RAMBOLL ENVIRON

ENVIRONMENT & HEALTH

Donna Musa
Initial Investigation / Site Hazard Assessment Coordinator
Regional Facility Site / ISIS Database Coordinator
NWRO Toxics Cleanup Program, WA Dept of Ecology
3190 160th Ave SE, Bellevue WA 98008

Excavation and Confirmation Sampling of Petroleum Contaminated Soil at 1002 E Seneca Street, Seattle, WA

Dear Ms. Musa,

Date 12/11/2015

Ramboll Environ
901 Fifth Avenue
Suite 2820
Seattle, WA 98164
USA

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Ramboll Environ US Corporation (Ramboll Environ) was retained by Epstein Family, LLC ("owner") in 2014 to conduct a Site Investigation of potentially petroleum-contaminated soil at a commercial property located 1002 East Seneca Street, in Seattle, Washington ("site" or "facility"). The 0.41-acre site is located in Seattle, Washington and is developed with a 14,160-square foot building that is located on the western edge of the property, consisting of a ground-floor level and a basement (lower level). To the east of the building is a paved parking lot. There are no other structures on the site. The site is flanked by East Seneca Street to the south and 10th Avenue to the west. The site is currently occupied by the Bright Horizons Day Care.

During construction in October of 2014, a petroleum odor was encountered by workers in the basement. Subsequently, approximately 1.5 cubic yards of soil was excavated from a small pit where the odor was reported to be the strongest and soil samples were collected by the owners from the excavated material, as well as from the side and base of the pit and submitted to a Washington State certified laboratory on October 16th of 2014. The samples were analyzed for diesel and heavy oil range organics. Diesel was detected at a concentration of 3,010 milligrams per kilogram (mg/kg) in the excavated material, which exceeds the Model Toxics Control Act (MTCA) Method A clean-up value. Diesel was also detected at concentrations of 1,940 mg/kg (for the sample collected from the bottom of the pit) and 1,480 mg/kg (for the sample collected from the side of the pit). Heavy oil was not detected in any of the samples collected. As a result, Ramboll Environ was retained by the owner to complete a Site Investigation and prepare a report for submittal to the Washington State Department of Ecology (Ecology).

Ramboll Environ's initial field activities were conducted on November 25th and December 11th of 2014 and consisted of the non-invasive sampling from the surface of exposed soils in the basement of the facility to evaluate the need of further investigation. Once a more defined scope of work was developed, field investigation activities included conducting utility clearance, advancing soil borings, and collection of soil samples, which were conducted from December 22nd to the 24th.

Diesel was not detected in any of the surface- or sub-surface samples collected as part of this investigation and detected concentration of heavy oil were observed in samples SB3-6-122214, SS02, SS03, SS06, SS07, and SS09, with a maximum value of 422 mg/kg (SS09) and all were well below the MTCA Method A level of 2,000 mg/kg for heavy oil in soils[1]. Also, gasoline was not detected in any of the samples analyzed and the only BTEX constituent detected was xylene at concentrations at an order-of-magnitude less that the MTCA Method A value for total xylenes.

[1] Site Investigation Report, 1002 East Seneca Street, Seattle, Washington, Prepared for Epstein family, LLC, Prepared by Environ International Corporation, Seattle, Washington, January 2015.

Based on the results of the investigation, the extent of diesel contamination above MTCA Method A criteria at the facility was limited to the pit area near the south wall of the basement, where the odor was originally observed. Furthermore, any vertical migration of diesel in this area was likely confined by the hard and till-like unit that resulted in refusal for all borings that were advanced in the basement.

As a result, to ensure that the residual-petroleum contaminated soils are mitigated to protect human health and the environment, including the needs of the new tenant, Ramboll Environ recommended the following:

- Excavate soils from the pit area to the depth of refusal. The extent of this excavation would be based on field observations but would likely be limited and not extend beyond locations SS05, SS07, and SB03/SS02 (Figure 1);
- Containerize the excavated soil for subsequent analysis, transport, and disposal off-site; and
- Oversee the excavation activities performed and collect of confirmation soil samples to ensure soils impacted MTCA Method A criteria have been removed.

