2016 by Friedman & Bruya, Inc. from the NRC Environmental Services Nelson Petroleum, PO 109689, F&BI 612382 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	NRC Environmental Services
612382 -01	No. 1
612382 -02	No. 2
612382 -03	No. 3
612382 -04	No. 4

The 8260C samples were not received in 5035 sampling kits. The data were flagged accordingly.

The 8260C laboratory control sample and laboratory control sample duplicate failed the relative percent difference for bromomethane. The analyte was not detected therefore the data were acceptable.

All other quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/05/17
Date Received: 12/27/16
Project: Nelson Petroleum, PO 109689, F&BI 612382
Date Extracted: 12/28/16
Date Analyzed: 12/28/16

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

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

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 48-168)
No. 1 612382-01	440	<250	106
No. 2 612382-02	5,600	<250	90
No. 3 612382-03	34,000	1,400 x	ip
No. 4 612382-04	490	<250	94
Method Blank 06-2683 MB	<50	<250	96

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	No. 1 pc	Client:	NRC Environmental Services
Date Received:	12/27/16	Project:	Nelson Petroleum, PO 109689, F&BI 612382
Date Extracted:	12/27/16	Lab ID:	612382-01
Date Analyzed:	12/27/16	Data File:	122721.D
Matrix:	Soil	Instrument:	GCMS4
Units:	mg/kg (ppm) Dry Weight	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	62	142
Toluene-d8	104	55	145
4-Bromofluorobenzene	97	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	0.76
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	3.5
Hexane	<0.25	o-Xylene	1.5
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	0.17
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	0.56
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	1.2
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	4.3
Benzene	<0.03	sec-Butylbenzene	0.22
Trichloroethene	<0.02	p-Isopropyltoluene	0.20
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	0.36	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	0.23
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	No. 2 pc	Client:	NRC Environmental Services
Date Received:	12/27/16	Project:	Nelson Petroleum, PO 109689, F&BI 612382
Date Extracted:	12/27/16	Lab ID:	612382-02 1/0.5
Date Analyzed:	12/30/16	Data File:	123011.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	93	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	0.22
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	1.0
Hexane	<0.25	o-Xylene	0.51
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	0.13
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	0.37
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	1.6
Benzene	<0.03	sec-Butylbenzene	0.068
Trichloroethene	<0.02	p-Isopropyltoluene	0.16
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	0.13	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	0.30
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	No. 3 pc	Client:	NRC Environmental Services
Date Received:	12/27/16	Project:	Nelson Petroleum, PO 109689, F&BI 612382
Date Extracted:	12/27/16	Lab ID:	612382-03
Date Analyzed:	12/27/16	Data File:	122723.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	103	55	145
4-Bromofluorobenzene	91	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	8.4
Acetone	0.55	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	38
Hexane	<0.25	o-Xylene	17
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	1.5
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	4.2
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	9.0
Chloroform	<0.05	1,1,2,2-Tetrachloroethane	0.051
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	34
Benzene	0.18	sec-Butylbenzene	1.2
Trichloroethene	<0.02	p-Isopropyltoluene	0.92
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	3.9	Hexachlorobutadiene	<0.25
trans-1,3-Dichloropropene	<0.05	Naphthalene	2.3
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	No. 4 pc	Client:	NRC Environmental Services
Date Received:	12/27/16	Project:	Nelson Petroleum, PO 109689, F&BI 612382
Date Extracted:	12/27/16	Lab ID:	612382-04
Date Analyzed:	12/27/16	Data File:	122724.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	103	55	145
4-Bromofluorobenzene	92	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	0.29
Acetone	<0.5	1,1,1,2-Tetrachloroethane	<0.05
1,1-Dichloroethene	<0.05	m,p-Xylene	1.5
Hexane	<0.25	o-Xylene	0.71
Methylene chloride	<0.5	Styrene	<0.05
Methyl t-butyl ether (MTBE)	<0.05	Isopropylbenzene	0.11
trans-1,2-Dichloroethene	<0.05	Bromoform	<0.05
1,1-Dichloroethane	<0.05	n-Propylbenzene	0.38
2,2-Dichloropropane	<0.05	Bromobenzene	<0.05
cis-1,2-Dichloroethene	<0.05	1,3,5-Trimethylbenzene	0.94
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	3.4
Benzene	<0.03	sec-Butylbenzene	0.18
Trichloroethene	<0.02	p-Isopropyltoluene	0.16
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	0.21
1,1,2-Trichloroethane	<0.05	1,2,3-Trichlorobenzene	<0.25
2-Hexanone	<0.5		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	NRC Environmental Services
Date Received:	Not Applicable	Project:	Nelson Petroleum, PO 109689, F&BI 612382
Date Extracted:	12/27/16	Lab ID:	06-2648 mb
Date Analyzed:	12/27/16	Data File:	122720.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	102	55	145
4-Bromofluorobenzene	93	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		

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/05/17
Date Received: 12/27/16
Project: Nelson Petroleum, PO 109689, F&BI 612382

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

Laboratory Code: 612390-02 (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	94	73-135	0

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	98	74-139

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/05/17
Date Received: 12/27/16
Project: Nelson Petroleum, PO 109689, F&BI 612382

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

Laboratory Code: 612382-04 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result (Wet wt)	Percent Recovery MS	Acceptance Criteria
Dichlorodifluoromethane	mg/kg (ppm)	2.5	<0.5	12	10-142
Chloromethane	mg/kg (ppm)	2.5	<0.5	38	10-126
Vinyl chloride	mg/kg (ppm)	2.5	<0.05	32	10-138
Bromomethane	mg/kg (ppm)	2.5	<0.5	51	10-163
Chloroethane	mg/kg (ppm)	2.5	<0.5	49	10-176
Trichlorofluoromethane	mg/kg (ppm)	2.5	<0.5	38	10-176
Acetone	mg/kg (ppm)	12.5	<0.5	65	10-163
1,1-Dichloroethene	mg/kg (ppm)	2.5	<0.05	45	10-160
Hexane	mg/kg (ppm)	2.5	<0.25	24	10-137
Methylene chloride	mg/kg (ppm)	2.5	<0.5	70	10-156
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	<0.05	60	21-145
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	55	14-137
1,1-Dichloroethane	mg/kg (ppm)	2.5	<0.05	61	19-140
2,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	70	10-158
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	<0.05	68	25-135
Chloroform	mg/kg (ppm)	2.5	<0.05	72	21-145
2-Butanone (MEK)	mg/kg (ppm)	12.5	<0.5	69	19-147
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	<0.05	73	12-160
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	<0.05	65	10-156
1,1-Dichloropropene	mg/kg (ppm)	2.5	<0.05	58	17-140
Carbon tetrachloride	mg/kg (ppm)	2.5	<0.05	63	9-164
Benzene	mg/kg (ppm)	2.5	<0.03	60	29-129
Trichloroethene	mg/kg (ppm)	2.5	<0.02	65	21-139
1,2-Dichloropropane	mg/kg (ppm)	2.5	<0.05	66	30-135
Bromodichloromethane	mg/kg (ppm)	2.5	<0.05	80	23-155
Dibromomethane	mg/kg (ppm)	2.5	<0.05	73	23-145
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	<0.5	80	24-155
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	75	28-144
Toluene	mg/kg (ppm)	2.5	<0.05	59	35-130
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	<0.05	69	26-149
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	<0.05	65	10-205
2-Hexanone	mg/kg (ppm)	12.5	<0.5	69	15-166
1,3-Dichloropropane	mg/kg (ppm)	2.5	<0.05	65	31-137
Tetrachloroethene	mg/kg (ppm)	2.5	<0.025	60	20-138
Dibromochloromethane	mg/kg (ppm)	2.5	<0.05	76	28-150
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	<0.05	68	28-142
Chlorobenzene	mg/kg (ppm)	2.5	<0.05	67	32-129
Ethylbenzene	mg/kg (ppm)	2.5	0.14	64	32-137
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	76	31-143
m,p-Xylene	mg/kg (ppm)	5	0.75	62	34-136
o-Xylene	mg/kg (ppm)	2.5	0.35	63	33-134
Styrene	mg/kg (ppm)	2.5	<0.05	71	35-137
Isopropylbenzene	mg/kg (ppm)	2.5	0.054	70	31-142
Bromoform	mg/kg (ppm)	2.5	<0.05	75	21-156
n-Propylbenzene	mg/kg (ppm)	2.5	0.18	62	23-146
Bromobenzene	mg/kg (ppm)	2.5	<0.05	63	34-130
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	0.46	60	18-149
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	<0.05	63	28-140
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	<0.05	63	25-144
2-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	69	31-134
4-Chlorotoluene	mg/kg (ppm)	2.5	<0.05	67	31-136
tert-Butylbenzene	mg/kg (ppm)	2.5	<0.05	69	30-137
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	1.7	53 b	10-182
sec-Butylbenzene	mg/kg (ppm)	2.5	0.090	70	23-145
p-Isopropyltoluene	mg/kg (ppm)	2.5	0.075	68	21-149
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	66	30-131
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	66	29-129
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	<0.05	66	31-132
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	<0.5	70	11-161
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	64	22-142
Hexachlorobutadiene	mg/kg (ppm)	2.5	<0.25	82	10-142
Naphthalene	mg/kg (ppm)	2.5	0.10	63	14-157
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	<0.25	64	20-144

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/05/17
Date Received: 12/27/16
Project: Nelson Petroleum, PO 109689, F&BI 612382

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	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Dichlorodifluoromethane	mg/kg (ppm)	2.5	56	61	10-146	9
Chloromethane	mg/kg (ppm)	2.5	60	67	27-133	11
Vinyl chloride	mg/kg (ppm)	2.5	69	78	22-139	12
Bromomethane	mg/kg (ppm)	2.5	77	95	38-114	21 vo
Chloroethane	mg/kg (ppm)	2.5	83	92	10-163	10
Trichlorofluoromethane	mg/kg (ppm)	2.5	90	96	10-196	6
Acetone	mg/kg (ppm)	12.5	87	94	52-141	8
1,1-Dichloroethene	mg/kg (ppm)	2.5	82	86	47-128	5
Hexane	mg/kg (ppm)	2.5	83	87	43-142	5
Methylene chloride	mg/kg (ppm)	2.5	105	111	42-132	6
Methyl t-butyl ether (MTBE)	mg/kg (ppm)	2.5	82	85	60-123	4
trans-1,2-Dichloroethene	mg/kg (ppm)	2.5	90	94	67-127	4
1,1-Dichloroethane	mg/kg (ppm)	2.5	91	96	68-115	5
2,2-Dichloropropane	mg/kg (ppm)	2.5	107	113	52-170	5
cis-1,2-Dichloroethene	mg/kg (ppm)	2.5	100	106	72-113	6
Chloroform	mg/kg (ppm)	2.5	103	108	66-120	5
2-Butanone (MEK)	mg/kg (ppm)	12.5	93	98	57-123	5
1,2-Dichloroethane (EDC)	mg/kg (ppm)	2.5	102	107	56-135	5
1,1,1-Trichloroethane	mg/kg (ppm)	2.5	103	107	62-131	4
1,1-Dichloropropene	mg/kg (ppm)	2.5	94	98	69-128	4
Carbon tetrachloride	mg/kg (ppm)	2.5	104	107	60-139	3
Benzene	mg/kg (ppm)	2.5	89	93	68-114	4
Trichloroethene	mg/kg (ppm)	2.5	97	101	64-117	4
1,2-Dichloropropane	mg/kg (ppm)	2.5	93	98	72-127	5
Bromodichloromethane	mg/kg (ppm)	2.5	114	117	72-130	3
Dibromomethane	mg/kg (ppm)	2.5	103	107	70-120	4
4-Methyl-2-pentanone	mg/kg (ppm)	12.5	108	112	45-145	4
cis-1,3-Dichloropropene	mg/kg (ppm)	2.5	106	110	75-136	4
Toluene	mg/kg (ppm)	2.5	86	90	66-126	5
trans-1,3-Dichloropropene	mg/kg (ppm)	2.5	97	100	72-132	3
1,1,2-Trichloroethane	mg/kg (ppm)	2.5	89	95	75-113	7
2-Hexanone	mg/kg (ppm)	12.5	89	94	33-152	5
1,3-Dichloropropane	mg/kg (ppm)	2.5	90	94	72-130	4
Tetrachloroethene	mg/kg (ppm)	2.5	93	98	72-114	5
Dibromochloromethane	mg/kg (ppm)	2.5	108	112	74-125	4
1,2-Dibromoethane (EDB)	mg/kg (ppm)	2.5	96	101	74-132	5
Chlorobenzene	mg/kg (ppm)	2.5	94	100	76-111	6
Ethylbenzene	mg/kg (ppm)	2.5	95	99	64-123	4
1,1,1,2-Tetrachloroethane	mg/kg (ppm)	2.5	108	112	69-135	4
m,p-Xylene	mg/kg (ppm)	5	95	100	78-122	5
o-Xylene	mg/kg (ppm)	2.5	96	103	77-124	7
Styrene	mg/kg (ppm)	2.5	100	105	74-126	5
Isopropylbenzene	mg/kg (ppm)	2.5	101	107	76-127	6
Bromoform	mg/kg (ppm)	2.5	109	112	56-132	3
n-Propylbenzene	mg/kg (ppm)	2.5	94	98	74-124	4
Bromobenzene	mg/kg (ppm)	2.5	93	95	72-122	2
1,3,5-Trimethylbenzene	mg/kg (ppm)	2.5	93	99	76-126	6
1,1,2,2-Tetrachloroethane	mg/kg (ppm)	2.5	88	91	56-143	3
1,2,3-Trichloropropane	mg/kg (ppm)	2.5	88	92	61-137	4
2-Chlorotoluene	mg/kg (ppm)	2.5	92	96	74-121	4
4-Chlorotoluene	mg/kg (ppm)	2.5	94	98	75-122	4
tert-Butylbenzene	mg/kg (ppm)	2.5	99	105	73-130	6
1,2,4-Trimethylbenzene	mg/kg (ppm)	2.5	94	99	76-125	5
sec-Butylbenzene	mg/kg (ppm)	2.5	101	108	71-130	7
p-Isopropyltoluene	mg/kg (ppm)	2.5	100	106	70-132	6
1,3-Dichlorobenzene	mg/kg (ppm)	2.5	95	101	75-121	6
1,4-Dichlorobenzene	mg/kg (ppm)	2.5	95	100	74-117	5
1,2-Dichlorobenzene	mg/kg (ppm)	2.5	93	100	76-121	7
1,2-Dibromo-3-chloropropane	mg/kg (ppm)	2.5	93	99	58-138	6
1,2,4-Trichlorobenzene	mg/kg (ppm)	2.5	92	99	64-135	7
Hexachlorobutadiene	mg/kg (ppm)	2.5	113	119	50-153	5
Naphthalene	mg/kg (ppm)	2.5	87	95	63-140	9
1,2,3-Trichlorobenzene	mg/kg (ppm)	2.5	91	99	63-138	8

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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.

