March 9, 2016

Mr. Tom Meyer
Seattle City Light
700 Fifth Avenue, Suite 3316
Seattle, WA 98104

Re: Ladder Creek Settling Tank Soil Assessment
Newhalem, Washington
17843-71

Dear Mr. Meyer:

This letter report documents our site assessment at Seattle City Light's (City Light's) Ladder Creek Settling Tank site in Newhalem, Washington (Figure 1). The purpose of our assessment was to determine impacts to surrounding soil from the burning of a building that formerly housed the tank during a recent forest fire, and whether they are of concern.

Project Background

The Ladder Creek Settling Tank building was destroyed by forest fires during summer 2015. The building was in a remote area behind and upslope from the Gorge Powerhouse adjacent to Ladder Creek in North Cascades National Park. It provided protective housing for a steel settling tank that was historically used for sedimentation of creek water for the town of Newhalem domestic water supply. The building was burned completely, leaving the tank, which remains intact, uncovered. City Light had previously completed an initial assessment after the fire, which found remnants at the Site including scattered aluminum debris from the building roof and extensive heat stress to the settling tank and its coating.

Summary of Investigation Activities

On October 21, 2015, Hart Crowser and a City Light employee visited the Site to evaluate the soil for possible contamination from the burned building and settling tank. The evaluation consisted of field-screening soil with an XRF analyzer, collecting surface soil samples for laboratory analysis, and collecting a water sample from the settling tank.

The soil screening and sampling transect locations are on Figure 2. The XRF analyzer data is in Table 1. The soil and water analytical data are in Tables 2 and 3, respectively.

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XRF Field Screening and Sample Collection

Three transects (Transects 1 through 3) were set up perpendicular to the former building for field screening with the XRF analyzer and sample collection. Soil samples from Transects 1 and 2 were screened with the XRF analyzer approximately every 5 feet from inside the former building (−5 feet on the transect) to 50 feet from the edge of the former building footprint. Soil samples from Transect 3 were screened with the XRF analyzer from the building footprint (0 feet on the transect) to 20 feet from the building footprint.

Samples were collected for chemical analysis from Transects 1 and 2 from inside the former building footprint (−5 feet), at the edge of the former building footprint (0 feet), and at 5, 10, 20, 30, 40, and 50 feet from the edge of the former building footprint. Samples were collected from Transect 3 at 5, 10, and 20 feet from the edge of the former building footprint.

Surface soil samples were collected by removing debris and organic material from the surface with a gloved hand, then scooping with a stainless steel spoon from the top 0 to 3 inches into a jar. These samples were submitted to OnSite Environmental Inc. (OnSite) in Redmond, Washington, and selected samples were analyzed for one or more of the following:

- Semivolatile organic compounds (SVOCs) with polycyclic aromatic hydrocarbons (PAHs) by Environmental Protection Agency (EPA) Method 8270D/SIM,
- PAHs by EPA Method 8270D/SIM,
- Total metals by EPA Methods 6010C and 7471B, and
- Hexavalent chromium (CrVI) by EPA Method 7196A.

A water sample was collected from water in the settling tank. The water sample was submitted to OnSite for the following analyses:

- PAHs by EPA Method 8270D/SIM and
- Total and dissolved metals by EPA Methods 200.8 and 7470A.

Results

Former Building Area Soil Samples

The XRF soil screening results are in Table 1 and soil analytical results are in Table 2. The laboratory reports and our data validation review are in Attachment 1.

XRF Screening Results

The XRF field results were compared with Model Toxics Control Act (MTCA) Method A cleanup levels. Several of the field screening results (SS1 through SS4, SS13, SS14, SS18, and SS25) exceeded the MTCA Method A cleanup level for arsenic of 20 parts per million (ppm). The XRF arsenic concentrations ranged

from non-detect to 60 ppm. Total chromium was measured at 169 ppm which is above the chromium VI cleanup but below the chromium III cleanup level. Mercury was measured at 5.5 ppm in soil sample SS14. All other field screening results were either below detection limits or below the MTCA Method A cleanup level.

Laboratory Analysis Results

Carcinogenic Polycyclic Aromatic Hydrocarbons

Total carcinogenic PAHs (cPAHs) were calculated using the benzo[a]pyrene (BaP) toxicity equivalency factor (TEF) methodology. Total cPAHs exceeded the MTCA Method B cleanup level of 0.137 milligrams per kilogram (mg/kg) in the samples HC-LC-T1-(-5), HC-LC-T2-(-5), HC-LC-T1-5, HC-LC-T1-10, HC-LC-T2-10, HC-LC-T3-20, and HC-LC-T2-30.

cPAHs were detected in samples HC-LC-T3-5, HC-LC-T2-5, and HC-LC-T1-30 at concentrations below the MTCA BaP TEF cleanup level.

Semivolatiles

Concentrations of semivolatiles in all samples were either below the laboratory practical quantitation limits (PQLs) or below the MTCA Method B direct contact screening levels.

Metals

Arsenic was detected at a concentration above the MTCA Method A unrestricted cleanup level of 20 mg/kg in two samples; HC-LC-T1-(-5) and HC-LC-T1-10. Barium was also detected in all samples at concentrations between 46 and 210 mg/kg, there is not a MTCA cleanup level for barium. Concentrations of arsenic and all other metals were either below cleanup levels or below the laboratory PQL in all other samples analyzed. Sample HC-LC-T2-(-5) had the highest detection of total chromium, so it was analyzed for chromium VI. The chromium VI result was below the laboratory PQL.

As stated above in the XRF Screening Results, mercury was measured by XRF at 5.5 ppm in soil sample SS14. Soil sample HC-LC-T2-0 was collected at the same location as SS14. Mercury was not detected in this sample above its laboratory PQL.

Background Soil Samples

To investigate the occurrence of chemicals that can occur naturally in burned forest floor debris after fires, City Light collected five background samples (SCL-LC-BG1 through SCL-LC-BG5) from a burned forest area approximately 1.5 miles west of the settling tank. Soil sample HC-LC-BG was collected from an area that had not been burned in the forest fire. The background sample analytical results are shown in Table 2.

Chromium, and lead were detected in all six background samples at concentrations well below their respective MTCA unrestricted cleanup levels. Barium was also detected at concentrations between 83 and 330 mg/kg, there is not a MTCA cleanup level for barium.

Low level PAHs were detected in the soil samples collected from the burned area (SCL-LC-BG1 through SCL-LC-BG5). PAHs were not detected in soil sample HC-LC-BG (non-burned area). This supports other evidence that PAHs occur naturally on the forest floor after a forest fire.

cPAHs were detected in the background sample SCL-LC-BG5 at concentrations well below the Method A cleanup level. No cPAHs were detected in the remaining five background samples.

Settling Tank Water Sample

Water sample analytical results are shown in Table 3. Total arsenic and lead were detected at concentrations of 21 micrograms per liter (µg/L) and 30 µg/L, respectively, above their MTCA Method A cleanup levels of 5 µg/L and 15 µg/L, respectively. Total barium and chromium were detected at concentrations of 110 µg/L and 58 µg/L, respectively, below their MTCA groundwater cleanup levels of 2,000 µg/L and 100 µg/L, respectively. Total mercury, selenium, and silver were not detected above their respective laboratory PQLs.

Concentrations of dissolved metals were all either below their respective MTCA Method A cleanup levels or were not detected above the laboratory PQLs.

Conclusions and Recommendations

Several individual surface soil samples collected from the three transects had concentrations of arsenic slightly above the MTCA Method A unrestricted level. These elevated concentrations appear to be localized and may be at least partly associated with naturally occurring arsenic, rather than solely from the building or forest fire.

Concentrations in background samples were non-detect or below the cleanup levels for all metals.

PAHs were detected in several of the transect samples and fire background sample analytical results. The consistent PAH concentrations indicate that it is likely that the PAHs are caused by the forest fire and not from the burning of the building or the settling tank.

Individual surface soil samples collected from the three transects had concentrations of cPAHs above the MTCA Method A unrestricted cleanup level. Concentrations in background samples were all non-detect or well below the cleanup levels for total cPAHs. The cPAH data and field observations support the conclusion that the materials from the settling tank and surrounding building burned in the forest fire may have impacted Site surface soil quality.

We understand water continues to accumulate in the settling tank. A sample of this accumulated water contained total arsenic and lead concentrations exceeding their respective MTCA Method A cleanup levels. However, the dissolved metals concentrations were all below MTCA Method A cleanup levels. Since laboratory filtering effectively removed the metals that exceeded their respective MTCA Method A cleanup levels, filtering will likely be an effective method of treatment. We recommend designing and installing filtration system capable of treating the accumulated water. Post-filtration sampling should be implemented to confirm the water meets discharge criteria prior to discharge.

The settling tank remains in place at the Site; however the protective coating and some ancillary equipment has been destroyed. We understand City Light plans to remove debris from the affected area, an approximately 3,000 to 4,000 square foot area surrounding the tank, as well as the remaining building structure material, this year. As part of the debris removal, the upper three to six inches of intermixed soil is planned to be removed and properly disposed of. The area impacted by cPAHs is roughly the same as where the building debris is located, therefore, it is likely that the debris removal activity will remove the cPAHs impacted soil. We recommend collecting post-removal soil samples for chemical analysis to confirm the cPAH contamination has been removed.

Sincerely,

HART CROWSER, INC.

ROSS R. STAINSBY
Senior Associate
Ross.Stainsby@hartcrowser.com

Attachments:
Table 1 – XRF Field Screening
Table 2 – Analytical Results for Soil Samples
Table 3 – Analytical Results for Water Sample
Figure 1 – Vicinity Map
Figure 2 – Site Plan
Attachment 1 – Chemical Data Quality Review and Laboratory Reports

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Table 1 - XRF Field Screening

Transect	Field Sample Name	Distance from Building	Metals Results (ppm)							
			Arsenic	Barium	Cadmium	Chromium	Lead	Selenium	Silver	Mercury
MTCA Method A Screening Levels			20		2	2000/19[a]	250			2
T1	SS1	-5	**53.1**	554	ND	48	64.1	ND	ND	ND
	SS2	0	**26**	357	ND	62	67.5	ND	ND	ND
	SS3	5	**27.4**	568	ND	37	48.8	ND	ND	ND
	SS4	10	**43**	477	ND	ND	62.4	ND	ND	ND
	SS5	15	3.1	400	ND	46	12.2	ND	ND	ND
	SS6	20	3.9	549	ND	54	44	ND	ND	ND
	SS7	25	5.7	592	ND	47	8.9	ND	ND	ND
	SS8	30	5.1	198	ND	ND	24.4	ND	ND	ND
	SS9	35	4.6	250	ND	ND	13.4	ND	ND	ND
	SS10	40	4.7	209	ND	ND	22.6	ND	ND	ND
	SS11	45	2.9	200	ND	ND	20.6	ND	ND	ND
	SS12	50	ND	160	ND	ND	31.3	ND	ND	ND
T2	SS13	-5	**22.7**	407	ND	**169**	109	ND	ND	ND
	SS14	0	**60**	687	ND	67	85	ND	ND	**5.5**
	SS15	5	ND	359	ND	57	126	1.4	ND	ND
	SS16	10	6.1	395	ND	42	90.7	ND	ND	ND
	SS17	15	17.5	ND	ND	ND	71	ND	ND	ND
	SS18	20	**38**	548	ND	ND	178	ND	ND	ND
	SS19	25	7.3	373	ND	ND	20.9	ND	ND	ND
	SS20	30	5.5	ND	ND	ND	19.4	ND	ND	ND
	SS21	35	2.7	ND	ND	ND	24.4	ND	ND	ND
	SS22	40	3.5	232	ND	30	19.4	ND	ND	ND
	SS23	45	ND	287	ND	27	16.1	ND	ND	ND
	SS24	50	3.3	307	ND	ND	21.4	ND	ND	ND
T3	SS25	0	**22**	583	ND	57	43.5	ND	ND	ND
	SS26	5	3.5	740	ND	37	20.5	ND	ND	ND
	SS27	10	7.3	243	ND	31	17.8	ND	ND	ND
	SS28	15	6.9	407	ND	40	13.7	ND	ND	ND
	SS29	20	13.6	446	ND	ND	17.3	ND	ND	ND

a. 19 mg/kg as chromium VI/2,000 mg/kg as chromium III.