Excavation of the source area of the petroleum-contaminated soils were conducted on January 27 of 2015, resulting in in the removal of approximately 1.5 cubic yards of soil that were placed in twelve 50-gallon DOT steel drums for characterization, manifest as non-hazardous waste, and disposal.

Three confirmation samples were collected from the pit as shown on Figure 1, with all three retrieved from near the bottom of the pit on the north-, east-, and west-sides (C-N, C-E, and C-W, respectively). The three samples were submitted under a chain of custody to Fremont Analytical for the determination of BTEX, along with Gasoline range organics (GRO) and Diesel/Heavy Oil range organics (DRO) (Attachment A). BTEX compounds and GRO were not detected in any of the samples submitted and DRO was only detected in samples C-W and C-E at concentrations of 388 and 73.9, respectively (both well below the MTCA action limit of 2000 mg/kg).

Therefore, any remaining, residual petroleum in the soils at the site present a *de minimis* risk to human health and the environment. Furthermore, a vapor barrier was subsequently placed in areas of the basement where soil was exposed prior to the emplacement of new concrete to satisfy the concerns of the current tenant (the day care facility).

As a result, we do not recommend any further corrective actions at this time and, on behalf of Epstein Family, LLC, we request that Ecology not list the Site.

Yours sincerely

Ken Ames, PG
Senior Manager

D 1 206 3361669
M 1 602 2906762
kames@ramboll.com

Attachments
Laboratory Analytical Report
Figure 1

Q:\DRAWINGS\3034760b\3034760b-layout-seattle-excav.mxd

10TH AVENUE

E SENECA STREET

SS04
SB2/SS01
SS03
SB4
SB3/SS02
SS06
SS05
SS09
SB1
SS07
SB6
SB5
SS08
Excavated Pit

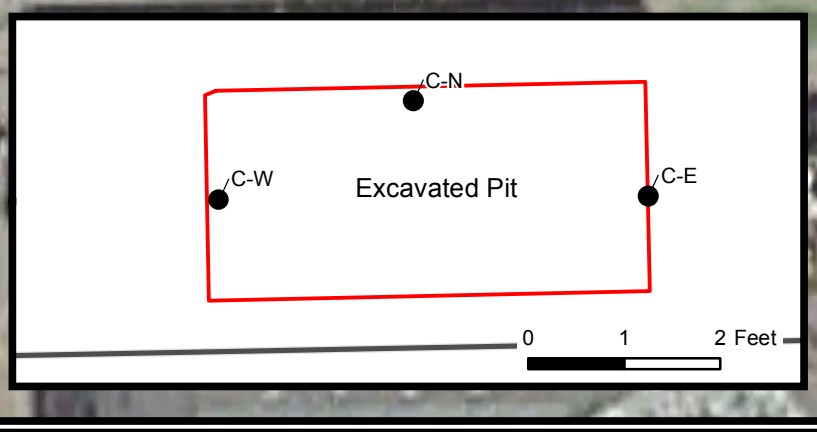
Legend

- Confirmation Soil Sample Location
- Soil Boring Location
- Surface Soil Sampling Location
- Soil Boring and Surface Soil Sample Location
- Structural Brace Frame Footing
- Plumbing Trench
- Excavation

Notes:

1. Samples inside the building were collected from borings in the basement, situated 9'5" below the grade of the sidewalk.
2. SB5 and SB6 were collected outside of the building on the sidewalk.

SOURCE: GOOGLE EARTH PRO, May 4, 2013.



N

0 6 12 Feet

RAMBOLL ENVIRON

DRAFTED BY:

DATE: 12/11/2015

Confirmation Soil Sample Locations

Epstein Family LLC

1002 E Seneca Street

Seattle, Washington 98122

FIGURE

1

30-34760B

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

Epstein Family LLC
Ken Ames
2308 48th Ave
Seattle, WA 98116

RE: Seneca Site
Lab ID: 1501221

January 29, 2015

Attention Ken Ames:

Fremont Analytical, Inc. received 3 sample(s) on 1/27/2015 for the analyses presented in the following report.