612387

SAMPLE CHAIN OF CUSTODY ME 12/27/16 CI1

Report To: Kyle Myers
Company: NRC
Address: 9520 10TH Ave S., Suite 150
City, State, ZIP: Seattle WA 98108
Phone: 5108521900 Email: kmyers5@nrcc.com

SAMPLERS (signature):
PROJECT NAME: Nelson Petroleum
PO #: 109689
REMARKS:
INVOICE TO: NRC

Page # 1 of 1

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

SAMPLE DISPOSAL
☐ Dispose after 30 days
☐ Archive Samples
☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
#1	01	12/23/16	1635	soil	1		X			X							
2	02	12/23/16	1640	soil	1		X			X							
3	03	12/23/16	1645	soil	1		X			X							
4	04	12/23/16	1650	soil	1		X			X							

ANALYSES REQUESTED

Samples received at 12 °C

	SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by:		Kyle Myers	NRC	12/27/16	1301
Received by:		HONG NGUYEN	FMI	V	V
Relinquished by:					
Received by:					

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

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

January 27, 2017

Kyle Myers, Project Manager
NRC Environmental Services
9520 10th Ave. S., Suite 150
Seattle, WA 98108-5067

Dear Mr Myers:

Included are the results from the testing of material submitted on January 25, 2017 from the Nelson Petroleum, PO 109689, F&BI 701280 project. There are 4 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
NRC0127R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on January 25, 2017 by Friedman & Bruya, Inc. from the NRC Environmental Services Nelson Petroleum, PO 109689, F&BI 701280 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	NRC Environmental Services
701280 -01	No. 1
701280 -02	No. 2

All quality control requirements were acceptable.

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/27/17
Date Received: 01/25/17
Project: Nelson Petroleum, PO 109689, F&BI 701280
Date Extracted: 01/25/17
Date Analyzed: 01/25/17

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 48-168)
No. 1 701280-01	1,300	<250	116
No. 2 701280-02	<50	<250	104
Method Blank 07-161 MB2	<50	<250	104

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

Date of Report: 01/27/17
Date Received: 01/25/17
Project: Nelson Petroleum, PO 109689, F&BI 701280

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

Laboratory Code: 701255-06 (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	100	111	63-146	10

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Diesel Extended	mg/kg (ppm)	5,000	106	79-144

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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.

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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.

701280

HE 01-25-17

401

SAMPLE CHAIN OF CUSTODY

Page # 1 of 1

Report To: Kyle Myers
Company: NRC
Address: 9520 10TH Ave S, Suite 150
City, State, ZIP: Seattle WA 98108
Phone: 510 852 1900 Email: kmyers@nrcc.com

SAMPLERS (signature): KMyers
PROJECT NAME: Nelson Petroleum
PO #: 109689
REMARKS:
INVOICE TO:

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

SAMPLE DISPOSAL
☒ Dispose after 30 days
☐ Archive Samples
☐ Other

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM					Notes
# 1	01	1/23/17	11:42am	Soil	1		X										
# 2	02	1/23/17	11:46am	Soil	1		X										

Samples received at 10 °C

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: KMyers	Kyle Myers	NRC	1/25/17	11:14am
Received by:	HONG NGUYEN	FBB	✓	✓
Relinquished by:				
Received by:				

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

APPENDIX B:
EXPORT MATERIALS LOG AND WEIGHT TICKETS

PRINTIX (253) 582-5576

STRAIGHT BILL OF LADING - ORIGINAL - NOT NEGOTIABLE

NRC 9520 10th Avenue S. Suite 150 Seattle, WA 98108

Tracking No. 67915

Carrier NRC SCAC _____ Carrier's No. _____

RECEIVED, subject to individually determined rates or contracts that have been agreed upon in writing between the carrier and shipper, if applicable, otherwise to the rates, classifications and rules that have been established by the carrier and are available to the shipper, on request; and all applicable state and federal regulations:

at _____, date 12-23-16 from _____

the property described below, in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated below which said company (the word company being understood thoughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to delivery at said destination, if on it's route, or otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of said Property over all or any portion of said route to destination and as to each party at any time interested in all or any of said Property that every service to be performed hereunder shall be subject to all the conditions not prohibited by law, whether printed or written, herein contained, including the conditions on the back hereof, which are hereby agreed to by the shipper and accepted for himself and his assigns.

TO: Consignee PRS	**FROM:** Shipper Nelson Petroleum
Street 3003 Taylor way	Street 21601 76th AVE W
Destination Tacoma, WA Zip	Origin Edmonds, WA Zip
Route ANY	
Delivering Carrier NRC	Vehicle Number 2135

U.S. DOT Hazmat Reg. Number

Number and Type of Packages	HM	I.D. Number	Description of Articles	Hazard Class	Pkg. Grp.	Total Quantity (mass, volume, or activity)	Weight (subject to correction)	Class or Rate
IT			oily water & Sludge					
			waster, not Regulated by DOT			3 Tov		
			Profile # 500X-b					
			Tab#					
			PO # sup. Kyle Myers.					

Remit COD to:
Address:
City: State: Zip:

NOTE: Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property. The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding $ Per

NOTE: Liability Limitation for loss or damage in this shipment may be applicable. See 49 U.S.C. 14706 (c)(1)(A) and (B).

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. Per

Subject to Section 7 of conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement: The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

(Signature of Consignor)

COD AMT: $

TOTAL CHARGES: $

COD FEE: Prepaid ☐ Collect ☐ $

FREIGHT CHARGES: ☐ Prepaid ☐ Collect

PLACARDS REQUIRED

PLACARDS SUPPLIED ☐ BY SHIPPER ☐ BY CARRIER

DRIVER'S SIGNATURE:

SHIPPER: _____
PER: _____ DATE: _____

CARRIER: NRC
PER: _____ DATE: 12-23-16

EMERGENCY RESPONSE TELEPHONE NUMBER: ( )

Monitored at all times the Hazardous Material is in transportation including storage incidental to transportation (172.604).

2

20

PRS Group, Inc.
3003 Taylor Way
Tacoma, WA 98421

Invoice

Date	Invoice #
12/23/2016	58038

Bill To:

NRC Environmental Services
Myers
Attn: Accounts Payable Department
3500 Sunrise Highway Ste 200, Bldg 200
Great River, NY 11739-1001

Nelson Petroleum

P.O. No.	Terms	Due Date	Profile #	Entry Log
109689-KM	30 Days	1/22/2017	5007-b	70836

Item	Qty	Description	Rate	Amount
Sludge	3	Ton(s)	85.00	255.00
Labor Straight Time	2	Hours, For plant operator after hours.	50.00	100.00

Subtotal	$355.00
Sales Tax (9.6%)	$0.00
Total	$355.00

✓

Phone #	Fax #	E-mail	Web Site
253-383-4175	253-383-4531	prs@prsplant.net	www.prsplant.net

E

PRS Group, Inc.
3003 Taylor Way
Tacoma, WA 98421

Invoice

Date	Invoice #
1/23/2017	58494

Bill To:

NRC Environmental Services
Attn: Accounts Payable Department
3500 Sunrise Highway Ste 200, Bldg 200
Great River, NY 11739-1001

Nelson

P.O. No.	Terms	Due Date	Profile #	Entry Log
109689-KM	30 Days	2/22/2017	5007-b	70282

Item	Qty	Description	Rate	Amount
Sludge	4.6	Ton(s)	85.00	391.00

Subtotal	$391.00
Sales Tax (9.6%)	$0.00
Total	$391.00

✓

Phone #	Fax #	E-mail	Web Site
253-383-4175	253-383-4531	prs@prsplant.net	www.prsplant.net

E

Weighed At: Soil Remediation
6300 Glenwood Ave
CEMEX Everett, WA 98213

1876091289

Location: 1876

Order: 41105083 **Dispatch:** 0 **Date:** 04/12/2017
Ship To: 50030254 - WYSER CONSTRUCTION INC-VARIOUS VARIOUS
P:76: SWEDISH
SWEDISH AT EDMONDS
EVERETT, WA 98203
Instruct: CLASS 3 TO EVERETT SOIL REMEDIATION

Job #: **PO:** VERBAL DARREN
Product: 1192508 - CLASS 3 SOIL DUMPED BY TON
Carrier: -
Vehicle: 2281263 - WC25S,WYSER CONSTRUCTION
Tractor / Trailer1 / Trailer 2 -/- -/-

Qty: 7.80 ton
Weighmaster:
CEMEX
Deputy Weighmaster:
Regan, Angelique S
Scale: 1
In:
Out: 1:19 pm

--- DRIVER ON AT TARE & GROSS ---

	lb	ton	tne
Gross:	29,760	14.88	13.50
Tare:	14,160	7.08	6.42
Net:	15,600	7.80	7.08

* P. T.

Today Loads: 2
Today Qty: 14.03 ton
0.00

CEMEX'S STANDARD TERMS AND CONDITIONS INCORPORATED HEREIN.

0.00

Signature of Receiving Agent Driver

METRIC CONVERSION FORMULA: POUNDS DIVIDED BY 2204.623, ROUNDED TO 2 DECIMALS
SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION

Weighed At: Soil Remediation
6300 Glenwood Ave
CEMEX Everett, WA 98213

1876091288

Location: 1876

Order: 41105083 **Dispatch:** 0 **Date:** 04/12/2017
Ship To: 50030254 - WYSER CONSTRUCTION INC-VARIOUS VARIOUS
P:76: SWEDISH
SWEDISH AT EDMONDS
EVERETT, WA 98203
Instruct: CLASS 3 TO EVERETT SOIL REMEDIATION

Job #: **PO:** VERBAL DARREN
Product: 1192508 - CLASS 3 SOIL DUMPED BY TON
Carrier: -
Vehicle: 2281263 - WC25S,WYSER CONSTRUCTION
Tractor / Trailer1 / Trailer 2 -/- -/-

Qty: 6.23 ton
Weighmaster:
CEMEX
Deputy Weighmaster:
Regan, Angelique S
Scale: 1
In: 11:33 am
Out: 11:47 am

--- DRIVER ON AT TARE & GROSS ---

	lb	ton	tne
Gross:	26,620	13.31	12.07
Tare:	14,160	7.08	6.42
Net:	12,460	6.23	5.65

Today Loads: 1
Today Qty: 6.23 ton
0.00

CEMEX'S STANDARD TERMS AND CONDITIONS INCORPORATED HEREIN.

0.00

Signature of Receiving Agent Driver

METRIC CONVERSION FORMULA: POUNDS DIVIDED BY 2204.623, ROUNDED TO 2 DECIMALS
SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION

Weighed At: Soil Remediation
6300 Glenwood Ave
CEMEX Everett, WA 98213

1876091293

Location: 1876

Order: 41105083 **Dispatch:** 0 **Date:** 04/12/2017
Ship To: 50030254 - WYSER CONSTRUCTION INC-VARIOUS VARIOUS
P:76: SWEDISH
SWEDISH AT EDMONDS
EVERETT, WA 98203
Instruct: CLASS 3 TO EVERETT SOIL REMEDIATION

ATC-17-1506

Job #: **PO:** VERBAL DARREN
Product: 1192508 - CLASS 3 SOIL DUMPED BY TON
Carrier: -
Vehicle: 2281263 - WC25S,WYSER CONSTRUCTION
Tractor / Trailer1 / Trailer 2 -/- -/-

Qty: 5.83 ton
Weighmaster:
CEMEX
Deputy Weighmaster:
Regan, Angelique S
Scale: 1
In:
Out: 2:59 pm

--- DRIVER ON AT TARE & GROSS ---

	lb	ton	tne
Gross:	25,820	12.91	11.71
Tare:	14,160	7.08	6.42
Net:	11,660	5.83	5.29

* P. T.

Today Loads: 3
Today Qty: 19.86 ton
0.00

CEMEX'S STANDARD TERMS AND CONDITIONS INCORPORATED HEREIN.