Shaded value exceeds cleanup level.

ND = non-detect.

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA Method A/Method B Screening Levels	HC-LC-T1-(-5)	HC-LC-T1-0	HC-LC-T1-5	HC-LC-T1-10	HC-LC-T1-30	HC-LC-T1-50	HC-LC-T2-(-5)	HC-LC-T2-0
Sampling Date		10/21/2015	10/21/2015	10/21/2015	10/21/2015	10/21/2015	10/21/2015	10/21/2015	10/21/2015
Transect		Transect 1	Transect 1	Transect 1	Transect 1	Transect 1	Transect 2	Transect 2	Transect 2
Distance from Building (feet)		-5	0	5	10	30	50	-5	0
PAHs in mg/kg									
1-Methylnaphthalene		0.0078 U	0.0099 U	**0.013**	0.0092 U	**0.015**	0.0095 U	0.0085 U	**0.017**
2-Methylnaphthalene		0.0078 U	0.0099 U	**0.013**	0.0092 U	**0.014**	0.0095 U	0.0085 U	**0.025**
Acenaphthene		**0.018**	0.0099 U	**0.063**	**0.037**	0.0089 U	0.0095 U	0.0085 U	**0.0092**
Acenaphthylene		0.0078 U	0.0099 U	**0.013**	0.0092 U	0.0089 U	0.0095 U	0.0085 U	**0.0076**
Anthracene		**0.18**	0.0099 U	**0.35**	**0.3**	0.0089 U	0.0095 U	**0.025**	**0.018**
Benz[a]anthracene		**2.1**	0.0099 U	**1.6**	**6.9**	**0.027**	0.0095 U	**0.16**	**0.13**
Benzo(a)pyrene	0.1	**2.7**	0.0099 U	**2.1**	**4.8**	**0.013**	0.0095 U	**0.32**	**0.043**
Benzo(b)fluoranthene		**4.2**	0.0099 U	**5.2**	**8**	**0.03**	0.0095 U	**0.58**	**0.096**
Benzo(ghi)perylene		**1.8**	0.0099 U	**3.6**	**2.5**	0.0089 U	0.0095 U	**0.39**	**0.026**
Benzo(j,k)fluoranthene		**1.5**	0.0099 U	**1.1**	**2.6**	**0.0095**	0.0095 U	**0.19**	**0.034**
Chrysene		**3**	0.0099 U	**2.7**	**6.2**	**0.032**	0.0095 U	**0.29**	**0.16**
Dibenzo(a,h)anthracene		**0.52**	0.0099 U	**1**	**0.79**	0.0089 U	0.0095 U	**0.1**	0.0076 U
Fluoranthene		**2.5**	0.0099 U	**6.2**	**9.9**	**0.053**	0.0095 U	**0.18**	**0.42**
Fluorene		**0.0096**	0.0099 U	**0.065**	**0.06**	**0.01**	0.0095 U	0.0085 U	**0.0089**
Indeno(1,2,3-cd)pyrene		**1.6**	0.0099 U	**2.4**	**2.8**	0.0089 U	0.0095 U	**0.3**	**0.021**
Naphthalene	5	**0.033**	0.0099 U	**0.07**	**0.026**	**0.03**	0.0095 U	**0.017**	**0.072**
Phenanthrene		**0.35**	0.0099 U	**2.5**	**1.6**	**0.044**	0.0095 U	**0.061**	**0.27**
Pyrene		**1.9**	0.0099 U	**2.8**	**6.9**	**0.041**	0.0095 U	**0.1**	**0.2**
Total cPAHs TEF[c]	0.137	**3.722**	NC	**3.257**	**6.971**	**0.01997**	NC	**0.4559**	**0.0727**
Semivolatiles in mg/kg									
(3+4)-Methylphenol (m,p-cresol)	4,000/8,000	0.2 U		**0.068**				0.043 U	
1,2,4-Trichlorobenzene	34.5	0.2 U		0.049 U				0.043 U	
1,2-Dichlorobenzene	72,000	0.2 U		0.049 U				0.043 U	
1,2-Dinitrobenzene		0.2 U		0.049 U				0.043 U	
1,2-Diphenylhydrazine		0.2 U		0.049 U				0.043 U	
1,3-Dichlorobenzene		0.2 U		0.049 U				0.043 U	
1,3-Dinitrobenzene		0.2 U		0.049 U				0.043 U	
1,4-Dichlorobenzene		0.2 U		0.049 U				0.043 U	
1,4-Dinitrobenzene		0.2 U		0.049 U				0.043 U	
2,3,4,6-Tetrachlorophenol		0.2 U		0.049 U				0.043 U	
2,3,5,6-Tetrachlorophenol		0.2 U		0.049 U				0.043 U	
2,3-Dichloroaniline		0.2 U		0.049 U				0.043 U	
2,4,5-Trichlorophenol		0.2 U		0.049 U				0.043 U	
2,4,6-Trichlorophenol		0.2 U		0.049 U				0.043 U	
2,4-Dichlorophenol		0.2 U		0.049 U				0.043 U	
2,4-Dimethylphenol	16,000	0.2 U		0.049 U				0.043 U	
2,4-Dinitrophenol		0.98 U		0.24 U				0.21 U	
2,4-Dinitrotoluene		0.2 U		0.049 U				0.043 U	
2,6-Dinitrotoluene		0.2 U		0.049 U				0.043 U	
2-Chloronaphthalene		0.2 U		0.049 U				0.043 U	
2-Chlorophenol	400	0.2 U		0.049 U				0.043 U	
2-Methylphenol (o-cresol)		0.2 U		0.049 U				0.043 U	
2-Nitroaniline		0.2 U		0.049 U				0.043 U	
2-Nitrophenol		0.2 U		0.049 U				0.043 U	
3,3'-Dichlorobenzidine		0.98 U		0.24 U				0.21 U	
3-Nitroaniline		0.2 U		0.049 U				0.043 U	
4,6-Dinitro-2-methylphenol		0.98 U		0.24 U				0.21 U	
4-Bromophenyl-phenylether		0.2 U		0.049 U				0.043 U	
4-Chloro-3-methylphenol		0.2 U		0.049 U				0.043 U	
4-Chloroaniline		0.98 U		0.24 U				0.21 U	
4-Chlorophenyl-phenylether		0.2 U		0.049 U				0.043 U	
4-Nitroaniline		0.2 U		0.049 U				0.043 U	
4-Nitrophenol		0.2 U		0.049 U				0.043 U	
Aniline		0.98 U		0.24 U				0.21 U	
Benzidine		2 U		0.49 U				0.43 U	
Benzyl alcohol		0.98 U		0.24 U				0.21 U	
bis(2-Chloroethoxy)methane		0.2 U		0.049 U				0.043 U	
bis(2-Chloroethyl)ether		0.2 U		0.049 U				0.043 U	
bis(2-Chloroisopropyl)ether		0.2 U		0.049 U				0.043 U	
bis(2-Ethylhexyl)phthalate		0.2 U		0.049 U				0.043 U	
bis-2-Ethylhexyladipate		0.2 U		0.049 U				0.043 U	
Butylbenzylphthalate		0.2 U		0.049 U				0.043 U	
Carbazole		0.2 U		**0.088**				0.043 U	
Dibenzofuran	80	0.2 U		**0.11**				0.043 U	
Diethylphthalate		0.98 U		0.24 U				0.21 U	
Dimethylphthalate		0.2 U		0.049 U				0.043 U	
Di-n-butylphthalate		0.2 U		0.049 U				0.043 U	
Di-n-octylphthalate		0.2 U		0.049 U				0.043 U	
Hexachlorobenzene		0.2 U		0.049 U				0.043 U	
Hexachlorobutadiene		0.2 U		0.049 U				0.043 U	
Hexachlorocyclopentadiene		0.2 U		0.049 U				0.043 U	
Hexachloroethane		0.2 U		0.049 U				0.043 U	
Isophorone		0.2 U		0.049 U				0.043 U	
Nitrobenzene		0.2 U		0.049 U				0.043 U	
n-Nitrosodimethylamine		0.2 U		0.049 U				0.043 U	
n-Nitroso-di-n-propylamine		0.2 U		0.049 U				0.043 U	
n-Nitrosodiphenylamine		0.2 U		0.049 U				0.043 U	
Pentachlorophenol		0.98 U		0.24 U				0.21 U	
Phenol	24,000	0.2 U		**0.14**				0.043 U	
Pyridine	80	2 U		**1**				0.43 U	
Metals in mg/kg									
Arsenic	20	**25**	**20**	15 U	**26**	13 U	14 U	13 U	**34**
Barium		**78**	**130**	**120**	**130**	**46**	**66**	**150**	**82**
Cadmium	2	0.59 U	0.74 U	0.73 U	0.69 U	0.67 U	0.71 U	0.64 U	0.57 U
Chromium	19/2,000[a]	**34**	**45**	**45**	**38**	**6.8**	**4.7**	**62**	**69**
Lead	250	**26**	**27**	**28**	**39**	**13**	**13**	**16**	**140**
Selenium		12 U	15 U	15 U	14 U	13 U	14 U	13 U	11 U
Silver		1.2 U	1.5 U	1.5 U	1.4 U	1.3 U	1.4 U	1.3 U	1.1 U
Mercury	2	0.29 U	0.37 U	0.36 U	0.35 U	0.34 U	0.36 U	0.32 U	0.29 U
Hexavalent chromium	19								

Notes:
U = Not detected at the reporting limit indicated.
NC = Not calculated.
Bolded values are above detection limit
Shaded values exceed cleanup level.
a. 19 mg/kg as chromium VI/2,000 mg/kg as chromium III.
b. MTCA Method B screening level using the lowest direct contact cleanup level presented in Ecology's CLARC database.
c. Calculated using Ecology's benzo[a]pyrene TEF methodology.