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

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: *01/29/2015*

CLIENT: Epstein Family LLC
Project: Seneca Site
Lab Order: 1501221

Work Order Sample Summary

Lab Sample ID	Client Sample ID	Date/Time Collected	Date/Time Received
1501221-001	C-N	01/27/2015 12:23 PM	01/27/2015 1:25 PM
1501221-002	C-E	01/27/2015 12:25 PM	01/27/2015 1:25 PM
1501221-003	C-W	01/27/2015 12:28 PM	01/27/2015 1:25 PM

Note: If no "Time Collected" is supplied, a default of 12:00AM is assigned

Case Narrative

WO#: **1501221**

Date: **1/29/2015**

CLIENT: Epstein Family LLC

Project: Seneca Site

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.

Analytical Report

WO#: **1501221**

Date Reported: **1/29/2015**

Client: Epstein Family LLC **Collection Date:** 1/27/2015 12:23:00 PM

Project: Seneca Site

Lab ID: 1501221-001 **Matrix:** Soil

Client Sample ID: C-N

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 9899		Analyst: EC
Diesel (Fuel Oil)	ND	22.6		mg/Kg-dry	1	1/28/2015 12:03:00 AM
Heavy Oil	ND	56.5		mg/Kg-dry	1	1/28/2015 12:03:00 AM
Surr: 2-Fluorobiphenyl	96.5	50-150		%REC	1	1/28/2015 12:03:00 AM
Surr: o-Terphenyl	99.2	50-150		%REC	1	1/28/2015 12:03:00 AM
Gasoline by NWTPH-Gx				Batch ID: 9900		Analyst: AK
Gasoline	ND	4.73		mg/Kg-dry	1	1/27/2015 10:10:00 PM
Surr: 4-Bromofluorobenzene	92.2	65-135		%REC	1	1/27/2015 10:10:00 PM
Surr: Toluene-d8	103	65-135		%REC	1	1/27/2015 10:10:00 PM
Volatile Organic Compounds by EPA Method 8260				Batch ID: 9900		Analyst: AK
Benzene	ND	0.0189		mg/Kg-dry	1	1/27/2015 10:10:00 PM
Toluene	ND	0.0189		mg/Kg-dry	1	1/27/2015 10:10:00 PM
Ethylbenzene	ND	0.0284		mg/Kg-dry	1	1/27/2015 10:10:00 PM
m,p-Xylene	ND	0.0189		mg/Kg-dry	1	1/27/2015 10:10:00 PM
o-Xylene	ND	0.0189		mg/Kg-dry	1	1/27/2015 10:10:00 PM
Surr: Dibromofluoromethane	86.3	63.7-129		%REC	1	1/27/2015 10:10:00 PM
Surr: Toluene-d8	103	64.3-131		%REC	1	1/27/2015 10:10:00 PM
Surr: 1-Bromo-4-fluorobenzene	92.2	63.1-141		%REC	1	1/27/2015 10:10:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R20346		Analyst: CG
Percent Moisture	11.5			wt%	1	1/28/2015 10:44:36 AM

Qualifiers:

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
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1501221**