0.00

Signature of Receiving Agent Driver

METRIC CONVERSION FORMULA: POUNDS DIVIDED BY 2204.623, ROUNDED TO 2 DECIMALS
SEE REVERSE SIDE FOR PRODUCT LABEL INFORMATION

APPENDIX C:
SOIL SAMPLE LOG

ATC GROUP SERVICES LLC

Soil Sampling Log

FLD-105
Revision 0.0
Jul-08

ATC Branch: Seattle, WA

Page 1 of 2 1

ATC Representative(s): S. Payne

Project: Swedish Edmonds Fuel Releas

Contact Information:

Location:

Scope of Work:

___ Monitoring ✓ Assessment ~~X~~ Remediation ___ Closure ___ Other

Project No:

Task No:

Weather: Rain

Temperature: ~ 45 °F

Contractor:

Attach Field Diagram (Form FLD-101) illustrating soil sample location(s)

Soil Sample Identification	Sample Location (dispenser, excavation, stockpile, UST, Other)	Sample Information				Soil Impact Observations	
		Sample Time	Sample Depth (feet bgs)	USCS Soil Classification	Saturation (dry, moist, wet)	Odors/Type (none, mild, strong)	PID (ppmV)
HA-1-1-1.5	Upslope and WSW of AST	12:15	1-1.5'	GP	dry	none	50.7
HA-2-0.5-1	by Fuel port	12:35	0.5-1'	GP	dry	Strong	1,458
HA-3-0.5-1	downslope of AST	12:45	0.5-1'	SP	dry	Strong	981.1
HA-4-0.5-1	downslope of AST	13:00	0.5-1'	CL	damp	none	24.0
HA-5-0.5-1	S of Fuel Port	13:10	0.5-1'	GP	damp	mild	19.7
HA-6-0-0.5	inside AST Compound	14:00	0-0.5'	GP	dry	Strong	641.0
HA-7-0.5-1'	inside AST Compound	14:10	0.5-1'	SP	damp	none	11.0

Comments:

Notes: B = Bottom D = Dispenser PP = Product Piping SP = Stockpile SW = Sidewall UST = Underground Storage Tank PID = Photoionization Detector
N = North S = South E = East W = West NE = Northeast NW = Northwest SE = Southeast NW = Northwest bgs = below ground surface ppmV = parts per million volume

Soil Sampling Log

FLD-105
Revision 0.0
Jul-08

Page 1 of 2

ATC Branch: Seattle, WA

ATC Representative(s): Nicholas Turner

Contact Information: 206 781 1449

Scope of Work:

___ Monitoring ___ Assessment __X Remediation ___ Closure ___ Other

Attach Field Diagram (Form FLD-101) illustrating soil sample location(s)

Date: 04/12/17

Project: Herrygers Environmental - Swedish Edmonds Campus Fuel Release

Location: 21601 76th Ave W, Edmonds, WA 98026

Project No: 252 EM 00072

Task No:

Weather: Rain

Temperature: 50

Contractor: Wyser

Soil Sample Identification	Sample Location (dispenser, excavation, stockpile, UST, Other)	Sample Information				Soil Impact Observations	
		Sample Time	Sample Depth (feet bgs)	USCS Soil Classification	Saturation (dry, moist, wet)	Odors/Type (none, mild, strong)	PID (ppmV)
~~E3-B-0.5-01~~	2 Feet South of SE corner of fence	1150	0.5	GP	Moist	none	0.3
~~E3-B-0.0-02~~	Eastern extent of excavation	1210	Surface	GP	Moist	None	4.9
~~E3-SW-1.0-03~~	NE corner of 2' excavation	1235	1.0	SP	Moist	None	0.7
~~D3-SW-1.0-04~~	SE Corner of 2' excavation	1355	1.0	SP	Wet	none	7.5
~~D2-SW-1.0-05~~	N Wall of 2' excavation (center)	1402	1.0	SP	Wet	none	3.8
~~C3-SW-1.0-06~~	S Wall of 2' excavation (center)	1440	1.0	SP	Wet	None	0.6
~~C2-B-2.0-07~~	Base of Western 2' excavation	1510	2.0	GP	Wet	None	3.2
~~C2-SW-1.0-08~~	NW Corner of 2' Excavation	1520	1.0	SP	Wet	None	1.0
~~D3-B-2.0-09~~	Base of eastern 2' Excavation	1530	2.0	GP	Moist	Mild	16.9
~~B2-B-0.5-10~~	Base of Western 0.5' excavation extent	1451	0.5	GP	Moist	None	0.3

Comments:

Notes: B = Bottom D = Dispenser PP = Product Piping SP = Stockpile SW = Sidewall UST = Underground Storage Tank PID = Photoionization Detector
N = North S = South E = East W = West NE = Northeast NW = Northwest SE = Southeast NW = Northwest bgs = below ground surface ppmV = parts per million volume

Soil Sampling Log

FLD-105
Revision 0.0
Jul-08

Date: 04/12/17 | Page 2 of 2

ATC Branch: Seattle, WA

ATC Representative(s): Nicholas Turner

Contact Information: 206 781 1449

Scope of Work:

___ Monitoring ___ Assessment __X Remediation ___ Closure ___ Other

Attach Field Diagram (Form FLD-101) illustrating soil sample location(s)

Project: Herrygers Environmental - Swedish Edmonds Campus Fuel Release

Location: 21601 76th Ave W, Edmonds, WA 98026

Project No: 252 EM 00072 | Task No:

Weather: Rain | Temperature: 50

Contractor: Wyser

Soil Sample Identification	Sample Location (dispenser, excavation, stockpile, UST, Other)	Sample Information: Sample Time	Sample Depth (feet bgs)	USCS Soil Classification	Saturation (dry, moist, wet)	Soil Impact Observations: Odors/Type (none, mild, strong)	PID (ppmV)
~~B3-B-0.5-1~~ (NT)	SW Corner of 0.5' excavation	1455	0.5	GP	Moist	none	0.3
~~B3-B-0.5-2~~ (NT)	S. Lateral of 0.5' excavation	1457	0.5	GP	Moist	none	1.0

Comments:

Notes: B = Bottom D = Dispenser PP = Product Piping SP = Stockpile SW = Sidewall UST = Underground Storage Tank PID = Photoionization Detector
N = North S = South E = East W = West NE = Northeast NW = Northwest SE = Southeast NW = Northwest bgs = below ground surface ppmV = parts per million volume

APPENDIX D:
LABORATORY ANALYTICAL REPORTS AND CHAIN OF CUSTODY DOCUMENTATION

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

ATC Group Services, Inc.
Simon Payne
6347 Seaview Ave NW
Seattle, WA 98107

RE: Swedish Edmonds Campus
Work Order Number: 1703107

March 15, 2017

Attention Simon Payne:

Fremont Analytical, Inc. received 8 sample(s) on 3/9/2017 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.
Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

Date: *03/15/2017*

CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus
Work Order: 1703107

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1703107-001	HA-1-1-1.5	03/09/2017 12:15 PM	03/09/2017 4:46 PM
1703107-002	HA-2-0.5-1	03/09/2017 12:35 PM	03/09/2017 4:46 PM
1703107-003	HA-3-0.5-1	03/09/2017 12:45 PM	03/09/2017 4:46 PM
1703107-004	HA-4-0.5-1	03/09/2017 1:00 PM	03/09/2017 4:46 PM
1703107-005	HA-5-0.5-1	03/09/2017 1:10 PM	03/09/2017 4:46 PM
1703107-006	HA-6-0-0.5	03/09/2017 2:00 PM	03/09/2017 4:46 PM
1703107-007	HA-7-0.5-1	03/09/2017 2:10 PM	03/09/2017 4:46 PM
1703107-008	Trip Blank	03/08/2017 12:10 PM	03/09/2017 4:46 PM

Case Narrative

WO#: **1703107**
Date: **3/15/2017**

CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus

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

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

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

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

Qualifiers:

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

Acronyms:

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

Analytical Report

Work Order: **1703107**
Date Reported: **3/15/2017**

Client: ATC Group Services, Inc.
Collection Date: 3/9/2017 12:15:00 PM
Project: Swedish Edmonds Campus
Lab ID: 1703107-001
Matrix: Soil
Client Sample ID: **HA-1-1-1.5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16485		Analyst: WC
Diesel (Fuel Oil)	ND	19.1		mg/Kg-dry	1	3/13/2017 8:44:20 PM
Heavy Oil	ND	47.8		mg/Kg-dry	1	3/13/2017 8:44:20 PM
Surr: 2-Fluorobiphenyl	92.9	50-150		%Rec	1	3/13/2017 8:44:20 PM
Surr: o-Terphenyl	96.7	50-150		%Rec	1	3/13/2017 8:44:20 PM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16486		Analyst: MW
Benzene	ND	0.0433		mg/Kg-dry	1	3/13/2017 9:21:18 PM
Toluene	ND	0.0433		mg/Kg-dry	1	3/13/2017 9:21:18 PM
Ethylbenzene	ND	0.0649		mg/Kg-dry	1	3/13/2017 9:21:18 PM
m,p-Xylene	ND	0.0433		mg/Kg-dry	1	3/13/2017 9:21:18 PM
o-Xylene	ND	0.0433		mg/Kg-dry	1	3/13/2017 9:21:18 PM
Surr: Dibromofluoromethane	89.8	56.5-129		%Rec	1	3/13/2017 9:21:18 PM
Surr: Toluene-d8	99.5	64.5-151		%Rec	1	3/13/2017 9:21:18 PM
Surr: 1-Bromo-4-fluorobenzene	96.8	63.1-141		%Rec	1	3/13/2017 9:21:18 PM
Sample Moisture (Percent Moisture)				Batch ID: R34918		Analyst: BB
Percent Moisture	6.60	0.500		wt%	1	3/14/2017 9:16:39 AM

Analytical Report

Work Order: **1703107**
Date Reported: **3/15/2017**

Client: ATC Group Services, Inc.
Collection Date: 3/9/2017 12:35:00 PM
Project: Swedish Edmonds Campus
Lab ID: 1703107-002
Matrix: Soil
Client Sample ID: **HA-2-0.5-1**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16462		Analyst: WC
Diesel (Fuel Oil)	7,290	190	D	mg/Kg-dry	10	3/13/2017 10:16:15 AM
Heavy Oil	ND	47.4		mg/Kg-dry	1	3/11/2017 4:40:17 AM
Surr: 2-Fluorobiphenyl	211	50-150	S	%Rec	1	3/11/2017 4:40:17 AM
Surr: o-Terphenyl	284	50-150	S	%Rec	1	3/11/2017 4:40:17 AM

NOTES:
S - Outlying surrogate recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).

Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16464		Analyst: MW
Benzene	ND	0.0252		mg/Kg-dry	1	3/11/2017 2:06:10 PM
Toluene	ND	0.0252		mg/Kg-dry	1	3/11/2017 2:06:10 PM
Ethylbenzene	6.39	0.378	D	mg/Kg-dry	10	3/11/2017 9:41:00 AM
m,p-Xylene	19.3	0.252	D	mg/Kg-dry	10	3/11/2017 9:41:00 AM
o-Xylene	16.2	0.252	D	mg/Kg-dry	10	3/11/2017 9:41:00 AM
Surr: Dibromofluoromethane	85.9	56.5-129		%Rec	1	3/11/2017 2:06:10 PM
Surr: Toluene-d8	105	64.5-151		%Rec	1	3/11/2017 2:06:10 PM
Surr: 1-Bromo-4-fluorobenzene	99.6	63.1-141		%Rec	1	3/11/2017 2:06:10 PM
Sample Moisture (Percent Moisture)				Batch ID: R34856		Analyst: BB
Percent Moisture	5.23	0.500		wt%	1	3/10/2017 10:11:17 AM

Analytical Report

Work Order: **1703107**
Date Reported: **3/15/2017**

Client: ATC Group Services, Inc.
Collection Date: 3/9/2017 12:45:00 PM
Project: Swedish Edmonds Campus
Lab ID: 1703107-003
Matrix: Soil
Client Sample ID: **HA-3-0.5-1**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16462		Analyst: WC
Diesel (Fuel Oil)	3,050	45.8	D	mg/Kg-dry	2	3/13/2017 10:47:19 AM
Heavy Oil	ND	57.2		mg/Kg-dry	1	3/11/2017 6:12:23 AM
Surr: 2-Fluorobiphenyl	155	50-150	S	%Rec	1	3/11/2017 6:12:23 AM
Surr: o-Terphenyl	191	50-150	S	%Rec	1	3/11/2017 6:12:23 AM

NOTES:
S - Outlying surrogate recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).

Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16464		Analyst: MW
Benzene	ND	0.0357		mg/Kg-dry	1	3/11/2017 3:49:57 AM
Toluene	ND	0.0357		mg/Kg-dry	1	3/11/2017 3:49:57 AM
Ethylbenzene	1.52	0.0535		mg/Kg-dry	1	3/11/2017 3:49:57 AM
m,p-Xylene	1.09	0.0357		mg/Kg-dry	1	3/11/2017 3:49:57 AM
o-Xylene	5.18	0.357	D	mg/Kg-dry	10	3/13/2017 12:14:20 PM
Surr: Dibromofluoromethane	91.6	56.5-129		%Rec	1	3/11/2017 3:49:57 AM
Surr: Toluene-d8	106	64.5-151		%Rec	1	3/11/2017 3:49:57 AM
Surr: 1-Bromo-4-fluorobenzene	105	63.1-141		%Rec	1	3/11/2017 3:49:57 AM
Sample Moisture (Percent Moisture)				Batch ID: R34856		Analyst: BB
Percent Moisture	17.1	0.500		wt%	1	3/10/2017 10:11:17 AM

Analytical Report

Work Order: **1703107**
Date Reported: **3/15/2017**

Client: ATC Group Services, Inc.
Collection Date: 3/9/2017 1:00:00 PM
Project: Swedish Edmonds Campus
Lab ID: 1703107-004
Matrix: Soil
Client Sample ID: **HA-4-0.5-1**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16462		Analyst: WC
Diesel (Fuel Oil)	ND	20.3		mg/Kg-dry	1	3/11/2017 6:43:02 AM
Heavy Oil	ND	50.8		mg/Kg-dry	1	3/11/2017 6:43:02 AM
Surr: 2-Fluorobiphenyl	100	50-150		%Rec	1	3/11/2017 6:43:02 AM
Surr: o-Terphenyl	99.2	50-150		%Rec	1	3/11/2017 6:43:02 AM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16464		Analyst: MW
Benzene	ND	0.0420		mg/Kg-dry	1	3/11/2017 4:19:18 AM
Toluene	ND	0.0420		mg/Kg-dry	1	3/11/2017 4:19:18 AM
Ethylbenzene	ND	0.0630		mg/Kg-dry	1	3/11/2017 4:19:18 AM
m,p-Xylene	ND	0.0420		mg/Kg-dry	1	3/11/2017 4:19:18 AM
o-Xylene	ND	0.0420		mg/Kg-dry	1	3/11/2017 4:19:18 AM
Surr: Dibromofluoromethane	86.9	56.5-129		%Rec	1	3/11/2017 4:19:18 AM
Surr: Toluene-d8	105	64.5-151		%Rec	1	3/11/2017 4:19:18 AM
Surr: 1-Bromo-4-fluorobenzene	101	63.1-141		%Rec	1	3/11/2017 4:19:18 AM
Sample Moisture (Percent Moisture)				Batch ID: R34856		Analyst: BB
Percent Moisture	5.88	0.500		wt%	1	3/10/2017 10:11:17 AM

Analytical Report

Work Order: **1703107**
Date Reported: **3/15/2017**

Client: ATC Group Services, Inc.
Collection Date: 3/9/2017 1:10:00 PM
Project: Swedish Edmonds Campus
Lab ID: 1703107-005
Matrix: Soil
Client Sample ID: **HA-5-0.5-1**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16485		Analyst: WC
Diesel (Fuel Oil)	ND	21.3		mg/Kg-dry	1	3/13/2017 11:51:15 PM
Heavy Oil	ND	53.4		mg/Kg-dry	1	3/13/2017 11:51:15 PM
Surr: 2-Fluorobiphenyl	84.6	50-150		%Rec	1	3/13/2017 11:51:15 PM
Surr: o-Terphenyl	86.9	50-150		%Rec	1	3/13/2017 11:51:15 PM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16486		Analyst: MW
Benzene	ND	0.0237		mg/Kg-dry	1	3/13/2017 9:50:02 PM
Toluene	ND	0.0237		mg/Kg-dry	1	3/13/2017 9:50:02 PM
Ethylbenzene	ND	0.0355		mg/Kg-dry	1	3/13/2017 9:50:02 PM
m,p-Xylene	ND	0.0237		mg/Kg-dry	1	3/13/2017 9:50:02 PM
o-Xylene	ND	0.0237		mg/Kg-dry	1	3/13/2017 9:50:02 PM
Surr: Dibromofluoromethane	90.4	56.5-129		%Rec	1	3/13/2017 9:50:02 PM
Surr: Toluene-d8	99.6	64.5-151		%Rec	1	3/13/2017 9:50:02 PM
Surr: 1-Bromo-4-fluorobenzene	95.8	63.1-141		%Rec	1	3/13/2017 9:50:02 PM
Sample Moisture (Percent Moisture)				Batch ID: R34918		Analyst: BB
Percent Moisture	7.50	0.500		wt%	1	3/14/2017 9:16:39 AM

Analytical Report

Work Order: **1703107**
Date Reported: **3/15/2017**

Client: ATC Group Services, Inc.
Collection Date: 3/9/2017 2:00:00 PM
Project: Swedish Edmonds Campus
Lab ID: 1703107-006
Matrix: Soil
Client Sample ID: **HA-6-0-0.5**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16462		Analyst: WC
Diesel (Fuel Oil)	2,030	41.0	D	mg/Kg-dry	2	3/13/2017 11:18:27 AM
Heavy Oil	ND	51.2		mg/Kg-dry	1	3/11/2017 7:13:41 AM
Surr: 2-Fluorobiphenyl	148	50-150		%Rec	1	3/11/2017 7:13:41 AM
Surr: o-Terphenyl	174	50-150	S	%Rec	1	3/11/2017 7:13:41 AM

NOTES:
S - Outlying surrogate recovery attributed to TPH interference. The method is in control as indicated by the Method Blank (MB) & Laboratory Control Sample (LCS).

Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16464		Analyst: MW
Benzene	ND	0.0163		mg/Kg-dry	1	3/11/2017 4:48:34 AM
Toluene	ND	0.0163		mg/Kg-dry	1	3/11/2017 4:48:34 AM
Ethylbenzene	2.56	0.245	D	mg/Kg-dry	10	3/13/2017 12:43:53 PM
m,p-Xylene	4.19	0.163	D	mg/Kg-dry	10	3/13/2017 12:43:53 PM
o-Xylene	5.58	0.163	D	mg/Kg-dry	10	3/13/2017 12:43:53 PM
Surr: Dibromofluoromethane	90.2	56.5-129		%Rec	1	3/11/2017 4:48:34 AM
Surr: Toluene-d8	112	64.5-151		%Rec	1	3/11/2017 4:48:34 AM
Surr: 1-Bromo-4-fluorobenzene	104	63.1-141		%Rec	1	3/11/2017 4:48:34 AM
Sample Moisture (Percent Moisture)				Batch ID: R34856		Analyst: BB
Percent Moisture	13.3	0.500		wt%	1	3/10/2017 10:11:17 AM

Analytical Report

Work Order: **1703107**
Date Reported: **3/15/2017**

Client: ATC Group Services, Inc.
Collection Date: 3/9/2017 2:10:00 PM
Project: Swedish Edmonds Campus
Lab ID: 1703107-007
Matrix: Soil
Client Sample ID: **HA-7-0.5-1**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16485		Analyst: WC
Diesel (Fuel Oil)	ND	25.5		mg/Kg-dry	1	3/14/2017 12:22:26 AM
Heavy Oil	ND	63.8		mg/Kg-dry	1	3/14/2017 12:22:26 AM
Surr: 2-Fluorobiphenyl	98.3	50-150		%Rec	1	3/14/2017 12:22:26 AM
Surr: o-Terphenyl	107	50-150		%Rec	1	3/14/2017 12:22:26 AM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16486		Analyst: MW
Benzene	ND	0.0248		mg/Kg-dry	1	3/13/2017 10:18:40 PM
Toluene	ND	0.0248		mg/Kg-dry	1	3/13/2017 10:18:40 PM
Ethylbenzene	ND	0.0372		mg/Kg-dry	1	3/13/2017 10:18:40 PM
m,p-Xylene	ND	0.0248		mg/Kg-dry	1	3/13/2017 10:18:40 PM
o-Xylene	ND	0.0248		mg/Kg-dry	1	3/13/2017 10:18:40 PM
Surr: Dibromofluoromethane	88.7	56.5-129		%Rec	1	3/13/2017 10:18:40 PM
Surr: Toluene-d8	111	64.5-151		%Rec	1	3/13/2017 10:18:40 PM
Surr: 1-Bromo-4-fluorobenzene	97.0	63.1-141		%Rec	1	3/13/2017 10:18:40 PM
Sample Moisture (Percent Moisture)				Batch ID: R34918		Analyst: BB
Percent Moisture	22.7	0.500		wt%	1	3/14/2017 9:16:39 AM

Work Order: 1703107
CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID **MB-16462**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **3/10/2017**	RunNo: **34863**
Client ID: **MBLKS**	Batch ID: **16462**		Analysis Date: **3/10/2017**	SeqNo: **665628**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	20.0									
Heavy Oil	ND	50.0									
Surr: 2-Fluorobiphenyl	19.6		20.00		98.0	50	150				
Surr: o-Terphenyl	18.8		20.00		94.2	50	150				

Sample ID **LCS-16462**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **3/10/2017**	RunNo: **34863**
Client ID: **LCSS**	Batch ID: **16462**		Analysis Date: **3/10/2017**	SeqNo: **665627**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	513	20.0	500.0	0	103	65	135				
Surr: 2-Fluorobiphenyl	20.3		20.00		101	50	150				
Surr: o-Terphenyl	21.8		20.00		109	50	150				

Sample ID **1703104-001ADUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **3/10/2017**	RunNo: **34863**
Client ID: **BATCH**	Batch ID: **16462**		Analysis Date: **3/10/2017**	SeqNo: **666125**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	21.2						0		30	
Heavy Oil	97.4	52.9						57.51	51.5	30	
Surr: 2-Fluorobiphenyl	20.9		21.17		98.5	50	150		0		
Surr: o-Terphenyl	21.2		21.17		100	50	150		0		

Sample ID **1703104-001AMS**	SampType: **MS**	Units: **mg/Kg-dry**	Prep Date: **3/10/2017**	RunNo: **34863**
Client ID: **BATCH**	Batch ID: **16462**		Analysis Date: **3/10/2017**	SeqNo: **666126**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	654	21.9	548.0	0	119	65	135				
Surr: 2-Fluorobiphenyl	20.3		21.92		92.4	50	150				
Surr: o-Terphenyl	22.5		21.92		103	50	150				

Work Order: 1703107
CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID **1703104-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **3/10/2017** RunNo: **34863**
Client ID: **BATCH** Batch ID: **16462** Analysis Date: **3/10/2017** SeqNo: **666126**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID **1703104-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **3/10/2017** RunNo: **34863**
Client ID: **BATCH** Batch ID: **16462** Analysis Date: **3/10/2017** SeqNo: **666127**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	755	22.9	573.5	0	132	65	135	654.2	14.4	30	
Surr: 2-Fluorobiphenyl	26.3		22.94		114	50	150		0		
Surr: o-Terphenyl	29.5		22.94		129	50	150		0		

Sample ID **1703104-013ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **3/10/2017** RunNo: **34863**
Client ID: **BATCH** Batch ID: **16462** Analysis Date: **3/11/2017** SeqNo: **666121**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	22.1						0		30	
Heavy Oil	138	55.3						129.3	6.44	30	
Surr: 2-Fluorobiphenyl	20.9		22.14		94.5	50	150		0		
Surr: o-Terphenyl	20.5		22.14		92.4	50	150		0		

Sample ID **OIL-CCV-F-16462** SampType: **CCV** Units: **mg/Kg** Prep Date: **3/13/2017** RunNo: **34863**
Client ID: **CCV** Batch ID: **R34863** Analysis Date: **3/13/2017** SeqNo: **666475**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Heavy Oil	864	50.0	1,000	0	86.4	85	115				
Surr: 2-Fluorobiphenyl	15.1		20.00		75.5	50	150				
Surr: o-Terphenyl	17.4		20.00		87.1	50	150				

Work Order: 1703107
CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID **DX-CCV-F-16462** SampType: **CCV** Units: **mg/Kg** Prep Date: **3/13/2017** RunNo: **34863**
Client ID: **CCV** Batch ID: **R34863** Analysis Date: **3/13/2017** SeqNo: **666474**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	438	20.0	500.0	0	87.6	85	115				
Surr: 2-Fluorobiphenyl	17.5		20.00		87.7	50	150				
Surr: o-Terphenyl	19.3		20.00		96.3	50	150				

Sample ID **MB-16485** SampType: **MBLK** Units: **mg/Kg** Prep Date: **3/13/2017** RunNo: **34917**
Client ID: **MBLKS** Batch ID: **16485** Analysis Date: **3/13/2017** SeqNo: **666859**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	20.0									
Heavy Oil	ND	50.0									
Surr: 2-Fluorobiphenyl	18.3		20.00		91.6	50	150				
Surr: o-Terphenyl	18.1		20.00		90.7	50	150				

Sample ID **LCS-16485** SampType: **LCS** Units: **mg/Kg** Prep Date: **3/13/2017** RunNo: **34917**
Client ID: **LCSS** Batch ID: **16485** Analysis Date: **3/13/2017** SeqNo: **666858**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	531	20.0	500.0	0	106	65	135				
Surr: 2-Fluorobiphenyl	20.9		20.00		105	50	150				
Surr: o-Terphenyl	23.2		20.00		116	50	150				

Sample ID **1703107-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **3/13/2017** RunNo: **34917**
Client ID: **HA-1-1-1.5** Batch ID: **16485** Analysis Date: **3/13/2017** SeqNo: **666833**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	19.3						0		30	
Heavy Oil	ND	48.3						0		30	
Surr: 2-Fluorobiphenyl	20.6		19.31		106	50	150		0		
Surr: o-Terphenyl	21.8		19.31		113	50	150		0		

Work Order: 1703107
CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID **1703107-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **3/13/2017** RunNo: **34917**
Client ID: **HA-1-1-1.5** Batch ID: **16485** Analysis Date: **3/13/2017** SeqNo: **666833**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID **1703107-001AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **3/13/2017** RunNo: **34917**
Client ID: **HA-1-1-1.5** Batch ID: **16485** Analysis Date: **3/13/2017** SeqNo: **666834**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	467	18.1	452.5	0	103	65	135				
Surr: 2-Fluorobiphenyl	17.8		18.10		98.5	50	150				
Surr: o-Terphenyl	19.8		18.10		109	50	150				