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA Method A/Method B Screening Levels	HC-LC-T2-5	HC-LC-T2-10	HC-LC-T2-30	HC-LC-T2-50	HC-LC-T3-5	HC-LC-T3-20	SCL-LC-BG1	SCL-LC-BG2
Sampling Date		10/21/2015	10/21/2015	10/21/2015	10/21/2015	10/21/2015	10/21/2015	11/4/2015	11/4/2015
Transect		Transect 2	Transect 2	Transect 2	Transect 2	Transect 3	Transect 3	Background	Background
Distance from Building (feet)		5	10	30	50	5	20		
PAHs in mg/kg									
1-Methylnaphthalene		**0.04**	**0.011**	**0.016**	**0.0093**	0.0072 U	0.0085 U	**0.12**	**0.041**
2-Methylnaphthalene		**0.024**	**0.012**	**0.019**	**0.011**	0.0072 U	0.0085 U	**0.11**	**0.040**
Acenaphthene		0.01 U	**0.014**	**0.018**	0.0078 U	0.0072 U	**0.0096**	0.012 U	0.011 U
Acenaphthylene		0.01 U	0.0078 U	0.0089 U	0.0078 U	0.0072 U	0.0085 U	0.012 U	0.011 U
Anthracene		0.01 U	**0.05**	**0.12**	**0.011**	0.0072 U	**0.085**	0.012 U	0.011 U
Benz[a]anthracene		0.01 U	**1.4**	**0.85**	**0.078**	**0.0099**	**0.97**	0.012 U	0.009 U
Benzo(a)pyrene	0.1	0.01 U	**1.9**	**0.51**	**0.043**	**0.02**	**0.91**	0.012 U	0.009 U
Benzo(b)fluoranthene		0.01 U	**3.5**	**0.85**	**0.085**	**0.038**	**1.5**	0.012 U	0.009 U
Benzo(ghi)perylene		0.01 U	**1.6**	**0.24**	**0.029**	**0.045**	**0.63**	0.012 U	0.009 U
Benzo(j,k)fluoranthene		0.01 U	**1**	**0.3**	**0.025**	**0.01**	**0.4**	0.012 U	0.009 U
Chrysene		0.01 U	**1.7**	**0.83**	**0.075**	**0.029**	**1.4**	0.012 U	0.009 U
Dibenzo(a,h)anthracene		0.01 U	**0.47**	**0.088**	**0.0085**	**0.0097**	**0.23**	0.012 U	0.009 U
Fluoranthene		0.01 U	**1**	**1.5**	**0.085**	**0.038**	**1.4**	0.012 U	**0.017**
Fluorene		0.01 U	**0.011**	**0.027**	**0.017**	0.0072 U	**0.012**	**0.045**	**0.018**
Indeno(1,2,3-cd)pyrene		0.01 U	**1.7**	**0.3**	**0.03**	**0.04**	**0.83**	0.012 U	0.009 U
Naphthalene	5	**0.089**	**0.038**	**0.058**	**0.016**	0.0072 U	**0.014**	**0.43**	**0.20**
Phenanthrene		**0.01**	**0.15**	**0.43**	**0.047**	**0.021**	**0.3**	**0.11**	**0.046**
Pyrene		0.01 U	**0.75**	**1.2**	**0.078**	**0.016**	**0.81**	**0.029**	**0.022**
Total cPAHs TEF[c]	0.137	NC	**2.724**	**0.7571**	**0.0664**	**0.03105**	**1.317**	NC	NC
Semivolatiles in mg/kg									
(3+4)-Methylphenol (m,p-cresol)	4,000/8,000	0.052 U				0.036 U		**0.66**	**0.12**
1,2,4-Trichlorobenzene	34.5	0.052 U				0.036 U		0.058 U	0.056 U
1,2-Dichlorobenzene	72,000	0.052 U				0.036 U		0.058 U	0.056 U
1,2-Dinitrobenzene		0.052 U				0.036 U		0.058 U	0.056 U
1,2-Diphenylhydrazine		0.052 U				0.036 U		0.058 U	0.056 U
1,3-Dichlorobenzene		0.052 U				0.036 U		0.058 U	0.056 U
1,3-Dinitrobenzene		0.052 U				0.036 U		0.058 U	0.056 U
1,4-Dichlorobenzene		0.052 U				0.036 U		0.058 U	0.056 U
1,4-Dinitrobenzene		0.052 U				0.036 U		0.058 U	0.056 U
2,3,4,6-Tetrachlorophenol		0.052 U				0.036 U		0.058 U	0.056 U
2,3,5,6-Tetrachlorophenol		0.052 U				0.036 U		0.058 U	0.056 U
2,3-Dichloroaniline		0.052 U				0.036 U		0.058 U	0.056 U
2,4,5-Trichlorophenol		0.052 U				0.036 U		0.058 U	0.056 U
2,4,6-Trichlorophenol		0.052 U				0.036 U		0.058 U	0.056 U
2,4-Dichlorophenol		0.052 U				0.036 U		0.058 U	0.056 U
2,4-Dimethylphenol	16,000	0.052 U				0.036 U		**0.31**	0.056 U
2,4-Dinitrophenol		0.26 U				0.18 U		0.29 U	0.22 U
2,4-Dinitrotoluene		0.052 U				0.036 U		0.058 U	0.056 U
2,6-Dinitrotoluene		0.052 U				0.036 U		0.058 U	0.056 U
2-Chloronaphthalene		0.052 U				0.036 U		0.058 U	0.056 U
2-Chlorophenol	400	0.052 U				0.036 U		0.058 U	0.056 U
2-Methylphenol (o-cresol)		0.052 U				0.036 U		**0.27**	0.056 U
2-Nitroaniline		0.052 U				0.036 U		0.058 U	0.045 U
2-Nitrophenol		0.052 U				0.036 U		0.058 U	0.045 U
3,3'-Dichlorobenzidine		0.26 U				0.18 U		0.29 U	0.22 U
3-Nitroaniline		0.052 U				0.036 U		0.036 U	0.036 U
4,6-Dinitro-2-methylphenol		0.26 U				0.18 U		0.29 U	0.22 U
4-Bromophenyl-phenylether		0.052 U				0.036 U		0.058 U	0.056 U
4-Chloro-3-methylphenol		0.052 U				0.036 U		0.058 U	0.056 U
4-Chloroaniline		0.26 U				0.18 U		0.29 U	0.22 U
4-Chlorophenyl-phenylether		0.052 U				0.036 U		0.058 U	0.056 U
4-Nitroaniline		0.052 U				0.036 U		0.058 U	0.056 U
4-Nitrophenol		0.052 U				0.036 U		0.058 U	0.056 U
Aniline		0.26 U				0.18 U		0.29 U	0.28 U
Benzidine		0.52 U				0.58 U		0.58 U	0.56 U
Benzyl alcohol		0.26 U				0.18 U		0.29 U	0.22 U
bis(2-Chloroethoxy)methane		0.052 U				0.036 U		0.058 U	0.056 U
bis(2-Chloroethyl)ether		0.052 U				0.036 U		0.058 U	0.056 U
bis(2-Chloroisopropyl)ether		0.052 U				0.036 U		0.058 U	0.056 U
bis(2-Ethylhexyl)phthalate		0.052 U				0.036 U		0.058 U	0.056 U
bis-2-Ethylhexyladipate		0.052 U				0.036 U		0.058 U	0.056 U
Butylbenzylphthalate		0.052 U				0.036 U		0.058 U	0.056 U
Carbazole		0.052 U				0.036 U		0.058 U	0.056 U
Dibenzofuran	80	0.052 U				0.036 U		**0.082**	**0.093**
Diethylphthalate		0.26 U				0.18 U		0.29 U	0.22 U
Dimethylphthalate		0.052 U				0.036 U		0.058 U	0.056 U
Di-n-butylphthalate		0.052 U				0.036 U		0.058 U	0.056 U
Di-n-octylphthalate		0.052 U				0.036 U		0.058 U	0.056 U
Hexachlorobenzene		0.052 U				0.036 U		0.058 U	0.056 U
Hexachlorobutadiene		0.052 U				0.036 U		0.058 U	0.056 U
Hexachlorocyclopentadiene		0.052 U				0.036 U		0.058 U	0.056 U
Hexachloroethane		0.052 U				0.036 U		0.058 U	0.056 U
Isophorone		0.052 U				0.036 U		0.058 U	0.056 U
Nitrobenzene		0.052 U				0.036 U		0.058 U	0.056 U
n-Nitrosodimethylamine		0.052 U				0.036 U		0.058 U	0.056 U
n-Nitroso-di-n-propylamine		0.052 U				0.036 U		0.058 U	0.056 U
n-Nitrosodiphenylamine		0.052 U				0.036 U		0.058 U	0.056 U
Pentachlorophenol		0.26 U				0.18 U		0.29 U	0.22 U
Phenol	24,000	0.052 U				0.036 U		**0.83**	**0.20**
Pyridine	80	0.52 U				0.36 U		0.58 U	**0.76**
Metals in mg/kg									
Arsenic	20	16 U		13 U	12 U	11 U	13 U	17 U	17 U
Barium		**210**		**150**	**96**	**68**	**110**	**83**	**150**
Cadmium	2	0.78 U		0.67 U	0.59 U	0.54 U	0.64 U	0.87 U	0.84 U
Chromium	19/2,000[a]	**69**		**19**	**20**	**22**	**30**	**9.6**	**16**
Lead	250	**79**		**24**	**14**	**12**	**16**	**87**	**23**
Selenium		16 U		13 U	12 U	11 U	13 U	17 U	17 U
Silver		1.6 U		1.3 U	1.2 U	1.1 U	1.3 U	1.7 U	1.7 U
Mercury	2	0.39 U		0.33 U	0.29 U	0.27 U	0.32 U	0.43 U	0.42 U
Hexavalent chromium	19	1.6 U							

Notes:
U = Not detected at the reporting limit indicated.
NC = Not calculated.
Bolded values are above detection limit
Shaded values exceed cleanup level.
a. 19 mg/kg as chromium VI/2,000 mg/kg as chromium III.
b. MTCA Method B screening level using the lowest direct contact cleanup level presented in Ecology's CLARC database.
c. Calculated using Ecology's benzo[a]pyrene TEF methodology.