Date Reported: **1/29/2015**

Client: Epstein Family LLC **Collection Date:** 1/27/2015 12:25:00 PM

Project: Seneca Site

Lab ID: 1501221-002 **Matrix:** Soil

Client Sample ID: C-E

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 9899		Analyst: EC
Diesel (Fuel Oil)	388	22.1		mg/Kg-dry	1	1/28/2015 12:34:00 AM
Heavy Oil	ND	55.3		mg/Kg-dry	1	1/28/2015 12:34:00 AM
Surr: 2-Fluorobiphenyl	97.7	50-150		%REC	1	1/28/2015 12:34:00 AM
Surr: o-Terphenyl	109	50-150		%REC	1	1/28/2015 12:34:00 AM
Gasoline by NWTPH-Gx				Batch ID: 9900		Analyst: AK
Gasoline	ND	4.28		mg/Kg-dry	1	1/27/2015 10:38:00 PM
Surr: 4-Bromofluorobenzene	91.7	65-135		%REC	1	1/27/2015 10:38:00 PM
Surr: Toluene-d8	101	65-135		%REC	1	1/27/2015 10:38:00 PM
Volatile Organic Compounds by EPA Method 8260				Batch ID: 9900		Analyst: AK
Benzene	ND	0.0171		mg/Kg-dry	1	1/27/2015 10:38:00 PM
Toluene	ND	0.0171		mg/Kg-dry	1	1/27/2015 10:38:00 PM
Ethylbenzene	ND	0.0257		mg/Kg-dry	1	1/27/2015 10:38:00 PM
m,p-Xylene	ND	0.0171		mg/Kg-dry	1	1/27/2015 10:38:00 PM
o-Xylene	ND	0.0171		mg/Kg-dry	1	1/27/2015 10:38:00 PM
Surr: Dibromofluoromethane	87.4	63.7-129		%REC	1	1/27/2015 10:38:00 PM
Surr: Toluene-d8	101	64.3-131		%REC	1	1/27/2015 10:38:00 PM
Surr: 1-Bromo-4-fluorobenzene	91.7	63.1-141		%REC	1	1/27/2015 10:38:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R20346		Analyst: CG
Percent Moisture	9.54			wt%	1	1/28/2015 10:44:36 AM

Qualifiers:

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
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Analytical Report

WO#: **1501221**

Date Reported: **1/29/2015**

Client: Epstein Family LLC **Collection Date:** 1/27/2015 12:28:00 PM

Project: Seneca Site

Lab ID: 1501221-003 **Matrix:** Soil

Client Sample ID: C-W

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
Diesel and Heavy Oil by NWTPH-Dx/Dx Ext.				Batch ID: 9899		Analyst: EC
Diesel (Fuel Oil)	73.9	22.4		mg/Kg-dry	1	1/28/2015 1:06:00 AM
Heavy Oil	ND	56.1		mg/Kg-dry	1	1/28/2015 1:06:00 AM
Surr: 2-Fluorobiphenyl	95.3	50-150		%REC	1	1/28/2015 1:06:00 AM
Surr: o-Terphenyl	98.8	50-150		%REC	1	1/28/2015 1:06:00 AM
Gasoline by NWTPH-Gx				Batch ID: 9900		Analyst: AK
Gasoline	ND	4.14		mg/Kg-dry	1	1/27/2015 11:07:00 PM
Surr: 4-Bromofluorobenzene	96.1	65-135		%REC	1	1/27/2015 11:07:00 PM
Surr: Toluene-d8	91.7	65-135		%REC	1	1/27/2015 11:07:00 PM
Volatile Organic Compounds by EPA Method 8260				Batch ID: 9900		Analyst: AK
Benzene	ND	0.0166		mg/Kg-dry	1	1/27/2015 11:07:00 PM
Toluene	ND	0.0166		mg/Kg-dry	1	1/27/2015 11:07:00 PM
Ethylbenzene	ND	0.0248		mg/Kg-dry	1	1/27/2015 11:07:00 PM
m,p-Xylene	ND	0.0166		mg/Kg-dry	1	1/27/2015 11:07:00 PM
o-Xylene	ND	0.0166		mg/Kg-dry	1	1/27/2015 11:07:00 PM
Surr: Dibromofluoromethane	88.2	63.7-129		%REC	1	1/27/2015 11:07:00 PM
Surr: Toluene-d8	102	64.3-131		%REC	1	1/27/2015 11:07:00 PM
Surr: 1-Bromo-4-fluorobenzene	96.0	63.1-141		%REC	1	1/27/2015 11:07:00 PM
Sample Moisture (Percent Moisture)				Batch ID: R20346		Analyst: CG
Percent Moisture	10.8			wt%	1	1/28/2015 10:44:36 AM

Qualifiers:

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
J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Date: *1/29/2015*

Work Order: 1501221
CLIENT: Epstein Family LLC
Project: Seneca Site

QC SUMMARY REPORT

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

Sample ID: **1501218-006BDUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **1/27/2015**		RunNo: **20319**		
Client ID: **BATCH**	Batch ID: **9899**					Analysis Date: **1/27/2015**		SeqNo: **386262**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	ND	22.3						0		30	
Heavy Oil	ND	55.7						0		30	
Surr: 2-Fluorobiphenyl	24.9		22.27		112	50	150		0		
Surr: o-Terphenyl	25.7		22.27		115	50	150		0		