Sample ID **1703107-001AMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **3/13/2017** RunNo: **34917**
Client ID: **HA-1-1-1.5** Batch ID: **16485** Analysis Date: **3/13/2017** SeqNo: **666835**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	608	18.8	469.2	0	129	65	135	467.4	26.1	30	
Surr: 2-Fluorobiphenyl	23.4		18.77		125	50	150		0		
Surr: o-Terphenyl	25.8		18.77		138	50	150		0		

Sample ID **1703121-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **3/13/2017** RunNo: **34917**
Client ID: **BATCH** Batch ID: **16485** Analysis Date: **3/14/2017** SeqNo: **666845**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	22.0						0		30	
Heavy Oil	97.8	54.9						82.65	16.8	30	
Surr: 2-Fluorobiphenyl	19.8		21.97		90.0	50	150		0		
Surr: o-Terphenyl	22.0		21.97		100	50	150		0		

Work Order: 1703107
CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-16464** SampType: **LCS** Units: **mg/Kg** Prep Date: **3/10/2017** RunNo: **34901**
Client ID: **LCSS** Batch ID: **16464** Analysis Date: **3/10/2017** SeqNo: **666424**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.999	0.0200	1.000	0	99.9	64.3	133				
Toluene	1.00	0.0200	1.000	0	100	67.3	138				
Ethylbenzene	0.980	0.0300	1.000	0	98.0	74	129				
m,p-Xylene	1.97	0.0200	2.000	0	98.4	70	124				
o-Xylene	0.963	0.0200	1.000	0	96.3	72.7	124				
Surr: Dibromofluoromethane	1.24		1.250		99.3	56.5	129				
Surr: Toluene-d8	1.27		1.250		102	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.31		1.250		105	63.1	141				

Sample ID **MB-16464** SampType: **MBLK** Units: **mg/Kg** Prep Date: **3/10/2017** RunNo: **34901**
Client ID: **MBLKS** Batch ID: **16464** Analysis Date: **3/10/2017** SeqNo: **666425**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0200									
Ethylbenzene	ND	0.0300									
m,p-Xylene	ND	0.0200									
o-Xylene	ND	0.0200									
Surr: Dibromofluoromethane	1.23		1.250		98.8	56.5	129				
Surr: Toluene-d8	1.25		1.250		99.9	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.21		1.250		96.6	63.1	141				

Sample ID **1703104-002BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **3/10/2017** RunNo: **34901**
Client ID: **BATCH** Batch ID: **16464** Analysis Date: **3/10/2017** SeqNo: **666398**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0210						0		30	
Toluene	ND	0.0210						0		30	
Ethylbenzene	ND	0.0314						0		30	
m,p-Xylene	ND	0.0210						0		30	

Work Order: 1703107
CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1703104-002BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **3/10/2017** RunNo: **34901**
Client ID: **BATCH** Batch ID: **16464** Analysis Date: **3/10/2017** SeqNo: **666398**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	0.0210						0		30	
Surr: Dibromofluoromethane	1.19		1.310		91.2	56.5	129		0		
Surr: Toluene-d8	1.32		1.310		101	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.25		1.310		95.6	63.1	141		0		

Sample ID **1703104-005BMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **3/10/2017** RunNo: **34901**
Client ID: **BATCH** Batch ID: **16464** Analysis Date: **3/11/2017** SeqNo: **666401**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.17	0.0227	1.134	0	103	63.5	133				
Toluene	1.19	0.0227	1.134	0	105	63.4	132				
Ethylbenzene	1.14	0.0340	1.134	0	100	54.5	134				
m,p-Xylene	2.24	0.0227	2.268	0	98.8	53.1	132				
o-Xylene	1.11	0.0227	1.134	0	97.9	53.3	139				
Surr: Dibromofluoromethane	1.30		1.418		91.8	56.5	129				
Surr: Toluene-d8	1.47		1.418		104	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.46		1.418		103	63.1	141				

Sample ID **1703104-005BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **3/10/2017** RunNo: **34901**
Client ID: **BATCH** Batch ID: **16464** Analysis Date: **3/11/2017** SeqNo: **666402**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.30	0.0227	1.134	0	114	63.5	133	1.170	10.2	30	
Toluene	1.21	0.0227	1.134	0	107	63.4	132	1.192	1.81	30	
Ethylbenzene	1.16	0.0340	1.134	0	103	54.5	134	1.137	2.41	30	
m,p-Xylene	2.29	0.0227	2.268	0	101	53.1	132	2.241	2.23	30	
o-Xylene	1.13	0.0227	1.134	0	99.3	53.3	139	1.111	1.40	30	
Surr: Dibromofluoromethane	1.28		1.418		90.0	56.5	129		0		
Surr: Toluene-d8	1.47		1.418		103	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.47		1.418		104	63.1	141		0		

Work Order: 1703107
CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1703104-005BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **3/10/2017** RunNo: **34901**
Client ID: **BATCH** Batch ID: **16464** Analysis Date: **3/11/2017** SeqNo: **666402**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID **1703115-003BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **3/10/2017** RunNo: **34901**
Client ID: **BATCH** Batch ID: **16464** Analysis Date: **3/11/2017** SeqNo: **666414**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0279						0		30	
Toluene	ND	0.0279						0		30	
Ethylbenzene	ND	0.0418						0		30	
m,p-Xylene	ND	0.0279						0		30	
o-Xylene	ND	0.0279						0		30	
Surr: Dibromofluoromethane	1.51		1.744		86.5	56.5	129		0		
Surr: Toluene-d8	1.81		1.744		104	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	1.72		1.744		98.8	63.1	141		0		

Sample ID **CCV-16464D** SampType: **CCV** Units: **µg/L** Prep Date: **3/13/2017** RunNo: **34901**
Client ID: **CCV** Batch ID: **R34901** Analysis Date: **3/13/2017** SeqNo: **666590**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	20.2	0.0200	20.00	0	101	80	120				
Toluene	20.1	0.0200	20.00	0	100	80	120				
Ethylbenzene	19.3	0.0300	20.00	0	96.6	80	120				
m,p-Xylene	38.5	0.0200	40.00	0	96.3	80	120				
o-Xylene	19.1	0.0200	20.00	0	95.3	80	120				
Surr: Dibromofluoromethane	23.7		25.00		94.9	63.7	129				
Surr: Toluene-d8	25.4		25.00		101	62.4	141				
Surr: 1-Bromo-4-fluorobenzene	26.0		25.00		104	63.1	141				

Work Order: 1703107
CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-16486**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **3/13/2017**		RunNo: **34909**		
Client ID: **LCSS**	Batch ID: **16486**					Analysis Date: **3/13/2017**		SeqNo: **666889**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.983	0.0200	1.000	0	98.3	64.3	133				
Toluene	0.981	0.0200	1.000	0	98.1	67.3	138				
Ethylbenzene	0.963	0.0300	1.000	0	96.3	74	129				
m,p-Xylene	1.93	0.0200	2.000	0	96.3	70	124				
o-Xylene	0.951	0.0200	1.000	0	95.1	72.7	124				
Surr: Dibromofluoromethane	1.21		1.250		97.0	56.5	129				
Surr: Toluene-d8	1.26		1.250		101	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.27		1.250		102	63.1	141				

Sample ID **MB-16486**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **3/13/2017**		RunNo: **34909**		
Client ID: **MBLKS**	Batch ID: **16486**					Analysis Date: **3/13/2017**		SeqNo: **666890**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0200									
Ethylbenzene	ND	0.0300									
m,p-Xylene	ND	0.0200									
o-Xylene	ND	0.0200									
Surr: Dibromofluoromethane	1.16		1.250		92.5	56.5	129				
Surr: Toluene-d8	1.23		1.250		98.7	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.21		1.250		96.6	63.1	141				

Sample ID **1703130-003BMS**	SampType: **MS**			Units: **mg/Kg**		Prep Date: **3/13/2017**		RunNo: **34909**		
Client ID: **BATCH**	Batch ID: **16486**					Analysis Date: **3/14/2017**		SeqNo: **666881**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.741	0.0143	0.7155	0	104	63.5	133				
Toluene	0.707	0.0143	0.7155	0.02565	95.2	63.4	132				
Ethylbenzene	0.680	0.0215	0.7155	0.007907	93.9	54.5	134				
m,p-Xylene	1.36	0.0143	1.431	0.02837	93.1	53.1	132				

Work Order: 1703107
CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1703130-003BMS** SampType: **MS** Units: **mg/Kg** Prep Date: **3/13/2017** RunNo: **34909**
Client ID: **BATCH** Batch ID: **16486** Analysis Date: **3/14/2017** SeqNo: **666881**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	0.667	0.0143	0.7155	0.01356	91.4	53.3	139				
Surr: Dibromofluoromethane	0.847		0.8944		94.7	56.5	129				
Surr: Toluene-d8	0.896		0.8944		100	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	0.904		0.8944		101	63.1	141				

Sample ID **1703130-003BMSD** SampType: **MSD** Units: **mg/Kg** Prep Date: **3/13/2017** RunNo: **34909**
Client ID: **BATCH** Batch ID: **16486** Analysis Date: **3/14/2017** SeqNo: **666882**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.720	0.0143	0.7155	0	101	63.5	133	0.7406	2.75	30	
Toluene	0.680	0.0143	0.7155	0.02565	91.5	63.4	132	0.7070	3.85	30	
Ethylbenzene	0.649	0.0215	0.7155	0.007907	89.6	54.5	134	0.6797	4.60	30	
m,p-Xylene	1.31	0.0143	1.431	0.02837	89.7	53.1	132	1.360	3.63	30	
o-Xylene	0.638	0.0143	0.7155	0.01356	87.3	53.3	139	0.6674	4.44	30	
Surr: Dibromofluoromethane	0.848		0.8944		94.9	56.5	129		0		
Surr: Toluene-d8	0.893		0.8944		99.8	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	0.903		0.8944		101	63.1	141		0		

Work Order: 1703107
CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID **1703075-030ADUP** SampType: **DUP** Units: **wt%** Prep Date: **3/10/2017** RunNo: **34856**
Client ID: **BATCH** Batch ID: **R34856** Analysis Date: **3/10/2017** SeqNo: **665456**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	11.2	0.500						12.72	13.1	20	

Sample ID **1703107-001ADUP** SampType: **DUP** Units: **wt%** Prep Date: **3/14/2017** RunNo: **34918**
Client ID: **HA-1-1-1.5** Batch ID: **R34918** Analysis Date: **3/14/2017** SeqNo: **666801**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	6.09	0.500						6.600	7.97	20	

Sample ID **1703087-009ADUP** SampType: **DUP** Units: **wt%** Prep Date: **3/14/2017** RunNo: **34918**
Client ID: **BATCH** Batch ID: **R34918** Analysis Date: **3/14/2017** SeqNo: **666821**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	25.8	0.500						18.17	34.8	20	R

Sample Log-In Check List

Client Name:	**ATC**	Work Order Number:	**1703107**
Logged by:	**Erica Silva**	Date Received:	**3/9/2017 4:46:00 PM**

Chain of Custody

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

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C*	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	1.8
Sample	2.3
Temp Blank	6.1

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

Chain of Custody Record and Laboratory Services Agreement

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 03/09/17

Laboratory Project No (internal): 1703107

Page: 1 of: 1

Client: ATC
Address: 6347 Seaview Ave NW
City, State, Zip: Seattle, WA 98107
Telephone: 206 781 1449 Fax: 206 781 1543

Project Name: Swedish Edmonds Campus
Project No:
Location: Edmonds, WA
Report To (PM): S. Payne
PM Email: simon.payne@atcassociates.com
Collected by: S. Payne

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM / 625)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1	HA-1-1-1.5	03/09/17	12:15	S														hold
2	HA-2-0.5-1		12:35	S			X			X								
3	HA-3-0.5-1		12:45	S			X			X								
4	HA-4-0.5-1		13:00	S			X			X								
5	HA-5-0.5-1		13:10	S														hold
6	HA-6-0-0.5		14:00	S			X			X								
7	HA-7-0.5-1		14:10	S														hold
8																		
9																		
10																		

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab (Samples will be held for 30 days unless otherwise noted. A fee may be assessed if samples are retained after 30 days.)

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks:

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x	03/09/17 16:46	x	3/9/17 1646
x		x	

TAT → SameDay^ NextDay^ 2 Day 3 Day STD

^Please coordinate with the lab in advance

Chain of Custody Record and Laboratory Services Agreement

Fremont Analytical

3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Date: 03/09/17
Laboratory Project No (internal): 1703107
Page: 1 of: 1

Client: ATC
Address: 6347 Seaview Ave NW
City, State, Zip: Seattle, WA 98107
Telephone: 206 781 1449 Fax: 206 781 1543

Project Name: Swedish Edmonds Campus
Project No:
Collected by: S. Payne
Location: Edmonds, WA
Report To (PM): S. Payne
PM Email: simon.payne@ztcassociates.com

*Matrix Codes: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM / 625)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1	HA-1-1-1.5	03/09/17	12:15	S			X			X								hold
2	HA-2-0.5-1		12:35	S			X			X								
3	HA-3-0.5-1		12:45	S			X			X								
4	HA-4-0.5-1		13:00	S			X			X								
5	HA-5-0.5-1		13:10	S			X			X								hold
6	HA-6-0-0.5		14:00	S			X			X								
7	HA-7-0.5-1		14:10	S			X			X								hold
8																		
9																		
10																		

**Metals Analysis (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab (Samples will be held for 30 days unless otherwise noted. A fee may be assessed if samples are retained after 30 days.)