Table 2 - Analytical Results for Soil Samples

Sample ID	MTCA Method A/Method B Screening Levels	SCL-LC-BG3	SCL-LC-BG4	SCL-LC-BG5	HC-LC-BG
Sampling Date		11/4/2015	11/4/2015	11/4/2015	10/21/2015
Transect		Background	Background	Background	Background
Distance from Building (feet)					
PAHs in mg/kg					
1-Methylnaphthalene		**0.034**	**0.035**	**0.035**	0.0097 U
2-Methylnaphthalene		**0.039**	**0.043**	**0.042**	0.0097 U
Acenaphthene		**0.022**	0.011 U	**0.012**	0.0097 U
Acenaphthylene		0.009 U	0.011 U	0.011 U	0.0097 U
Anthracene		**0.011**	0.011 U	0.011 U	0.0097 U
Benz[a]anthracene		0.012 U	0.011 U	0.011 U	0.0097 U
Benzo(a)pyrene	0.1	0.012 U	0.011 U	0.011 U	0.0097 U
Benzo(b)fluoranthene		0.012 U	0.011 U	**0.013**	0.0097 U
Benzo(ghi)perylene		0.012 U	0.011 U	0.011 U	0.0097 U
Benzo(j,k)fluoranthene		0.012 U	0.011 U	0.011 U	0.0097 U
Chrysene		0.012 U	0.011 U	**0.013**	0.0097 U
Dibenzo(a,h)anthracene		0.012 U	0.011 U	0.011 U	0.0097 U
Fluoranthene		**0.019**	**0.011**	**0.015**	0.0097 U
Fluorene		**0.027**	**0.019**	**0.015**	0.0097 U
Indeno(1,2,3-cd)pyrene		0.012 U	0.011 U	0.011 U	0.0097 U
Naphthalene	5	**0.11**	**0.12**	**0.14**	0.0097 U
Phenanthrene		**0.067**	**0.043**	**0.042**	0.0097 U
Pyrene		**0.017**	**0.024**	**0.02**	0.0097 U
Total cPAHs TEF[c]	0.137	NC	NC	**0.001**	NC
Semivolatiles in mg/kg					
(3+4)-Methylphenol (m,p-cresol)	4,000/8,000	**0.19**	**0.21**	**0.13**	
1,2,4-Trichlorobenzene	34.5	0.045 U	0.055 U	0.057 U	
1,2-Dichlorobenzene	72,000	0.045 U	0.055 U	0.057 U	
1,2-Dinitrobenzene		0.045 U	0.055 U	0.057 U	
1,2-Diphenylhydrazine		0.045 U	0.055 U	0.057 U	
1,3-Dichlorobenzene		0.045 U	0.055 U	0.057 U	
1,3-Dinitrobenzene		0.045 U	0.055 U	0.057 U	
1,4-Dichlorobenzene		0.045 U	0.055 U	0.057 U	
1,4-Dinitrobenzene		0.045 U	0.055 U	0.057 U	
2,3,4,6-Tetrachlorophenol		0.045 U	0.055 U	0.057 U	
2,3,5,6-Tetrachlorophenol		0.045 U	0.055 U	0.057 U	
2,3-Dichloroaniline		0.045 U	0.055 U	0.057 U	
2,4,5-Trichlorophenol		0.045 U	0.055 U	0.057 U	
2,4,6-Trichlorophenol		0.045 U	0.055 U	0.057 U	
2,4-Dichlorophenol		0.045 U	0.055 U	0.057 U	
2,4-Dimethylphenol	16,000	0.045 U	0.055 U	0.057 U	
2,4-Dinitrophenol		0.29 U	0.27 U	0.28 U	
2,4-Dinitrotoluene		0.045 U	0.055 U	0.057 U	
2,6-Dinitrotoluene		0.045 U	0.055 U	0.057 U	
2-Chloronaphthalene		0.045 U	0.055 U	0.057 U	
2-Chlorophenol	400	0.045 U	0.055 U	0.057 U	
2-Methylphenol (o-cresol)		**0.067**	**0.079**	**0.059**	
2-Nitroaniline		0.045 U	0.055 U	0.057 U	
2-Nitrophenol		0.045 U	0.055 U	0.057 U	
3,3'-Dichlorobenzidine		0.29 U	0.27 U	0.28 U	
3-Nitroaniline		0.036 U	0.036 U	0.036 U	
4,6-Dinitro-2-methylphenol		0.29 U	0.27 U	0.28 U	
4-Bromophenyl-phenylether		0.045 U	0.055 U	0.057 U	
4-Chloro-3-methylphenol		0.045 U	0.055 U	0.057 U	
4-Chloroaniline		0.29 U	0.27 U	0.28 U	
4-Chlorophenyl-phenylether		0.045 U	0.055 U	0.057 U	
4-Nitroaniline		0.045 U	0.055 U	0.057 U	
4-Nitrophenol		0.045 U	0.055 U	0.057 U	
Aniline		0.29 U	0.27 U	0.28 U	
Benzidine		0.45 U	0.55 U	0.57 U	
Benzyl alcohol		0.29 U	0.27 U	0.28 U	
bis(2-Chloroethoxy)methane		0.045 U	0.055 U	0.057 U	
bis(2-Chloroethyl)ether		0.045 U	0.055 U	0.057 U	
bis(2-Chloroisopropyl)ether		0.045 U	0.055 U	0.057 U	
bis(2-Ethylhexyl)phthalate		0.045 U	0.055 U	0.057 U	
bis-2-Ethylhexyladipate		0.045 U	0.055 U	0.057 U	
Butylbenzylphthalate		0.045 U	0.055 U	0.057 U	
Carbazole		0.045 U	0.055 U	0.057 U	
Dibenzofuran	80	**0.079**	**0.06**	0.057 U	
Diethylphthalate		0.29 U	0.27 U	0.28 U	
Dimethylphthalate		0.045 U	0.055 U	0.057 U	
Di-n-butylphthalate		0.045 U	0.055 U	0.057 U	
Di-n-octylphthalate		0.045 U	0.055 U	0.057 U	
Hexachlorobenzene		0.045 U	0.055 U	0.057 U	
Hexachlorobutadiene		0.045 U	0.055 U	0.057 U	
Hexachlorocyclopentadiene		0.045 U	0.055 U	0.057 U	
Hexachloroethane		0.045 U	0.055 U	0.057 U	
Isophorone		0.045 U	0.055 U	0.057 U	
Nitrobenzene		0.045 U	0.055 U	0.057 U	
n-Nitrosodimethylamine		0.045 U	0.055 U	0.057 U	
n-Nitroso-di-n-propylamine		0.045 U	0.055 U	0.057 U	
n-Nitrosodiphenylamine		0.045 U	0.055 U	0.057 U	
Pentachlorophenol		0.29 U	0.27 U	0.28 U	
Phenol	24,000	**0.26**	**0.24**	**0.83**	
Pyridine	80	0.46	0.55 U	0.57 U	
Metals in mg/kg					
Arsenic	20	13 U	16 U	17 U	15 U
Barium		**290**	**320**	**330**	**260**
Cadmium	2	0.67 U	0.82 U	0.85 U	0.73 U
Chromium	19/2,000[a]	**30**	**31**	**37**	**33**
Lead	250	**27**	**18**	**24**	**8.9**
Selenium		13 U	16 U	17 U	15 U
Silver		1.3 U	1.6 U	1.7 U	1.5 U
Mercury	2	0.34 U	0.41 U	0.42 U	0.36 U
Hexavalent chromium	19				

Notes:
U = Not detected at the reporting limit indicated.
NC = Not calculated.
Bolded values are above detection limit
Shaded values exceed cleanup level.
a. 19 mg/kg as chromium VI/2,000 mg/kg as chromium III.
b. MTCA Method B screening level using the lowest direct contact cleanup level presented in Ecology's CLARC database.
c. Calculated using Ecology's benzo[a]pyrene TEF methodology.

Table 3 - Analytical Results for Water Sample

Sample ID Sampling Date	MTCA Method A Cleanup Level	HC-LC-WT1 10/21/2015	
SW8270DSIM in µg/L			
1-Methylnaphthalene		0.096	U
2-Methylnaphthalene		0.096	U
Acenaphthene		0.096	U
Acenaphthylene		0.096	U
Anthracene		0.096	U
Benz[a]anthracene		**0.029**	
Benzo(a)pyrene		0.0096	U
Benzo(b)fluoranthene		**0.018**	
Benzo(ghi)perylene		**0.011**	
Benzo(j,k)fluoranthene		**0.012**	
Chrysene		**0.025**	
Dibenzo(a,h)anthracene		0.0096	U
Fluoranthene		0.096	U
Fluorene		0.096	U
Indeno(1,2,3-cd)pyrene		0.0096	U
Naphthalene		0.096	U
Phenanthrene		0.096	U
Pyrene		0.096	U
Total cPAHs TEQ	0.137	**0.00615**	
Total Metals in µg/L			
Arsenic	5	**21**	
Barium		**110**	
Cadmium	5	4.4	U
Chromium	50/100[a]	**58**	
Lead	15	**30**	
Selenium		5.6	U
Silver		11	U
Mercury	2	0.5	U
Dissolved Metals in µg/L			
Arsenic	5	3	U
Barium		**66**	
Cadmium	5	4	U
Chromium	50/100[a]	10	U
Lead	15	**1.2**	
Selenium		5	U
Silver		10	U
Mercury	2	0.5	U

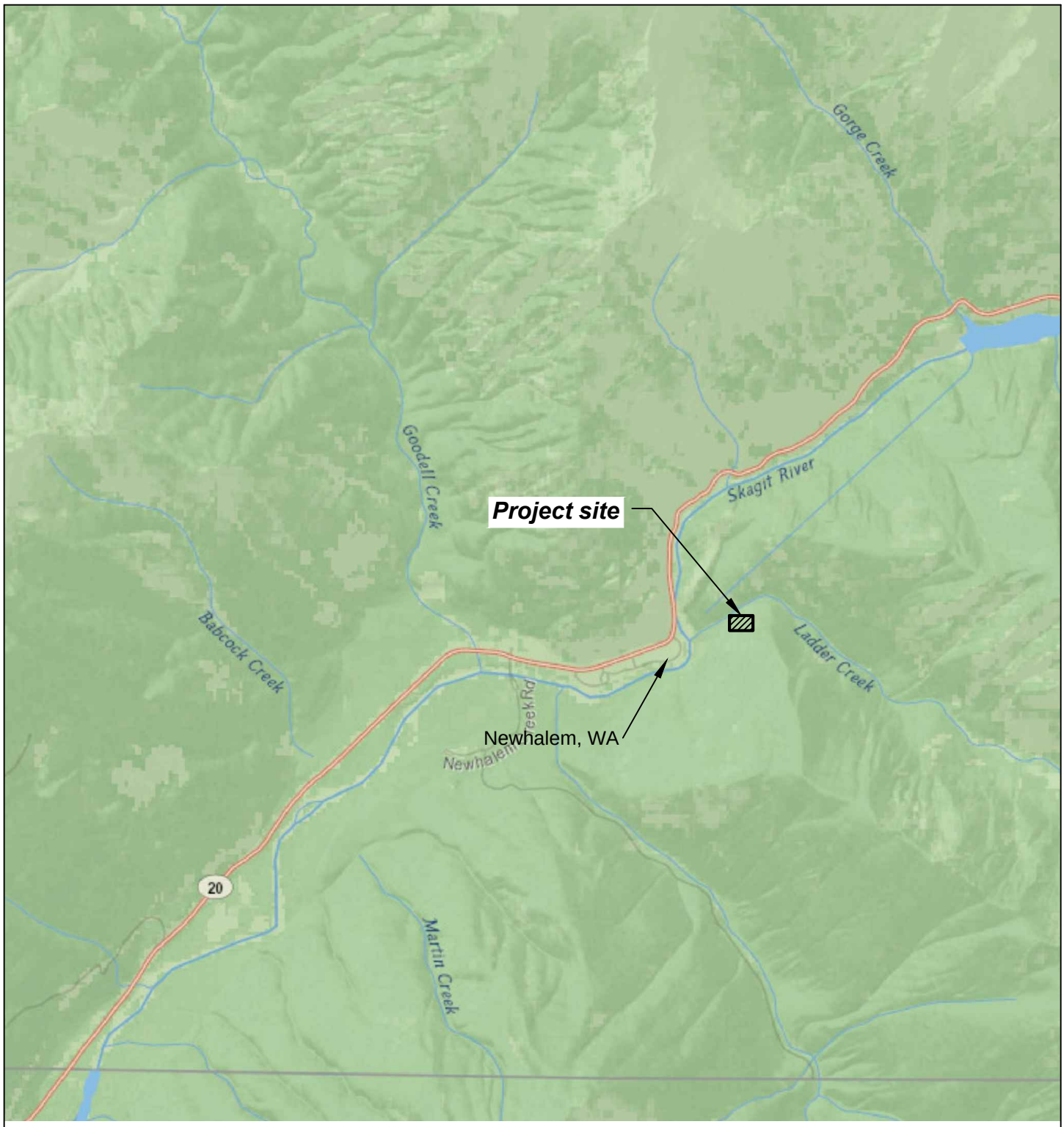
Notes

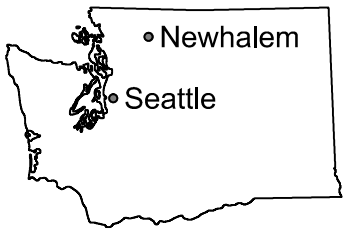
U = Not detected at the reporting limit indicated.