Sample ID: **MB-9899**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **1/27/2015**		RunNo: **20319**		
Client ID: **MBLKS**	Batch ID: **9899**					Analysis Date: **1/27/2015**		SeqNo: **386369**		
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	21.8		20.00		109	50	150				
Surr: o-Terphenyl	22.5		20.00		112	50	150				

Sample ID: **LCS-9899**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **1/27/2015**		RunNo: **20319**		
Client ID: **LCSS**	Batch ID: **9899**					Analysis Date: **1/27/2015**		SeqNo: **386390**		
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel (Fuel Oil)	497	20.0	500.0	0	99.5	65	135				
Surr: 2-Fluorobiphenyl	22.1		20.00		111	50	150				
Surr: o-Terphenyl	26.0		20.00		130	50	150				

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Date: *1/29/2015*

Work Order: 1501221
CLIENT: Epstein Family LLC
Project: Seneca Site

QC SUMMARY REPORT

Gasoline by NWTPH-Gx

Sample ID: **LCS-9900**	SampType: **LCS**			Units: **mg/Kg**		Prep Date: **1/27/2015**		RunNo: **20328**			
Client ID: **LCSS**	Batch ID: **9900**					Analysis Date: **1/27/2015**		SeqNo: **386711**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	23.8	5.00	25.00	0	95.2	65	135				
Surr: Toluene-d8	1.18		1.250		94.7	65	135				
Surr: 4-Bromofluorobenzene	1.22		1.250		97.4	65	135				

Sample ID: **MB-9900**	SampType: **MBLK**			Units: **mg/Kg**		Prep Date: **1/27/2015**		RunNo: **20328**			
Client ID: **MBLKS**	Batch ID: **9900**					Analysis Date: **1/27/2015**		SeqNo: **386712**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	5.00									
Surr: Toluene-d8	1.20		1.250		96.2	65	135				
Surr: 4-Bromofluorobenzene	1.21		1.250		96.7	65	135				

Sample ID: **1501218-001ADUP**	SampType: **DUP**			Units: **mg/Kg-dry**		Prep Date: **1/27/2015**		RunNo: **20328**			
Client ID: **BATCH**	Batch ID: **9900**					Analysis Date: **1/27/2015**		SeqNo: **386713**			
Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline	ND	7.29						0		30	
Surr: Toluene-d8	1.70		1.824		93.2	65	135		0		
Surr: 4-Bromofluorobenzene	1.68		1.824		92.3	65	135		0		

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1501221
CLIENT: Epstein Family LLC
Project: Seneca Site

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID: **LCS-9900** SampType: **LCS** Units: **µg/L** Prep Date: **1/27/2015** RunNo: **20324**
Client ID: **LCSS** Batch ID: **9900** Analysis Date: **1/27/2015** SeqNo: **386632**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	0.952	0.0200	1.000	0	95.2	64.3	133				
Toluene	0.910	0.0200	1.000	0	91.0	67.3	138				
Ethylbenzene	0.942	0.0300	1.000	0	94.2	74	129				
m,p-Xylene	1.83	0.0200	2.000	0	91.4	79.8	128				
o-Xylene	0.949	0.0200	1.000	0	94.9	72.7	124				
Surr: Dibromofluoromethane	1.25		1.250		99.8	63.7	129				
Surr: Toluene-d8	1.35		1.250		108	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.27		1.250		102	63.1	141				

Sample ID: **1501218-001ADUP** SampType: **DUP** Units: **mg/Kg-dry** Prep Date: **1/27/2015** RunNo: **20324**
Client ID: **BATCH** Batch ID: **9900** Analysis Date: **1/27/2015** SeqNo: **386693**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	0.0292						0		30	
Toluene	ND	0.0292						0		30	
Ethylbenzene	ND	0.0438						0		30	
m,p-Xylene	ND	0.0292						0		30	
o-Xylene	ND	0.0292						0		30	
Surr: Dibromofluoromethane	1.61		1.824		88.4	63.7	129		0		
Surr: Toluene-d8	1.88		1.824		103	64.3	131		0		
Surr: 1-Bromo-4-fluorobenzene	1.68		1.824		91.9	63.1	141		0		