Turn-around times for samples received after 4:00pm will begin on the following business day.

Special Remarks:
X Run per S.P. 3/13/17 cg
2 Day

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above, that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished	Date/Time	Received	Date/Time
x	03/09/17 16:46	x	3/9/17 1646
Relinquished	Date/Time	Received	Date/Time
x		x	

TAT → SameDay^ NextDay^ (2 Day) 3 Day STD
^Please coordinate with the lab in advance

Distribution: White - Lab, Yellow - File, Pink - Originator

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

ATC Group Services, Inc.
Simon Payne
6347 Seaview Ave NW
Seattle, WA 98107

RE: Swedish Edmonds Campus Fuel Release
Work Order Number: 1704147

April 17, 2017

Attention Simon Payne:

Fremont Analytical, Inc. received 13 sample(s) on 4/12/2017 for the analyses presented in the following report.

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.
Sample Moisture (Percent Moisture)
Volatile Organic Compounds by EPA Method 8260C

This report consists of the following:

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

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

Thank you for using Fremont Analytical.

Sincerely,

Chelsea Ward
Project Manager

Date: *04/17/2017*

CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus Fuel Release
Work Order: 1704147

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1704147-001	01	04/12/2017 11:50 AM	04/12/2017 5:14 PM
1704147-002	02	04/12/2017 12:10 PM	04/12/2017 5:14 PM
1704147-003	03	04/12/2017 1:35 PM	04/12/2017 5:14 PM
1704147-004	04	04/12/2017 1:55 PM	04/12/2017 5:14 PM
1704147-005	05	04/12/2017 2:02 PM	04/12/2017 5:14 PM
1704147-006	06	04/12/2017 2:40 PM	04/12/2017 5:14 PM
1704147-007	07	04/12/2017 3:10 PM	04/12/2017 5:14 PM
1704147-008	08	04/12/2017 3:20 PM	04/12/2017 5:14 PM
1704147-009	09	04/12/2017 3:30 PM	04/12/2017 5:14 PM
1704147-010	10	04/12/2017 2:51 PM	04/12/2017 5:14 PM
1704147-011	11	04/12/2017 2:55 PM	04/12/2017 5:14 PM
1704147-012	12	04/12/2017 2:57 PM	04/12/2017 5:14 PM
1704147-013	Trip Blank	04/07/2017 12:00 AM	04/12/2017 5:14 PM

Case Narrative

WO#: **1704147**
Date: **4/17/2017**

CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus Fuel Release

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

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

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

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

Qualifiers:

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

Acronyms:

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

Analytical Report

Work Order: **1704147**
Date Reported: **4/17/2017**

Client: ATC Group Services, Inc.
Collection Date: 4/12/2017 11:50:00 AM
Project: Swedish Edmonds Campus Fuel Release
Lab ID: 1704147-001
Matrix: Soil
Client Sample ID: **01**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16768		Analyst: SB
Diesel (Fuel Oil)	ND	21.4		mg/Kg-dry	1	4/14/2017 10:23:29 AM
Heavy Oil	ND	53.6		mg/Kg-dry	1	4/14/2017 10:23:29 AM
Surr: 2-Fluorobiphenyl	127	50-150		%Rec	1	4/14/2017 10:23:29 AM
Surr: o-Terphenyl	128	50-150		%Rec	1	4/14/2017 10:23:29 AM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16767		Analyst: NG
Benzene	ND	0.00891		mg/Kg-dry	1	4/13/2017 9:39:35 PM
Toluene	ND	0.00891		mg/Kg-dry	1	4/13/2017 9:39:35 PM
Ethylbenzene	ND	0.0134		mg/Kg-dry	1	4/13/2017 9:39:35 PM
m,p-Xylene	ND	0.00891		mg/Kg-dry	1	4/13/2017 9:39:35 PM
o-Xylene	ND	0.00891		mg/Kg-dry	1	4/13/2017 9:39:35 PM
Surr: Dibromofluoromethane	89.0	56.5-129		%Rec	1	4/13/2017 9:39:35 PM
Surr: Toluene-d8	95.1	64.5-151		%Rec	1	4/13/2017 9:39:35 PM
Surr: 1-Bromo-4-fluorobenzene	97.1	63.1-141		%Rec	1	4/13/2017 9:39:35 PM
Sample Moisture (Percent Moisture)				Batch ID: R35510		Analyst: BB
Percent Moisture	7.57	0.500		wt%	1	4/13/2017 11:05:21 AM

Analytical Report

Work Order: **1704147**
Date Reported: **4/17/2017**

Client: ATC Group Services, Inc.
Collection Date: 4/12/2017 12:10:00 PM
Project: Swedish Edmonds Campus Fuel Release
Lab ID: 1704147-002
Matrix: Soil
Client Sample ID: **02**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16768		Analyst: SB
Diesel (Fuel Oil)	33.0	25.2		mg/Kg-dry	1	4/14/2017 7:17:29 PM
Heavy Oil	ND	63.0		mg/Kg-dry	1	4/14/2017 7:17:29 PM
Surr: 2-Fluorobiphenyl	140	50-150		%Rec	1	4/14/2017 7:17:29 PM
Surr: o-Terphenyl	141	50-150		%Rec	1	4/14/2017 7:17:29 PM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16767		Analyst: NG
Benzene	ND	0.0122		mg/Kg-dry	1	4/13/2017 10:37:13 PM
Toluene	ND	0.0122		mg/Kg-dry	1	4/13/2017 10:37:13 PM
Ethylbenzene	ND	0.0184		mg/Kg-dry	1	4/13/2017 10:37:13 PM
m,p-Xylene	ND	0.0122		mg/Kg-dry	1	4/13/2017 10:37:13 PM
o-Xylene	ND	0.0122		mg/Kg-dry	1	4/13/2017 10:37:13 PM
Surr: Dibromofluoromethane	90.1	56.5-129		%Rec	1	4/13/2017 10:37:13 PM
Surr: Toluene-d8	95.5	64.5-151		%Rec	1	4/13/2017 10:37:13 PM
Surr: 1-Bromo-4-fluorobenzene	97.4	63.1-141		%Rec	1	4/13/2017 10:37:13 PM
Sample Moisture (Percent Moisture)				Batch ID: R35510		Analyst: BB
Percent Moisture	24.4	0.500		wt%	1	4/13/2017 11:05:21 AM

Analytical Report

Work Order: **1704147**
Date Reported: **4/17/2017**

Client: ATC Group Services, Inc.
Collection Date: 4/12/2017 1:35:00 PM
Project: Swedish Edmonds Campus Fuel Release
Lab ID: 1704147-003
Matrix: Soil
Client Sample ID: **03**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16768		Analyst: SB
Diesel (Fuel Oil)	ND	20.2		mg/Kg-dry	1	4/14/2017 7:48:56 PM
Heavy Oil	ND	50.6		mg/Kg-dry	1	4/14/2017 7:48:56 PM
Surr: 2-Fluorobiphenyl	89.6	50-150		%Rec	1	4/14/2017 7:48:56 PM
Surr: o-Terphenyl	94.3	50-150		%Rec	1	4/14/2017 7:48:56 PM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16767		Analyst: NG
Benzene	ND	0.0107		mg/Kg-dry	1	4/13/2017 11:05:58 PM
Toluene	ND	0.0107		mg/Kg-dry	1	4/13/2017 11:05:58 PM
Ethylbenzene	ND	0.0160		mg/Kg-dry	1	4/13/2017 11:05:58 PM
m,p-Xylene	ND	0.0107		mg/Kg-dry	1	4/13/2017 11:05:58 PM
o-Xylene	ND	0.0107		mg/Kg-dry	1	4/13/2017 11:05:58 PM
Surr: Dibromofluoromethane	86.8	56.5-129		%Rec	1	4/13/2017 11:05:58 PM
Surr: Toluene-d8	95.7	64.5-151		%Rec	1	4/13/2017 11:05:58 PM
Surr: 1-Bromo-4-fluorobenzene	95.2	63.1-141		%Rec	1	4/13/2017 11:05:58 PM
Sample Moisture (Percent Moisture)				Batch ID: R35510		Analyst: BB
Percent Moisture	8.14	0.500		wt%	1	4/13/2017 11:05:21 AM

Analytical Report

Work Order: **1704147**
Date Reported: **4/17/2017**

Client: ATC Group Services, Inc.
Collection Date: 4/12/2017 1:55:00 PM
Project: Swedish Edmonds Campus Fuel Release
Lab ID: 1704147-004
Matrix: Soil
Client Sample ID: **04**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16768		Analyst: SB
Diesel (Fuel Oil)	53.0	18.3		mg/Kg-dry	1	4/14/2017 8:20:11 PM
Heavy Oil	ND	45.8		mg/Kg-dry	1	4/14/2017 8:20:11 PM
Surr: 2-Fluorobiphenyl	107	50-150		%Rec	1	4/14/2017 8:20:11 PM
Surr: o-Terphenyl	109	50-150		%Rec	1	4/14/2017 8:20:11 PM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16767		Analyst: NG
Benzene	ND	0.0115		mg/Kg-dry	1	4/13/2017 11:34:46 PM
Toluene	ND	0.0115		mg/Kg-dry	1	4/13/2017 11:34:46 PM
Ethylbenzene	ND	0.0173		mg/Kg-dry	1	4/13/2017 11:34:46 PM
m,p-Xylene	ND	0.0115		mg/Kg-dry	1	4/13/2017 11:34:46 PM
o-Xylene	ND	0.0115		mg/Kg-dry	1	4/13/2017 11:34:46 PM
Surr: Dibromofluoromethane	87.8	56.5-129		%Rec	1	4/13/2017 11:34:46 PM
Surr: Toluene-d8	95.8	64.5-151		%Rec	1	4/13/2017 11:34:46 PM
Surr: 1-Bromo-4-fluorobenzene	95.4	63.1-141		%Rec	1	4/13/2017 11:34:46 PM
Sample Moisture (Percent Moisture)				Batch ID: R35510		Analyst: BB
Percent Moisture	6.32	0.500		wt%	1	4/13/2017 11:05:21 AM

Analytical Report

Work Order: **1704147**
Date Reported: **4/17/2017**

Client: ATC Group Services, Inc.
Collection Date: 4/12/2017 2:02:00 PM
Project: Swedish Edmonds Campus Fuel Release
Lab ID: 1704147-005
Matrix: Soil
Client Sample ID: **05**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16768		Analyst: SB
Diesel (Fuel Oil)	ND	19.5		mg/Kg-dry	1	4/14/2017 8:51:29 PM
Heavy Oil	ND	48.8		mg/Kg-dry	1	4/14/2017 8:51:29 PM
Surr: 2-Fluorobiphenyl	97.8	50-150		%Rec	1	4/14/2017 8:51:29 PM
Surr: o-Terphenyl	97.5	50-150		%Rec	1	4/14/2017 8:51:29 PM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16767		Analyst: NG
Benzene	0.0210	0.0107		mg/Kg-dry	1	4/14/2017 12:03:37 AM
Toluene	0.0237	0.0107		mg/Kg-dry	1	4/14/2017 12:03:37 AM
Ethylbenzene	0.0204	0.0161		mg/Kg-dry	1	4/14/2017 12:03:37 AM
m,p-Xylene	0.0423	0.0107		mg/Kg-dry	1	4/14/2017 12:03:37 AM
o-Xylene	0.0214	0.0107		mg/Kg-dry	1	4/14/2017 12:03:37 AM
Surr: Dibromofluoromethane	86.2	56.5-129		%Rec	1	4/14/2017 12:03:37 AM
Surr: Toluene-d8	96.3	64.5-151		%Rec	1	4/14/2017 12:03:37 AM
Surr: 1-Bromo-4-fluorobenzene	95.1	63.1-141		%Rec	1	4/14/2017 12:03:37 AM
Sample Moisture (Percent Moisture)				Batch ID: R35510		Analyst: BB
Percent Moisture	5.66	0.500		wt%	1	4/13/2017 11:05:21 AM

Analytical Report

Work Order: **1704147**
Date Reported: **4/17/2017**

Client: ATC Group Services, Inc.
Collection Date: 4/12/2017 2:40:00 PM
Project: Swedish Edmonds Campus Fuel Release
Lab ID: 1704147-006
Matrix: Soil
Client Sample ID: **06**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16768		Analyst: SB
Diesel (Fuel Oil)	ND	21.4		mg/Kg-dry	1	4/14/2017 9:22:39 PM
Heavy Oil	ND	53.5		mg/Kg-dry	1	4/14/2017 9:22:39 PM
Surr: 2-Fluorobiphenyl	79.5	50-150		%Rec	1	4/14/2017 9:22:39 PM
Surr: o-Terphenyl	77.8	50-150		%Rec	1	4/14/2017 9:22:39 PM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16767		Analyst: NG
Benzene	0.0174	0.0121		mg/Kg-dry	1	4/14/2017 12:32:23 AM
Toluene	0.0132	0.0121		mg/Kg-dry	1	4/14/2017 12:32:23 AM
Ethylbenzene	ND	0.0181		mg/Kg-dry	1	4/14/2017 12:32:23 AM
m,p-Xylene	0.0287	0.0121		mg/Kg-dry	1	4/14/2017 12:32:23 AM
o-Xylene	0.0234	0.0121		mg/Kg-dry	1	4/14/2017 12:32:23 AM
Surr: Dibromofluoromethane	85.9	56.5-129		%Rec	1	4/14/2017 12:32:23 AM
Surr: Toluene-d8	96.4	64.5-151		%Rec	1	4/14/2017 12:32:23 AM
Surr: 1-Bromo-4-fluorobenzene	96.5	63.1-141		%Rec	1	4/14/2017 12:32:23 AM
Sample Moisture (Percent Moisture)				Batch ID: R35510		Analyst: BB
Percent Moisture	6.90	0.500		wt%	1	4/13/2017 11:05:21 AM