Dectected values are bolded

Shaded value exceeds cleanup level.

a. 50 µg/L as Total Chromium (chromium III and VI)/100 µg/L as Chromium III.





0 4000 8000
Scale in Feet

N

Source: Base map prepared from ArcGIS Online, 2014.

Seattle City Light Ladder Creek Settling Tank
Newhalem, Washington

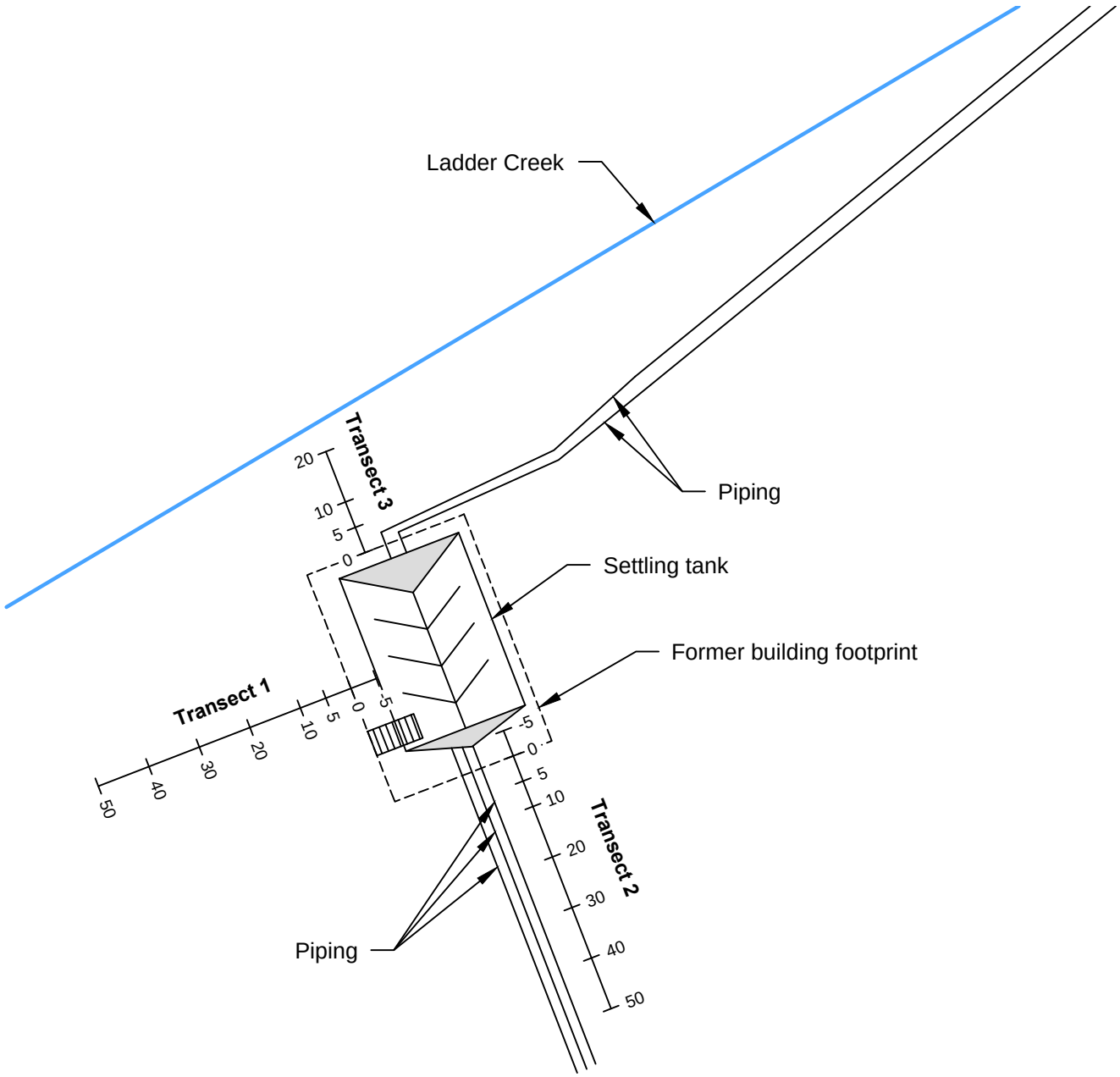
Vicinity Map

17843-71 3/16

HARTCROWSER

Figure
1

EAL 03/1/16 1784371-005 (VMap).dwg



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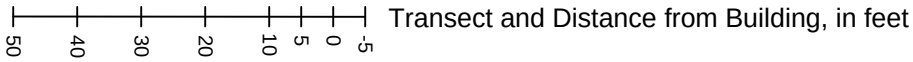
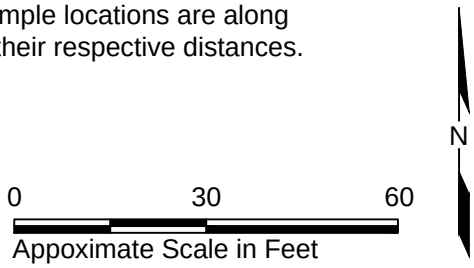


Note: Soil sample locations are along transects at their respective distances.



Seattle City Light Ladder Creek Settling Tank
Newhalem, Washington

Site Plan

17843-71 3/16

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Figure
2

EAL 03/1/16 1784371-006 (SPlan).dwg

ATTACHMENT 1
Chemical Data Quality Review And Laboratory Reports

CHEMICAL DATA QUALITY REVIEW AND LABORATORY REPORTS

Chemical Data Quality Review

On October 21, 2015, twenty soil samples and one water sample were collected. The samples were submitted to OnSite Environmental Inc. (OnSite), in Redmond, Washington, for chemical analysis. The laboratory report reference numbers are 1510-176 and 1510-176B.

Soil samples were analyzed for one or more of the following:

- Semivolatiles by EPA Method 8270D and 8270D/SIM;
- PAHs by EPA Method 8270D/SIM;
- Total RCRA Metals by EPA Method 6010C and 7471B;
- Hexavalent Chromium by EPA Method 7196A mod; and
- Percent moisture.

The water sample was analyzed for one or more of the following:

- PAHs by EPA Method 8270D/SIM and
- Total RCRA Metals by EPA Method 200.8 and 7470A.

The laboratory performed ongoing quality assurance/quality control (QA/QC) reviews. Hart Crowser reviewed summary reports to check that they met data quality objectives for the project and recorded the results on laboratory QC summary sheets.

The following criteria were evaluated during the standard data quality review process:

- Holding times;
- Reporting limits;
- Method blanks;
- Surrogate recoveries;
- Laboratory duplicate relative percent differences (RPDs);
- Spike blank/spike blank duplicate (SB/SBD) recoveries; and
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries.

The data were determined to be acceptable without qualification. The complete laboratory report is at the end of this appendix. The data review is summarized below.

Sample Receiving Notes

The samples were received within holding time and temperature. No discrepancies were noted by the laboratory.

Two bottles were provided for the water sample for Total Metals. Aliquots of both were combined to form a composite sample for analysis.

Under direction of Hart Crowser, analyses were added to the COC by the laboratory on 10/22/15. Under direction of Hart Crowser, additional analyses were added to the COC by the laboratory on 10/29/15. Under direction of Hart Crowser, an additional analysis was added to the COC by the laboratory on 11/10/15.

Semivolatiles EPA 8270D and 8270D/SIM

Holding times and reporting limits were acceptable. No method blank contamination was detected. Surrogate recoveries were within the laboratory control limits. SB and SBD recoveries and their associated RPDs were within laboratory control limits. The data are acceptable for use without qualification.

PAHs EPA 8270D/SIM

Holding times and reporting limits were acceptable. No method blank contamination was detected. Surrogate recoveries were within the laboratory control limits. SB and SBD recoveries and their associated RPDs were within laboratory control limits. The data are acceptable for use without qualification.

Total Metals EPA 6010C, 7471B

Holding times and reporting limits were acceptable. No method blank contamination was detected. SB recoveries were within laboratory control limits. MS and MSD recoveries and associated RPDs were within laboratory control limits. . The laboratory duplicate RPDs were either within control limits or were not applicable (NA) because the sample and duplicate were non-detect (ND). The data are acceptable for use without qualification.

Laboratory Reports

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

November 3, 2015

Nick Galvin
Hart Crowser, Inc.
1700 Westlake Avenue North, Suite 200
Seattle, WA 98109-3056

Re: Analytical Data for Project 17843-71
Laboratory Reference No. 1510-176

Dear Nick:

Enclosed are the analytical results and associated quality control data for samples submitted on October 22, 2015.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

Case Narrative

Samples were collected on October 21, 2015 and received by the laboratory on October 22, 2015. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Total Metals EPA 200.8/7470A Analysis

Aliquots of sample HC-LC-WT1 from the two bottles provided for metals were combined to form a composite sample.

Any other QA/QC issues associated with this extraction and analysis will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T1-(-5)**					
Laboratory ID:	10-176-02					
n-Nitrosodimethylamine	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Pyridine	**ND**	2.0	EPA 8270D	10-23-15	10-26-15	
Phenol	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Aniline	**ND**	0.98	EPA 8270D	10-23-15	10-26-15	
bis(2-Chloroethyl)ether	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
2-Chlorophenol	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
1,3-Dichlorobenzene	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
1,4-Dichlorobenzene	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Benzyl alcohol	**ND**	0.98	EPA 8270D	10-23-15	10-26-15	
1,2-Dichlorobenzene	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
2-Methylphenol (o-Cresol)	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
bis(2-Chloroisopropyl)ether	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
n-Nitroso-di-n-propylamine	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Hexachloroethane	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Nitrobenzene	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Isophorone	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
2-Nitrophenol	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
2,4-Dimethylphenol	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
bis(2-Chloroethoxy)methane	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
2,4-Dichlorophenol	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
1,2,4-Trichlorobenzene	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Naphthalene	**0.033**	0.0078	EPA 8270D/SIM	10-23-15	10-23-15	
4-Chloroaniline	**ND**	0.98	EPA 8270D	10-23-15	10-26-15	
Hexachlorobutadiene	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
4-Chloro-3-methylphenol	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
2-Methylnaphthalene	**ND**	0.0078	EPA 8270D/SIM	10-23-15	10-23-15	
1-Methylnaphthalene	**ND**	0.0078	EPA 8270D/SIM	10-23-15	10-23-15	
Hexachlorocyclopentadiene	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
2,4,6-Trichlorophenol	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
2,3-Dichloroaniline	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
2,4,5-Trichlorophenol	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
2-Chloronaphthalene	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
2-Nitroaniline	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
1,4-Dinitrobenzene	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Dimethylphthalate	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
1,3-Dinitrobenzene	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
2,6-Dinitrotoluene	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
1,2-Dinitrobenzene	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Acenaphthylene	**ND**	0.0078	EPA 8270D/SIM	10-23-15	10-23-15	
3-Nitroaniline	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	