Sample ID: **1501218-002AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **1/27/2015** RunNo: **20324**
Client ID: **BATCH** Batch ID: **9900** Analysis Date: **1/27/2015** SeqNo: **386694**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	1.33	0.0275	1.375	0	96.7	63.5	133				
Toluene	1.19	0.0275	1.375	0	86.4	63.4	132				

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Work Order: 1501221
CLIENT: Epstein Family LLC
Project: Seneca Site

QC SUMMARY REPORT

Volatile Organic Compounds by EPA Method 8260

Sample ID: **1501218-002AMS** SampType: **MS** Units: **mg/Kg-dry** Prep Date: **1/27/2015** RunNo: **20324**
Client ID: **BATCH** Batch ID: **9900** Analysis Date: **1/27/2015** SeqNo: **386694**

Analyte	Result	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Ethylbenzene	1.30	0.0412	1.375	0	94.5	54.5	134				
m,p-Xylene	2.54	0.0275	2.749	0	92.3	53.1	132				
o-Xylene	1.32	0.0275	1.375	0	96.1	53.3	139				
Surr: Dibromofluoromethane	1.76		1.718		103	63.7	129				
Surr: Toluene-d8	1.76		1.718		102	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.72		1.718		99.8	63.1	141				

Sample ID: **MB-9900** SampType: **MBLK** Units: **mg/Kg** Prep Date: **1/27/2015** RunNo: **20324**
Client ID: **MBLKS** Batch ID: **9900** Analysis Date: **1/27/2015** SeqNo: **386696**

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	1.15		1.250		91.9	63.7	129				
Surr: Toluene-d8	1.34		1.250		107	64.3	131				
Surr: 1-Bromo-4-fluorobenzene	1.20		1.250		96.3	63.1	141				

Qualifiers:

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	J	Analyte detected below quantitation limits	ND	Not detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike recovery outside accepted recovery limits

Sample Log-In Check List

Client Name:	**EPSTEIN**	Work Order Number:	**1501221**
Logged by:	**Kerra Ziegler**	Date Received:	**1/27/2015 1:25:00 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 intact on shipping container/cooler?	Yes ☐	No ☐	Not Required ☑
6.	Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
7.	Were all coolers 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 the 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	Condition
Cooler	6.0	Good
Sample	6.0	Good

Chain of Custody Record

Fremont Analytical

- Client wants to be billed directly

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

Laboratory Project No (internal): 1501221

Date: 1-27-15 Page: _____ of: _____

Client: Epstein Family, LLC - Steve Epstein
Address: _____
City, State, Zip _____ Tel: 206-669-7173
Reports To (PM): Ken Ames Fax: Email: KAmes@environcorp.com

Project Name: Seneca Site
Location: 1002 E. Seneca St., Seattle
Collected by: Sam Leick
Project No: _____

*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, WW = Waste Water

	Sample Name	Sample Date	Sample Time	Sample Type (Matrix)*	VOC (EPA 8260)	GX/BTEX	BTEX	Gasoline Range Organics (GX)	Hydrocarbon Identification (HCID)	Diesel/Heavy Oil Range Organics (DX)	SEMI VOL (EPA 8270)	PAH (EPA 8270 - SIM)	PCBs (EPA 8082)	Metals** (6020 / 200.8)	Total (T) | Dissolved (D)	Anions (IC)**	EDB (8011)	Comments/Depth
1	C-N	1-27-15	1223	S			X		X									
2	~~C-E~~ C-E	↓	1225	↓			X		X									
3	C-W	↓	1228	↓			X		X									
4																		
5																		
6																		
7																		
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 (A fee may be assessed if samples are retained after 30 days.)

Special Remarks:

Relinquished	Date/Time	Received	Date/Time
x Sam Leick	1325/1-27-15	x	1.27.15 1325
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