Analytical Report

Work Order: **1704147**
Date Reported: **4/17/2017**

Client: ATC Group Services, Inc.
Collection Date: 4/12/2017 3:10:00 PM
Project: Swedish Edmonds Campus Fuel Release
Lab ID: 1704147-007
Matrix: Soil
Client Sample ID: **07**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16768		Analyst: SB
Diesel (Fuel Oil)	75.4	19.4		mg/Kg-dry	1	4/14/2017 9:53:53 PM
Heavy Oil	ND	48.4		mg/Kg-dry	1	4/14/2017 9:53:53 PM
Surr: 2-Fluorobiphenyl	107	50-150		%Rec	1	4/14/2017 9:53:53 PM
Surr: o-Terphenyl	112	50-150		%Rec	1	4/14/2017 9:53:53 PM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16767		Analyst: NG
Benzene	ND	0.0133		mg/Kg-dry	1	4/14/2017 1:01:09 AM
Toluene	0.338	0.0133		mg/Kg-dry	1	4/14/2017 1:01:09 AM
Ethylbenzene	1.16	0.0200		mg/Kg-dry	1	4/14/2017 1:01:09 AM
m,p-Xylene	4.04	0.133	D	mg/Kg-dry	10	4/14/2017 11:16:10 AM
o-Xylene	2.34	0.133	D	mg/Kg-dry	10	4/14/2017 11:16:10 AM
Surr: Dibromofluoromethane	86.6	56.5-129		%Rec	1	4/14/2017 1:01:09 AM
Surr: Toluene-d8	104	64.5-151		%Rec	1	4/14/2017 1:01:09 AM
Surr: 1-Bromo-4-fluorobenzene	111	63.1-141		%Rec	1	4/14/2017 1:01:09 AM
Sample Moisture (Percent Moisture)				Batch ID: R35510		Analyst: BB
Percent Moisture	8.57	0.500		wt%	1	4/13/2017 11:05:21 AM

Analytical Report

Work Order: **1704147**
Date Reported: **4/17/2017**

Client: ATC Group Services, Inc.
Collection Date: 4/12/2017 3:20:00 PM
Project: Swedish Edmonds Campus Fuel Release
Lab ID: 1704147-008
Matrix: Soil
Client Sample ID: **08**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16768		Analyst: SB
Diesel (Fuel Oil)	ND	22.6		mg/Kg-dry	1	4/14/2017 10:25:03 PM
Heavy Oil	ND	56.4		mg/Kg-dry	1	4/14/2017 10:25:03 PM
Surr: 2-Fluorobiphenyl	122	50-150		%Rec	1	4/14/2017 10:25:03 PM
Surr: o-Terphenyl	130	50-150		%Rec	1	4/14/2017 10:25:03 PM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16767		Analyst: NG
Benzene	ND	0.00974		mg/Kg-dry	1	4/14/2017 4:22:37 AM
Toluene	0.0144	0.00974		mg/Kg-dry	1	4/14/2017 4:22:37 AM
Ethylbenzene	0.0164	0.0146		mg/Kg-dry	1	4/14/2017 4:22:37 AM
m,p-Xylene	0.0333	0.00974		mg/Kg-dry	1	4/14/2017 4:22:37 AM
o-Xylene	0.0274	0.00974		mg/Kg-dry	1	4/14/2017 4:22:37 AM
Surr: Dibromofluoromethane	88.0	56.5-129		%Rec	1	4/14/2017 4:22:37 AM
Surr: Toluene-d8	96.7	64.5-151		%Rec	1	4/14/2017 4:22:37 AM
Surr: 1-Bromo-4-fluorobenzene	99.4	63.1-141		%Rec	1	4/14/2017 4:22:37 AM
Sample Moisture (Percent Moisture)				Batch ID: R35510		Analyst: BB
Percent Moisture	13.6	0.500		wt%	1	4/13/2017 11:05:21 AM

Analytical Report

Work Order: **1704147**
Date Reported: **4/17/2017**

Client: ATC Group Services, Inc.
Collection Date: 4/12/2017 3:30:00 PM
Project: Swedish Edmonds Campus Fuel Release
Lab ID: 1704147-009
Matrix: Soil
Client Sample ID: **09**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16768		Analyst: SB
Diesel (Fuel Oil)	ND	20.4		mg/Kg-dry	1	4/14/2017 10:56:08 PM
Heavy Oil	ND	51.1		mg/Kg-dry	1	4/14/2017 10:56:08 PM
Surr: 2-Fluorobiphenyl	99.4	50-150		%Rec	1	4/14/2017 10:56:08 PM
Surr: o-Terphenyl	103	50-150		%Rec	1	4/14/2017 10:56:08 PM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16767		Analyst: NG
Benzene	ND	0.0108		mg/Kg-dry	1	4/14/2017 4:51:21 AM
Toluene	0.0251	0.0108		mg/Kg-dry	1	4/14/2017 4:51:21 AM
Ethylbenzene	0.0385	0.0163		mg/Kg-dry	1	4/14/2017 4:51:21 AM
m,p-Xylene	0.102	0.0108		mg/Kg-dry	1	4/14/2017 4:51:21 AM
o-Xylene	0.0760	0.0108		mg/Kg-dry	1	4/14/2017 4:51:21 AM
Surr: Dibromofluoromethane	86.6	56.5-129		%Rec	1	4/14/2017 4:51:21 AM
Surr: Toluene-d8	96.3	64.5-151		%Rec	1	4/14/2017 4:51:21 AM
Surr: 1-Bromo-4-fluorobenzene	98.9	63.1-141		%Rec	1	4/14/2017 4:51:21 AM
Sample Moisture (Percent Moisture)				Batch ID: R35510		Analyst: BB
Percent Moisture	7.80	0.500		wt%	1	4/13/2017 11:05:21 AM

Analytical Report

Work Order: **1704147**
Date Reported: **4/17/2017**

Client: ATC Group Services, Inc.
Collection Date: 4/12/2017 2:51:00 PM
Project: Swedish Edmonds Campus Fuel Release
Lab ID: 1704147-010
Matrix: Soil
Client Sample ID: **10**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16768		Analyst: SB
Diesel (Fuel Oil)	ND	19.4		mg/Kg-dry	1	4/15/2017 12:29:15 AM
Heavy Oil	ND	48.4		mg/Kg-dry	1	4/15/2017 12:29:15 AM
Surr: 2-Fluorobiphenyl	132	50-150		%Rec	1	4/15/2017 12:29:15 AM
Surr: o-Terphenyl	145	50-150		%Rec	1	4/15/2017 12:29:15 AM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16767		Analyst: NG
Benzene	ND	0.00902		mg/Kg-dry	1	4/14/2017 5:20:14 AM
Toluene	ND	0.00902		mg/Kg-dry	1	4/14/2017 5:20:14 AM
Ethylbenzene	ND	0.0135		mg/Kg-dry	1	4/14/2017 5:20:14 AM
m,p-Xylene	ND	0.00902		mg/Kg-dry	1	4/14/2017 5:20:14 AM
o-Xylene	ND	0.00902		mg/Kg-dry	1	4/14/2017 5:20:14 AM
Surr: Dibromofluoromethane	83.5	56.5-129		%Rec	1	4/14/2017 5:20:14 AM
Surr: Toluene-d8	95.8	64.5-151		%Rec	1	4/14/2017 5:20:14 AM
Surr: 1-Bromo-4-fluorobenzene	98.7	63.1-141		%Rec	1	4/14/2017 5:20:14 AM
Sample Moisture (Percent Moisture)				Batch ID: R35510		Analyst: BB
Percent Moisture	7.28	0.500		wt%	1	4/13/2017 11:05:21 AM

Analytical Report

Work Order: **1704147**
Date Reported: **4/17/2017**

Client: ATC Group Services, Inc.
Collection Date: 4/12/2017 2:55:00 PM
Project: Swedish Edmonds Campus Fuel Release
Lab ID: 1704147-011
Matrix: Soil
Client Sample ID: **11**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16768		Analyst: SB
Diesel (Fuel Oil)	ND	20.7		mg/Kg-dry	1	4/15/2017 1:31:10 AM
Heavy Oil	ND	51.7		mg/Kg-dry	1	4/15/2017 1:31:10 AM
Surr: 2-Fluorobiphenyl	104	50-150		%Rec	1	4/15/2017 1:31:10 AM
Surr: o-Terphenyl	105	50-150		%Rec	1	4/15/2017 1:31:10 AM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16767		Analyst: NG
Benzene	ND	0.00840		mg/Kg-dry	1	4/14/2017 5:49:04 AM
Toluene	ND	0.00840		mg/Kg-dry	1	4/14/2017 5:49:04 AM
Ethylbenzene	ND	0.0126		mg/Kg-dry	1	4/14/2017 5:49:04 AM
m,p-Xylene	ND	0.00840		mg/Kg-dry	1	4/14/2017 5:49:04 AM
o-Xylene	ND	0.00840		mg/Kg-dry	1	4/14/2017 5:49:04 AM
Surr: Dibromofluoromethane	84.9	56.5-129		%Rec	1	4/14/2017 5:49:04 AM
Surr: Toluene-d8	96.1	64.5-151		%Rec	1	4/14/2017 5:49:04 AM
Surr: 1-Bromo-4-fluorobenzene	96.1	63.1-141		%Rec	1	4/14/2017 5:49:04 AM
Sample Moisture (Percent Moisture)				Batch ID: R35510		Analyst: BB
Percent Moisture	5.39	0.500		wt%	1	4/13/2017 11:05:21 AM

Analytical Report

Work Order: **1704147**
Date Reported: **4/17/2017**

Client: ATC Group Services, Inc.
Collection Date: 4/12/2017 2:57:00 PM
Project: Swedish Edmonds Campus Fuel Release
Lab ID: 1704147-012
Matrix: Soil
Client Sample ID: **12**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 16768		Analyst: SB
Diesel (Fuel Oil)	ND	19.1		mg/Kg-dry	1	4/15/2017 2:02:07 AM
Heavy Oil	ND	47.8		mg/Kg-dry	1	4/15/2017 2:02:07 AM
Surr: 2-Fluorobiphenyl	106	50-150		%Rec	1	4/15/2017 2:02:07 AM
Surr: o-Terphenyl	109	50-150		%Rec	1	4/15/2017 2:02:07 AM
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16767		Analyst: NG
Benzene	ND	0.00946		mg/Kg-dry	1	4/14/2017 6:46:42 AM
Toluene	ND	0.00946		mg/Kg-dry	1	4/14/2017 6:46:42 AM
Ethylbenzene	ND	0.0142		mg/Kg-dry	1	4/14/2017 6:46:42 AM
m,p-Xylene	ND	0.00946		mg/Kg-dry	1	4/14/2017 6:46:42 AM
o-Xylene	ND	0.00946		mg/Kg-dry	1	4/14/2017 6:46:42 AM
Surr: Dibromofluoromethane	83.2	56.5-129		%Rec	1	4/14/2017 6:46:42 AM
Surr: Toluene-d8	96.3	64.5-151		%Rec	1	4/14/2017 6:46:42 AM
Surr: 1-Bromo-4-fluorobenzene	96.6	63.1-141		%Rec	1	4/14/2017 6:46:42 AM
Sample Moisture (Percent Moisture)				Batch ID: R35510		Analyst: BB
Percent Moisture	5.93	0.500		wt%	1	4/13/2017 11:05:21 AM

Analytical Report

Work Order: **1704147**
Date Reported: **4/17/2017**

Client: ATC Group Services, Inc.
Collection Date: 4/7/2017
Project: Swedish Edmonds Campus Fuel Release
Lab ID: 1704147-013
Matrix: Soil
Client Sample ID: **Trip Blank**

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Volatile Organic Compounds by EPA Method 8260C				Batch ID: 16767		Analyst: NG
Benzene	ND	0.0200		mg/Kg	1	4/13/2017 8:41:57 PM
Surr: Dibromofluoromethane	89.5	56.5-129		%Rec	1	4/13/2017 8:41:57 PM
Surr: Toluene-d8	95.1	64.5-151		%Rec	1	4/13/2017 8:41:57 PM
Surr: 1-Bromo-4-fluorobenzene	96.7	63.1-141		%Rec	1	4/13/2017 8:41:57 PM

Work Order: 1704147
CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus Fuel Release

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID **MB-16768**	SampType: **MBLK**	Units: **mg/Kg**	Prep Date: **4/13/2017**	RunNo: **35569**
Client ID: **MBLKS**	Batch ID: **16768**		Analysis Date: **4/14/2017**	SeqNo: **681330**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	20.0									
Heavy Oil	ND	50.0									
Surr: 2-Fluorobiphenyl	21.0		20.00		105	50	150				
Surr: o-Terphenyl	21.1		20.00		105	50	150				

Sample ID **LCS-16768**	SampType: **LCS**	Units: **mg/Kg**	Prep Date: **4/13/2017**	RunNo: **35569**
Client ID: **LCSS**	Batch ID: **16768**		Analysis Date: **4/14/2017**	SeqNo: **681329**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	524	20.0	500.0	0	105	65	135				
Surr: 2-Fluorobiphenyl	22.7		20.00		113	50	150				
Surr: o-Terphenyl	23.6		20.00		118	50	150				

Sample ID **1704147-001ADUP**	SampType: **DUP**	Units: **mg/Kg-dry**	Prep Date: **4/13/2017**	RunNo: **35569**
Client ID: **01**	Batch ID: **16768**		Analysis Date: **4/14/2017**	SeqNo: **681316**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	18.5						20.02	103	30	
Heavy Oil	ND	46.2						0		30	
Surr: 2-Fluorobiphenyl	22.2		18.46		120	50	150		0		
Surr: o-Terphenyl	22.2		18.46		120	50	150		0		

Sample ID **1704147-001AMS**	SampType: **MS**	Units: **mg/Kg-dry**	Prep Date: **4/13/2017**	RunNo: **35569**
Client ID: **01**	Batch ID: **16768**		Analysis Date: **4/14/2017**	SeqNo: **681317**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	524	19.6	489.1	20.02	103	65	135				
Surr: 2-Fluorobiphenyl	21.3		19.56		109	50	150				
Surr: o-Terphenyl	22.6		19.56		115	50	150				

Work Order: 1704147
CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus Fuel Release

QC SUMMARY REPORT

Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.