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Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T1-(-5)**					
Laboratory ID:	10-176-02					
2,4-Dinitrophenol	**ND**	0.98	EPA 8270D	10-23-15	10-26-15	
Acenaphthene	**0.018**	0.0078	EPA 8270D/SIM	10-23-15	10-23-15	
4-Nitrophenol	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
2,4-Dinitrotoluene	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Dibenzofuran	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
2,3,5,6-Tetrachlorophenol	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
2,3,4,6-Tetrachlorophenol	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Diethylphthalate	**ND**	0.98	EPA 8270D	10-23-15	10-26-15	
4-Chlorophenyl-phenylether	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
4-Nitroaniline	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Fluorene	**0.0096**	0.0078	EPA 8270D/SIM	10-23-15	10-23-15	
4,6-Dinitro-2-methylphenol	**ND**	0.98	EPA 8270D	10-23-15	10-26-15	
n-Nitrosodiphenylamine	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
1,2-Diphenylhydrazine	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
4-Bromophenyl-phenylether	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Hexachlorobenzene	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Pentachlorophenol	**ND**	0.98	EPA 8270D	10-23-15	10-26-15	
Phenanthrene	**0.35**	0.20	EPA 8270D	10-23-15	10-26-15	
Anthracene	**0.18**	0.0078	EPA 8270D/SIM	10-23-15	10-23-15	
Carbazole	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Di-n-butylphthalate	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Fluoranthene	**2.5**	0.20	EPA 8270D	10-23-15	10-26-15	
Benzidine	**ND**	2.0	EPA 8270D	10-23-15	10-26-15	
Pyrene	**1.9**	0.20	EPA 8270D	10-23-15	10-26-15	
Butylbenzylphthalate	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
bis-2-Ethylhexyladipate	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
3,3'-Dichlorobenzidine	**ND**	0.98	EPA 8270D	10-23-15	10-26-15	
Benzo[a]anthracene	**2.1**	0.20	EPA 8270D	10-23-15	10-26-15	
Chrysene	**3.0**	0.20	EPA 8270D	10-23-15	10-26-15	
bis(2-Ethylhexyl)phthalate	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Di-n-octylphthalate	**ND**	0.20	EPA 8270D	10-23-15	10-26-15	
Benzo[b]fluoranthene	**4.2**	0.20	EPA 8270D	10-23-15	10-26-15	
Benzo(j,k)fluoranthene	**1.5**	0.20	EPA 8270D	10-23-15	10-26-15	
Benzo[a]pyrene	**2.7**	0.20	EPA 8270D	10-23-15	10-26-15	
Indeno[1,2,3-cd]pyrene	**1.6**	0.20	EPA 8270D	10-23-15	10-26-15	
Dibenz[a,h]anthracene	**0.52**	0.20	EPA 8270D	10-23-15	10-26-15	
Benzo[g,h,i]perylene	**1.8**	0.20	EPA 8270D	10-23-15	10-26-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*68*	*24 - 117*				
Phenol-d6	*71*	*30 - 120*				
Nitrobenzene-d5	*67*	*27 - 112*				
2-Fluorobiphenyl	*63*	*35 - 113*				
2,4,6-Tribromophenol	*59*	*21 - 120*				
Terphenyl-d14	*65*	*39 - 121*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T1-5**					
Laboratory ID:	10-176-04					
n-Nitrosodimethylamine	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
Pyridine	**1.0**	0.49	EPA 8270D	10-23-15	10-26-15	
Phenol	**0.14**	0.049	EPA 8270D	10-23-15	10-26-15	
Aniline	**ND**	0.24	EPA 8270D	10-23-15	10-26-15	
bis(2-Chloroethyl)ether	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
2-Chlorophenol	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
1,3-Dichlorobenzene	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
1,4-Dichlorobenzene	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
Benzyl alcohol	**ND**	0.24	EPA 8270D	10-23-15	10-26-15	
1,2-Dichlorobenzene	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
2-Methylphenol (o-Cresol)	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
bis(2-Chloroisopropyl)ether	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
(3+4)-Methylphenol (m,p-Cresol)	**0.068**	0.049	EPA 8270D	10-23-15	10-26-15	
n-Nitroso-di-n-propylamine	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
Hexachloroethane	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
Nitrobenzene	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
Isophorone	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
2-Nitrophenol	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
2,4-Dimethylphenol	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
bis(2-Chloroethoxy)methane	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
2,4-Dichlorophenol	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
1,2,4-Trichlorobenzene	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
Naphthalene	**0.070**	0.049	EPA 8270D	10-23-15	10-26-15	
4-Chloroaniline	**ND**	0.24	EPA 8270D	10-23-15	10-26-15	
Hexachlorobutadiene	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
4-Chloro-3-methylphenol	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
2-Methylnaphthalene	**0.013**	0.0097	EPA 8270D/SIM	10-23-15	10-23-15	
1-Methylnaphthalene	**0.013**	0.0097	EPA 8270D/SIM	10-23-15	10-23-15	
Hexachlorocyclopentadiene	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
2,4,6-Trichlorophenol	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
2,3-Dichloroaniline	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
2,4,5-Trichlorophenol	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
2-Chloronaphthalene	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
2-Nitroaniline	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
1,4-Dinitrobenzene	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
Dimethylphthalate	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
1,3-Dinitrobenzene	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
2,6-Dinitrotoluene	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
1,2-Dinitrobenzene	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
Acenaphthylene	**0.013**	0.0097	EPA 8270D/SIM	10-23-15	10-23-15	
3-Nitroaniline	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T1-5**					
Laboratory ID:	10-176-04					
2,4-Dinitrophenol	**ND**	0.24	EPA 8270D	10-23-15	10-26-15	
Acenaphthene	**0.063**	0.049	EPA 8270D	10-23-15	10-26-15	
4-Nitrophenol	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
2,4-Dinitrotoluene	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
Dibenzofuran	**0.11**	0.049	EPA 8270D	10-23-15	10-26-15	
2,3,5,6-Tetrachlorophenol	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
2,3,4,6-Tetrachlorophenol	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
Diethylphthalate	**ND**	0.24	EPA 8270D	10-23-15	10-26-15	
4-Chlorophenyl-phenylether	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
4-Nitroaniline	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
Fluorene	**0.065**	0.049	EPA 8270D	10-23-15	10-26-15	
4,6-Dinitro-2-methylphenol	**ND**	0.24	EPA 8270D	10-23-15	10-26-15	
n-Nitrosodiphenylamine	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
1,2-Diphenylhydrazine	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
4-Bromophenyl-phenylether	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
Hexachlorobenzene	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
Pentachlorophenol	**ND**	0.24	EPA 8270D	10-23-15	10-26-15	
Phenanthrene	**2.5**	0.049	EPA 8270D	10-23-15	10-26-15	
Anthracene	**0.35**	0.049	EPA 8270D	10-23-15	10-26-15	
Carbazole	**0.088**	0.049	EPA 8270D	10-23-15	10-26-15	
Di-n-butylphthalate	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
Fluoranthene	**6.2**	0.49	EPA 8270D	10-23-15	10-27-15	
Benzidine	**ND**	0.49	EPA 8270D	10-23-15	10-26-15	
Pyrene	**2.8**	0.049	EPA 8270D	10-23-15	10-26-15	
Butylbenzylphthalate	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
bis-2-Ethylhexyladipate	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
3,3'-Dichlorobenzidine	**ND**	0.24	EPA 8270D	10-23-15	10-26-15	
Benzo[a]anthracene	**1.6**	0.049	EPA 8270D	10-23-15	10-26-15	
Chrysene	**2.7**	0.049	EPA 8270D	10-23-15	10-26-15	
bis(2-Ethylhexyl)phthalate	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
Di-n-octylphthalate	**ND**	0.049	EPA 8270D	10-23-15	10-26-15	
Benzo[b]fluoranthene	**5.2**	0.49	EPA 8270D	10-23-15	10-27-15	
Benzo(j,k)fluoranthene	**1.1**	0.049	EPA 8270D	10-23-15	10-26-15	
Benzo[a]pyrene	**2.1**	0.049	EPA 8270D	10-23-15	10-26-15	
Indeno[1,2,3-cd]pyrene	**2.4**	0.049	EPA 8270D	10-23-15	10-26-15	
Dibenz[a,h]anthracene	**1.0**	0.049	EPA 8270D	10-23-15	10-26-15	
Benzo[g,h,i]perylene	**3.6**	0.49	EPA 8270D	10-23-15	10-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*58*	*24 - 117*				
Phenol-d6	*68*	*30 - 120*				
Nitrobenzene-d5	*57*	*27 - 112*				
2-Fluorobiphenyl	*72*	*35 - 113*				
2,4,6-Tribromophenol	*72*	*21 - 120*				
Terphenyl-d14	*69*	*39 - 121*				

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SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T2-(-5)**					
Laboratory ID:	10-176-10					
n-Nitrosodimethylamine	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Pyridine	**ND**	0.43	EPA 8270D	10-23-15	10-26-15	
Phenol	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Aniline	**ND**	0.21	EPA 8270D	10-23-15	10-26-15	
bis(2-Chloroethyl)ether	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
2-Chlorophenol	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
1,3-Dichlorobenzene	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
1,4-Dichlorobenzene	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Benzyl alcohol	**ND**	0.21	EPA 8270D	10-23-15	10-26-15	
1,2-Dichlorobenzene	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
2-Methylphenol (o-Cresol)	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
bis(2-Chloroisopropyl)ether	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
n-Nitroso-di-n-propylamine	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Hexachloroethane	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Nitrobenzene	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Isophorone	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
2-Nitrophenol	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
2,4-Dimethylphenol	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
bis(2-Chloroethoxy)methane	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
2,4-Dichlorophenol	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
1,2,4-Trichlorobenzene	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Naphthalene	**0.017**	0.0085	EPA 8270D/SIM	10-23-15	10-23-15	
4-Chloroaniline	**ND**	0.21	EPA 8270D	10-23-15	10-26-15	
Hexachlorobutadiene	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
4-Chloro-3-methylphenol	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
2-Methylnaphthalene	**ND**	0.0085	EPA 8270D/SIM	10-23-15	10-23-15	
1-Methylnaphthalene	**ND**	0.0085	EPA 8270D/SIM	10-23-15	10-23-15	
Hexachlorocyclopentadiene	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
2,4,6-Trichlorophenol	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
2,3-Dichloroaniline	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
2,4,5-Trichlorophenol	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
2-Chloronaphthalene	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
2-Nitroaniline	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
1,4-Dinitrobenzene	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Dimethylphthalate	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
1,3-Dinitrobenzene	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
2,6-Dinitrotoluene	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
1,2-Dinitrobenzene	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Acenaphthylene	**ND**	0.0085	EPA 8270D/SIM	10-23-15	10-23-15	
3-Nitroaniline	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T2-(-5)**					
Laboratory ID:	10-176-10					
2,4-Dinitrophenol	**ND**	0.21	EPA 8270D	10-23-15	10-26-15	
Acenaphthene	**ND**	0.0085	EPA 8270D/SIM	10-23-15	10-23-15	
4-Nitrophenol	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
2,4-Dinitrotoluene	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Dibenzofuran	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
2,3,5,6-Tetrachlorophenol	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
2,3,4,6-Tetrachlorophenol	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Diethylphthalate	**ND**	0.21	EPA 8270D	10-23-15	10-26-15	
4-Chlorophenyl-phenylether	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
4-Nitroaniline	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Fluorene	**ND**	0.0085	EPA 8270D/SIM	10-23-15	10-23-15	
4,6-Dinitro-2-methylphenol	**ND**	0.21	EPA 8270D	10-23-15	10-26-15	
n-Nitrosodiphenylamine	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
1,2-Diphenylhydrazine	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
4-Bromophenyl-phenylether	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Hexachlorobenzene	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Pentachlorophenol	**ND**	0.21	EPA 8270D	10-23-15	10-26-15	
Phenanthrene	**0.061**	0.043	EPA 8270D	10-23-15	10-26-15	
Anthracene	**0.025**	0.0085	EPA 8270D/SIM	10-23-15	10-23-15	
Carbazole	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Di-n-butylphthalate	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Fluoranthene	**0.18**	0.043	EPA 8270D	10-23-15	10-26-15	
Benzidine	**ND**	0.43	EPA 8270D	10-23-15	10-26-15	
Pyrene	**0.10**	0.043	EPA 8270D	10-23-15	10-26-15	
Butylbenzylphthalate	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
bis-2-Ethylhexyladipate	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
3,3'-Dichlorobenzidine	**ND**	0.21	EPA 8270D	10-23-15	10-26-15	
Benzo[a]anthracene	**0.16**	0.043	EPA 8270D	10-23-15	10-26-15	
Chrysene	**0.29**	0.043	EPA 8270D	10-23-15	10-26-15	
bis(2-Ethylhexyl)phthalate	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Di-n-octylphthalate	**ND**	0.043	EPA 8270D	10-23-15	10-26-15	
Benzo[b]fluoranthene	**0.58**	0.043	EPA 8270D	10-23-15	10-26-15	
Benzo(j,k)fluoranthene	**0.19**	0.043	EPA 8270D	10-23-15	10-26-15	
Benzo[a]pyrene	**0.32**	0.043	EPA 8270D	10-23-15	10-26-15	
Indeno[1,2,3-cd]pyrene	**0.30**	0.043	EPA 8270D	10-23-15	10-26-15	
Dibenz[a,h]anthracene	**0.10**	0.043	EPA 8270D	10-23-15	10-26-15	
Benzo[g,h,i]perylene	**0.39**	0.043	EPA 8270D	10-23-15	10-26-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*47*	*24 - 117*				
Phenol-d6	*50*	*30 - 120*				
Nitrobenzene-d5	*47*	*27 - 112*				
2-Fluorobiphenyl	*55*	*35 - 113*				
2,4,6-Tribromophenol	*54*	*21 - 120*				
Terphenyl-d14	*47*	*39 - 121*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T2-5**					
Laboratory ID:	10-176-12					
n-Nitrosodimethylamine	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Pyridine	**ND**	0.52	EPA 8270D	10-27-15	10-27-15	
Phenol	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Aniline	**ND**	0.26	EPA 8270D	10-27-15	10-27-15	
bis(2-Chloroethyl)ether	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
2-Chlorophenol	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
1,3-Dichlorobenzene	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
1,4-Dichlorobenzene	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Benzyl alcohol	**ND**	0.26	EPA 8270D	10-27-15	10-27-15	
1,2-Dichlorobenzene	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
2-Methylphenol (o-Cresol)	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
bis(2-Chloroisopropyl)ether	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
n-Nitroso-di-n-propylamine	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Hexachloroethane	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Nitrobenzene	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Isophorone	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
2-Nitrophenol	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
2,4-Dimethylphenol	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
bis(2-Chloroethoxy)methane	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
2,4-Dichlorophenol	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
1,2,4-Trichlorobenzene	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Naphthalene	**0.089**	0.052	EPA 8270D	10-27-15	10-27-15	
4-Chloroaniline	**ND**	0.26	EPA 8270D	10-27-15	10-27-15	
Hexachlorobutadiene	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
4-Chloro-3-methylphenol	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
2-Methylnaphthalene	**0.024**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
1-Methylnaphthalene	**0.040**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
Hexachlorocyclopentadiene	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
2,4,6-Trichlorophenol	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
2,3-Dichloroaniline	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
2,4,5-Trichlorophenol	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
2-Chloronaphthalene	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
2-Nitroaniline	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
1,4-Dinitrobenzene	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Dimethylphthalate	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
1,3-Dinitrobenzene	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
2,6-Dinitrotoluene	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
1,2-Dinitrobenzene	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Acenaphthylene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
3-Nitroaniline	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T2-5**					
Laboratory ID:	10-176-12					
2,4-Dinitrophenol	**ND**	0.26	EPA 8270D	10-27-15	10-27-15	
Acenaphthene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
4-Nitrophenol	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
2,4-Dinitrotoluene	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Dibenzofuran	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
2,3,5,6-Tetrachlorophenol	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
2,3,4,6-Tetrachlorophenol	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Diethylphthalate	**ND**	0.26	EPA 8270D	10-27-15	10-27-15	
4-Chlorophenyl-phenylether	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
4-Nitroaniline	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Fluorene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
4,6-Dinitro-2-methylphenol	**ND**	0.26	EPA 8270D	10-27-15	10-27-15	
n-Nitrosodiphenylamine	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
1,2-Diphenylhydrazine	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
4-Bromophenyl-phenylether	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Hexachlorobenzene	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Pentachlorophenol	**ND**	0.26	EPA 8270D	10-27-15	10-27-15	
Phenanthrene	**0.010**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
Anthracene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
Carbazole	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Di-n-butylphthalate	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Fluoranthene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
Benzidine	**ND**	0.52	EPA 8270D	10-27-15	10-27-15	
Pyrene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
Butylbenzylphthalate	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
bis-2-Ethylhexyladipate	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
3,3'-Dichlorobenzidine	**ND**	0.26	EPA 8270D	10-27-15	10-27-15	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
Chrysene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
bis(2-Ethylhexyl)phthalate	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Di-n-octylphthalate	**ND**	0.052	EPA 8270D	10-27-15	10-27-15	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
Indeno[1,2,3-cd]pyrene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*74*	*24 - 117*				
Phenol-d6	*84*	*30 - 120*				
Nitrobenzene-d5	*74*	*27 - 112*				
2-Fluorobiphenyl	*89*	*35 - 113*				
2,4,6-Tribromophenol	*80*	*21 - 120*				
Terphenyl-d14	*76*	*39 - 121*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T3-5**					
Laboratory ID:	10-176-18					
n-Nitrosodimethylamine	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Pyridine	**ND**	0.36	EPA 8270D	10-23-15	10-26-15	
Phenol	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Aniline	**ND**	0.18	EPA 8270D	10-23-15	10-26-15	
bis(2-Chloroethyl)ether	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
2-Chlorophenol	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
1,3-Dichlorobenzene	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
1,4-Dichlorobenzene	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Benzyl alcohol	**ND**	0.18	EPA 8270D	10-23-15	10-26-15	
1,2-Dichlorobenzene	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
2-Methylphenol (o-Cresol)	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
bis(2-Chloroisopropyl)ether	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
n-Nitroso-di-n-propylamine	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Hexachloroethane	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Nitrobenzene	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Isophorone	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
2-Nitrophenol	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
2,4-Dimethylphenol	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
bis(2-Chloroethoxy)methane	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
2,4-Dichlorophenol	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
1,2,4-Trichlorobenzene	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Naphthalene	**ND**	0.0072	EPA 8270D/SIM	10-23-15	10-23-15	
4-Chloroaniline	**ND**	0.18	EPA 8270D	10-23-15	10-26-15	
Hexachlorobutadiene	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
4-Chloro-3-methylphenol	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
2-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	10-23-15	10-23-15	
1-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	10-23-15	10-23-15	
Hexachlorocyclopentadiene	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
2,4,6-Trichlorophenol	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
2,3-Dichloroaniline	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
2,4,5-Trichlorophenol	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
2-Chloronaphthalene	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
2-Nitroaniline	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
1,4-Dinitrobenzene	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Dimethylphthalate	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
1,3-Dinitrobenzene	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
2,6-Dinitrotoluene	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
1,2-Dinitrobenzene	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Acenaphthylene	**ND**	0.0072	EPA 8270D/SIM	10-23-15	10-23-15	
3-Nitroaniline	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T3-5**					
Laboratory ID:	10-176-18					
2,4-Dinitrophenol	**ND**	0.18	EPA 8270D	10-23-15	10-26-15	
Acenaphthene	**ND**	0.0072	EPA 8270D/SIM	10-23-15	10-23-15	
4-Nitrophenol	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
2,4-Dinitrotoluene	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Dibenzofuran	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
2,3,5,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
2,3,4,6-Tetrachlorophenol	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Diethylphthalate	**ND**	0.18	EPA 8270D	10-23-15	10-26-15	
4-Chlorophenyl-phenylether	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
4-Nitroaniline	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Fluorene	**ND**	0.0072	EPA 8270D/SIM	10-23-15	10-23-15	
4,6-Dinitro-2-methylphenol	**ND**	0.18	EPA 8270D	10-23-15	10-26-15	
n-Nitrosodiphenylamine	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
1,2-Diphenylhydrazine	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
4-Bromophenyl-phenylether	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Hexachlorobenzene	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Pentachlorophenol	**ND**	0.18	EPA 8270D	10-23-15	10-26-15	
Phenanthrene	**0.021**	0.0072	EPA 8270D/SIM	10-23-15	10-23-15	
Anthracene	**ND**	0.0072	EPA 8270D/SIM	10-23-15	10-23-15	
Carbazole	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Di-n-butylphthalate	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Fluoranthene	**0.038**	0.036	EPA 8270D	10-23-15	10-26-15	
Benzidine	**ND**	0.36	EPA 8270D	10-23-15	10-26-15	
Pyrene	**0.016**	0.0072	EPA 8270D/SIM	10-23-15	10-23-15	
Butylbenzylphthalate	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
bis-2-Ethylhexyladipate	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
3,3'-Dichlorobenzidine	**ND**	0.18	EPA 8270D	10-23-15	10-26-15	
Benzo[a]anthracene	**0.0099**	0.0072	EPA 8270D/SIM	10-23-15	10-23-15	
Chrysene	**0.029**	0.0072	EPA 8270D/SIM	10-23-15	10-23-15	
bis(2-Ethylhexyl)phthalate	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Di-n-octylphthalate	**ND**	0.036	EPA 8270D	10-23-15	10-26-15	
Benzo[b]fluoranthene	**0.038**	0.036	EPA 8270D	10-23-15	10-26-15	
Benzo(j,k)fluoranthene	**0.010**	0.0072	EPA 8270D/SIM	10-23-15	10-23-15	
Benzo[a]pyrene	**0.020**	0.0072	EPA 8270D/SIM	10-23-15	10-23-15	
Indeno[1,2,3-cd]pyrene	**0.040**	0.0072	EPA 8270D/SIM	10-23-15	10-23-15	
Dibenz[a,h]anthracene	**0.0097**	0.0072	EPA 8270D/SIM	10-23-15	10-23-15	
Benzo[g,h,i]perylene	**0.045**	0.036	EPA 8270D	10-23-15	10-26-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*58*	*24 - 117*				
Phenol-d6	*69*	*30 - 120*				
Nitrobenzene-d5	*59*	*27 - 112*				
2-Fluorobiphenyl	*81*	*35 - 113*				
2,4,6-Tribromophenol	*72*	*21 - 120*				
Terphenyl-d14	*74*	*39 - 121*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1023S1					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Pyridine	**ND**	0.33	EPA 8270D	10-23-15	10-26-15	
Phenol	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Aniline	**ND**	0.17	EPA 8270D	10-23-15	10-26-15	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
2-Chlorophenol	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Benzyl alcohol	**ND**	0.17	EPA 8270D	10-23-15	10-26-15	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Hexachloroethane	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Nitrobenzene	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Isophorone	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
2-Nitrophenol	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
4-Chloroaniline	**ND**	0.17	EPA 8270D	10-23-15	10-26-15	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
2-Nitroaniline	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Dimethylphthalate	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
3-Nitroaniline	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1023S1					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	10-23-15	10-26-15	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
4-Nitrophenol	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Dibenzofuran	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Diethylphthalate	**ND**	0.17	EPA 8270D	10-23-15	10-26-15	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
4-Nitroaniline	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	10-23-15	10-26-15	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Pentachlorophenol	**ND**	0.17	EPA 8270D	10-23-15	10-26-15	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
Carbazole	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Di-n-butylphthalate	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
Benzidine	**ND**	0.33	EPA 8270D	10-23-15	10-26-15	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
Butylbenzylphthalate	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
bis-2-Ethylhexyladipate	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	10-23-15	10-26-15	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
bis(2-Ethylhexyl)phthalate	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Di-n-octylphthalate	**ND**	0.033	EPA 8270D	10-23-15	10-26-15	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	10-23-15	10-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*78*	*24 - 117*				
Phenol-d6	*84*	*30 - 120*				
Nitrobenzene-d5	*75*	*27 - 112*				
2-Fluorobiphenyl	*84*	*35 - 113*				
2,4,6-Tribromophenol	*51*	*21 - 120*				
Terphenyl-d14	*72*	*39 - 121*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1027S2					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Pyridine	**ND**	0.33	EPA 8270D	10-27-15	10-27-15	
Phenol	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Aniline	**ND**	0.17	EPA 8270D	10-27-15	10-27-15	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
2-Chlorophenol	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Benzyl alcohol	**ND**	0.17	EPA 8270D	10-27-15	10-27-15	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Hexachloroethane	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Nitrobenzene	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Isophorone	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
2-Nitrophenol	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
4-Chloroaniline	**ND**	0.17	EPA 8270D	10-27-15	10-27-15	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
2-Nitroaniline	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Dimethylphthalate	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
3-Nitroaniline	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1027S2					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	10-27-15	10-27-15	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
4-Nitrophenol	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Dibenzofuran	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Diethylphthalate	**ND**	0.17	EPA 8270D	10-27-15	10-27-15	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
4-Nitroaniline	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	10-27-15	10-27-15	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Pentachlorophenol	**ND**	0.17	EPA 8270D	10-27-15	10-27-15	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Carbazole	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Di-n-butylphthalate	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Benzidine	**ND**	0.33	EPA 8270D	10-27-15	10-27-15	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Butylbenzylphthalate	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
bis-2-Ethylhexyladipate	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	10-27-15	10-27-15	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
bis(2-Ethylhexyl)phthalate	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Di-n-octylphthalate	**ND**	0.033	EPA 8270D	10-27-15	10-27-15	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*65*	*24 - 117*				
Phenol-d6	*75*	*30 - 120*				
Nitrobenzene-d5	*63*	*27 - 112*				
2-Fluorobiphenyl	*78*	*35 - 113*				
2,4,6-Tribromophenol	*72*	*21 - 120*				
Terphenyl-d14	*75*	*39 - 121*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1023S1									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**1.02**	**1.04**	1.33	1.33	77	78	41 - 110	2	36	
2-Chlorophenol	**1.04**	**1.05**	1.33	1.33	78	79	42 - 112	1	39	
1,4-Dichlorobenzene	**0.491**	**0.500**	0.667	0.667	74	75	37 - 104	2	39	
n-Nitroso-di-n-propylamine	**0.477**	**0.494**	0.667	0.667	72	74	39 - 102	4	34	
1,2,4-Trichlorobenzene	**0.475**	**0.484**	0.667	0.667	71	73	34 - 107	2	37	
4-Chloro-3-methylphenol	**1.03**	**1.04**	1.33	1.33	77	78	54 - 104	1	28	
Acenaphthene	**0.509**	**0.516**	0.667	0.667	76	77	52 - 103	1	30	
4-Nitrophenol	**1.04**	**1.12**	1.33	1.33	78	84	51 - 125	7	25	
2,4-Dinitrotoluene	**0.493**	**0.519**	0.667	0.667	74	78	53 - 118	5	29	
Pentachlorophenol	**0.611**	**0.751**	1.33	1.33	46	56	25 - 141	21	28	
Pyrene	**0.508**	**0.509**	0.667	0.667	76	76	57 - 120	0	22	
Surrogate:										
2-Fluorophenol					*76*	*75*	*24 - 117*			
Phenol-d6					*78*	*77*	*30 - 120*			
Nitrobenzene-d5					*69*	*71*	*27 - 112*			
2-Fluorobiphenyl					*82*	*84*	*35 - 113*			
2,4,6-Tribromophenol					*68*	*68*	*21 - 120*			
Terphenyl-d14					*73*	*75*	*39 - 121*			