Sample ID	**1704147-001AMS**	SampType:	**MS**		Units:	**mg/Kg-dry**	Prep Date:	**4/13/2017**		RunNo:	**35569**	
Client ID:	**01**	Batch ID:	**16768**				Analysis Date:	**4/14/2017**		SeqNo:	**681317**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	

Sample ID	**1704147-001AMSD**	SampType:	**MSD**		Units:	**mg/Kg-dry**	Prep Date:	**4/13/2017**		RunNo:	**35569**	
Client ID:	**01**	Batch ID:	**16768**				Analysis Date:	**4/14/2017**		SeqNo:	**681411**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Diesel (Fuel Oil)	537	19.9	498.1	20.02	104	65	135	524.3	2.44	30		
Surr: 2-Fluorobiphenyl	21.2		19.92		106	50	150		0			
Surr: o-Terphenyl	21.8		19.92		109	50	150		0			

Sample ID	**1704147-010ADUP**	SampType:	**DUP**		Units:	**mg/Kg-dry**	Prep Date:	**4/13/2017**		RunNo:	**35569**	
Client ID:	**10**	Batch ID:	**16768**				Analysis Date:	**4/15/2017**		SeqNo:	**681421**	
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Diesel (Fuel Oil)	ND	20.0						0		30		
Heavy Oil	ND	50.0						0		30		
Surr: 2-Fluorobiphenyl	22.8		19.99		114	50	150		0			
Surr: o-Terphenyl	23.8		19.99		119	50	150		0			

Work Order: 1704147
CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus Fuel Release

QC SUMMARY REPORT

Sample Moisture (Percent Moisture)

Sample ID **1704141-002ADUP**	SampType: **DUP**			Units: **wt%**		Prep Date: **4/13/2017**		RunNo: **35510**		
Client ID: **BATCH**	Batch ID: **R35510**					Analysis Date: **4/13/2017**		SeqNo: **680272**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	12.2	0.500						11.96	2.35	20	

Sample ID **1704140-007ADUP**	SampType: **DUP**			Units: **wt%**		Prep Date: **4/13/2017**		RunNo: **35510**		
Client ID: **BATCH**	Batch ID: **R35510**					Analysis Date: **4/13/2017**		SeqNo: **680292**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	13.3	0.500						13.80	3.39	20	

Work Order: 1704147
CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus Fuel Release

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **LCS-16767** SampType: **LCS** Units: **mg/Kg** Prep Date: **4/13/2017** RunNo: **35538**
Client ID: **LCSS** Batch ID: **16767** Analysis Date: **4/13/2017** SeqNo: **680795**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.03	0.0200	1.000	0	103	64.3	133				
Toluene	1.06	0.0200	1.000	0	106	67.3	138				
Ethylbenzene	1.07	0.0300	1.000	0	107	74	129				
m,p-Xylene	2.15	0.0200	2.000	0	107	70	124				
o-Xylene	1.07	0.0200	1.000	0	107	68.1	139				
Surr: Dibromofluoromethane	1.24		1.250		99.2	56.5	129				
Surr: Toluene-d8	1.27		1.250		102	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.31		1.250		105	63.1	141				

Sample ID **MB-16767** SampType: **MBLK** Units: **mg/Kg** Prep Date: **4/13/2017** RunNo: **35538**
Client ID: **MBLKS** Batch ID: **16767** Analysis Date: **4/13/2017** SeqNo: **680796**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0200									
Toluene	ND	0.0200									
Ethylbenzene	ND	0.0300									
m,p-Xylene	ND	0.0200									
o-Xylene	ND	0.0200									
Surr: Dibromofluoromethane	1.19		1.250		95.2	56.5	129				
Surr: Toluene-d8	1.22		1.250		97.7	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	1.22		1.250		97.4	63.1	141				

Sample ID **1704147-001BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **4/13/2017** RunNo: **35538**
Client ID: **01** Batch ID: **16767** Analysis Date: **4/13/2017** SeqNo: **680775**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.00891						0		30	
Toluene	ND	0.00891						0		30	
Ethylbenzene	ND	0.0134						0		30	
m,p-Xylene	ND	0.00891						0		30	

Work Order: 1704147
CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus Fuel Release

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID	1704147-001BDUP	SampType:	DUP	Units:	mg/Kg-dry	Prep Date:	4/13/2017	RunNo:	35538
Client ID:	01	Batch ID:	16767			Analysis Date:	4/13/2017	SeqNo:	680775

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
o-Xylene	ND	0.00891						0		30	
Surr: Dibromofluoromethane	0.497		0.5566		89.2	56.5	129		0		
Surr: Toluene-d8	0.533		0.5566		95.8	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	0.530		0.5566		95.1	63.1	141		0		

Sample ID	1704147-005BMS	SampType:	MS	Units:	mg/Kg-dry	Prep Date:	4/13/2017	RunNo:	35538
Client ID:	05	Batch ID:	16767			Analysis Date:	4/14/2017	SeqNo:	680780

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.543	0.0107	0.5357	0.02096	97.4	63.5	133				
Toluene	0.551	0.0107	0.5357	0.02369	98.4	63.4	132				
Ethylbenzene	0.568	0.0161	0.5357	0.02044	102	54.5	134				
m,p-Xylene	1.14	0.0107	1.071	0.04232	102	53.1	132				
o-Xylene	0.578	0.0107	0.5357	0.02144	104	53.3	139				
Surr: Dibromofluoromethane	0.579		0.6696		86.4	56.5	129				
Surr: Toluene-d8	0.663		0.6696		99.0	64.5	151				
Surr: 1-Bromo-4-fluorobenzene	0.725		0.6696		108	63.1	141				

Sample ID	1704147-005BMSD	SampType:	MSD	Units:	mg/Kg-dry	Prep Date:	4/13/2017	RunNo:	35538
Client ID:	05	Batch ID:	16767			Analysis Date:	4/14/2017	SeqNo:	680781

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.537	0.0107	0.5357	0.02096	96.3	63.5	133	0.5428	1.11	30	
Toluene	0.550	0.0107	0.5357	0.02369	98.3	63.4	132	0.5510	0.108	30	
Ethylbenzene	0.554	0.0161	0.5357	0.02044	99.6	54.5	134	0.5677	2.41	30	
m,p-Xylene	1.11	0.0107	1.071	0.04232	99.2	53.1	132	1.136	2.76	30	
o-Xylene	0.555	0.0107	0.5357	0.02144	99.6	53.3	139	0.5780	4.07	30	
Surr: Dibromofluoromethane	0.620		0.6696		92.5	56.5	129		0		
Surr: Toluene-d8	0.659		0.6696		98.4	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	0.699		0.6696		104	63.1	141		0		

Work Order: 1704147
CLIENT: ATC Group Services, Inc.
Project: Swedish Edmonds Campus Fuel Release

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260C

Sample ID **1704147-005BMSD** SampType: **MSD** Units: **mg/Kg-dry** Prep Date: **4/13/2017** RunNo: **35538**
Client ID: **05** Batch ID: **16767** Analysis Date: **4/14/2017** SeqNo: **680781**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Sample ID **1704147-012BDUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **4/13/2017** RunNo: **35538**
Client ID: **12** Batch ID: **16767** Analysis Date: **4/14/2017** SeqNo: **680789**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.00946						0		30	
Toluene	ND	0.00946						0		30	
Ethylbenzene	ND	0.0142						0		30	
m,p-Xylene	ND	0.00946						0		30	
o-Xylene	ND	0.00946						0		30	
Surr: Dibromofluoromethane	0.500		0.5912		84.5	56.5	129		0		
Surr: Toluene-d8	0.568		0.5912		96.2	64.5	151		0		
Surr: 1-Bromo-4-fluorobenzene	0.569		0.5912		96.2	63.1	141		0		

Sample Log-In Check List

Client Name:	**ATC**	Work Order Number:	**1704147**
Logged by:	**Erica Silva**	Date Received:	**4/12/2017 5:14:00 PM**

Chain of Custody

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

Log In

3.	Coolers are present?	Yes ☑	No ☐	NA ☐
4.	Shipping container/cooler in good condition?	Yes ☑	No ☐	
5.	Custody Seals present on shipping container/cooler? (Refer to comments for Custody Seals not intact)	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all items received at a temperature of >0°C to 10.0°C*	Yes ☑	No ☐	NA ☐
8.	Sample(s) in proper container(s)?	Yes ☑	No ☐	
9.	Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
10.	Are samples properly preserved?	Yes ☑	No ☐	
11.	Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
12.	Is there headspace in the VOA vials?	Yes ☐	No ☐	NA ☑
13.	Did all samples containers arrive in good condition(unbroken)?	Yes ☑	No ☐	
14.	Does paperwork match bottle labels?	Yes ☑	No ☐	
15.	Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
16.	Is it clear what analyses were requested?	Yes ☑	No ☐	
17.	Were all holding times able to be met?	Yes ☑	No ☐	

Special Handling (if applicable)

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

Person Notified: _____ Date _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

19. Additional remarks:

Item Information

Item #	Temp ºC
Cooler	2.3
Sample	3.1

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

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 04/12/17 Page: 1 of: 2

Laboratory Project No (internal): 1704147

Project Name: Swedish Edmonds Campus Fuel Release

Special Remarks:

Project No: 252 EM 00072

Client: ATC Group Services LLC

Collected by: Nicholas Turner

Address: 6347 Seaview Avenue NW

Location: Edmonds, WA

City, State, Zip: Seattle, Wa 98107

Report To (PM): Simon Payne

Telephone: 206-781-1449

Sample Disposal: ☐ Return to client ☐ Disposal by lab (after 30 days)

Fax:

PM Email: Simon.payne@atcassociates.com

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOCs (EPA 8260 / 624)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SVOCs (EPA 8270 / 625)	PAHs (EPA 8270 - SIM)	PCBs (EPA 8082 / 608)	Metals** (EPA 6020 / 200.8) Total (T) | Dissolved (D)	Anions (IC)***	EDB (8011)	Comments
1	01	04/12/17	1150	S			X			X							
2	02		1210				X			X							
3	03		1335				X			X							
4	04		1355				X			X							
5	05		1402				X			X							
6	06		1440				X			X							
7	07		1510				X			X							
8	08		1520				X			X							
9	09		1530				X			X							
10	10		1451				X			X							

*Matrix: A = Air, AQ = Aqueous, B = Bulk, O = Other, P = Product, S = Soil, SD = Sediment, SL = Solid, W = Water, DW = Drinking Water, GW = Ground Water, SW = Storm Water, WW = Waste Water

**Metals (Circle): MTCA-5 RCRA-8 Priority Pollutants TAL *Individual:* Ag Al As B Ba Be Ca Cd Co Cr Cu Fe Hg K Mg Mn Mo Na Ni Pb Sb Se Sr Sn Ti Tl U V Zn

***Anions (Circle): Nitrate Nitrite Chloride Sulfate Bromide O-Phosphate Fluoride Nitrate+Nitrite

I represent that I am authorized to enter into this Agreement with Fremont Analytical on behalf of the Client named above and that I have verified Client's agreement to each of the terms on the front and backside of this Agreement.

Relinquished x [signature] Date/Time 04/12/17 1714

Relinquished x Date/Time

Received x [signature] Date/Time 4/12/17 1714

Received x Date/Time

Turn-around Time:

- ☐ Standard
- ☒ 3 Day
- ☐ 2 Day
- ☐ Next Day
- Same Day _____ (specify)

Fremont Analytical
3600 Fremont Ave N.
Seattle, WA 98103
Tel: 206-352-3790
Fax: 206-352-7178

Chain of Custody Record & Laboratory Services Agreement

Date: 04/12/17 Page: 2 of: 2

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1	11	4/12/17	1455	S			X			X									
2	12	4/12/17	1457	S			X			X									
3	Trip Blank	Trip Blank															X		
4																			
5																			
6																			
7																			
8																			
9																			
10																			

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- Same Day ____ (specify)

Relinquished	Date/Time	Received	Date/Time
x [signature]	04/12/17 1714	x [signature]	4/12/17 1714
Relinquished	Date/Time	Received	Date/Time
x		x	