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SEMIVOLATILES EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1027S2									
	SB	SBD	SB	SBD	SB	SBD				
Phenol	**0.931**	**0.745**	1.33	1.33	70	56	41 - 110	22	36	
2-Chlorophenol	**0.897**	**0.711**	1.33	1.33	67	53	42 - 112	23	39	
1,4-Dichlorobenzene	**0.371**	**0.250**	0.667	0.667	56	37	37 - 104	39	39	
n-Nitroso-di-n-propylamine	**0.409**	**0.322**	0.667	0.667	61	48	39 - 102	24	34	
1,2,4-Trichlorobenzene	**0.383**	**0.278**	0.667	0.667	57	42	34 - 107	32	37	
4-Chloro-3-methylphenol	**1.01**	**0.900**	1.33	1.33	76	68	54 - 104	12	28	
Acenaphthene	**0.494**	**0.414**	0.667	0.667	74	62	52 - 103	18	30	
4-Nitrophenol	**1.22**	**1.06**	1.33	1.33	92	80	51 - 125	14	25	
2,4-Dinitrotoluene	**0.514**	**0.448**	0.667	0.667	77	67	53 - 118	14	29	
Pentachlorophenol	**0.996**	**0.890**	1.33	1.33	75	67	25 - 141	11	28	
Pyrene	**0.513**	**0.469**	0.667	0.667	77	70	57 - 120	9	22	
Surrogate:										
2-Fluorophenol					*63*	*49*	*24 - 117*			
Phenol-d6					*70*	*56*	*30 - 120*			
Nitrobenzene-d5					*62*	*49*	*27 - 112*			
2-Fluorobiphenyl					*78*	*63*	*35 - 113*			
2,4,6-Tribromophenol					*70*	*61*	*21 - 120*			
Terphenyl-d14					*75*	*66*	*39 - 121*			

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T1-10**					
Laboratory ID:	10-176-05					
Naphthalene	**0.026**	0.0092	EPA 8270D/SIM	10-27-15	10-27-15	
2-Methylnaphthalene	**ND**	0.0092	EPA 8270D/SIM	10-27-15	10-27-15	
1-Methylnaphthalene	**ND**	0.0092	EPA 8270D/SIM	10-27-15	10-27-15	
Acenaphthylene	**ND**	0.0092	EPA 8270D/SIM	10-27-15	10-27-15	
Acenaphthene	**0.037**	0.0092	EPA 8270D/SIM	10-27-15	10-27-15	
Fluorene	**0.060**	0.0092	EPA 8270D/SIM	10-27-15	10-27-15	
Phenanthrene	**1.6**	0.18	EPA 8270D/SIM	10-27-15	10-27-15	
Anthracene	**0.30**	0.18	EPA 8270D/SIM	10-27-15	10-27-15	
Fluoranthene	**9.9**	0.18	EPA 8270D/SIM	10-27-15	10-27-15	
Pyrene	**6.9**	0.18	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[a]anthracene	**6.9**	0.18	EPA 8270D/SIM	10-27-15	10-27-15	
Chrysene	**6.2**	0.18	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[b]fluoranthene	**8.0**	0.18	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo(j,k)fluoranthene	**2.6**	0.18	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[a]pyrene	**4.8**	0.18	EPA 8270D/SIM	10-27-15	10-27-15	
Indeno(1,2,3-c,d)pyrene	**2.8**	0.18	EPA 8270D/SIM	10-27-15	10-27-15	
Dibenz[a,h]anthracene	**0.79**	0.18	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[g,h,i]perylene	**2.5**	0.18	EPA 8270D/SIM	10-27-15	10-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*73*	*32 - 115*				
Pyrene-d10	*89*	*30 - 124*				
Terphenyl-d14	*108*	*30 - 117*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T1-30**					
Laboratory ID:	10-176-07					
Naphthalene	**0.030**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
2-Methylnaphthalene	**0.014**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
1-Methylnaphthalene	**0.015**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
Acenaphthylene	**ND**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
Acenaphthene	**ND**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
Fluorene	**0.010**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
Phenanthrene	**0.044**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
Anthracene	**ND**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
Fluoranthene	**0.053**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
Pyrene	**0.041**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[a]anthracene	**0.027**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
Chrysene	**0.032**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[b]fluoranthene	**0.030**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo(j,k)fluoranthene	**0.0095**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[a]pyrene	**0.013**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
Dibenz[a,h]anthracene	**ND**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[g,h,i]perylene	**ND**	0.0089	EPA 8270D/SIM	10-27-15	10-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*68*	*32 - 115*				
Pyrene-d10	*76*	*30 - 124*				
Terphenyl-d14	*100*	*30 - 117*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T2-10**					
Laboratory ID:	10-176-13					
Naphthalene	**0.038**	0.0078	EPA 8270D/SIM	10-26-15	10-27-15	
2-Methylnaphthalene	**0.012**	0.0078	EPA 8270D/SIM	10-26-15	10-27-15	
1-Methylnaphthalene	**0.011**	0.0078	EPA 8270D/SIM	10-26-15	10-27-15	
Acenaphthylene	**ND**	0.0078	EPA 8270D/SIM	10-26-15	10-27-15	
Acenaphthene	**0.014**	0.0078	EPA 8270D/SIM	10-26-15	10-27-15	
Fluorene	**0.011**	0.0078	EPA 8270D/SIM	10-26-15	10-27-15	
Phenanthrene	**0.15**	0.0078	EPA 8270D/SIM	10-26-15	10-27-15	
Anthracene	**0.050**	0.0078	EPA 8270D/SIM	10-26-15	10-27-15	
Fluoranthene	**1.0**	0.078	EPA 8270D/SIM	10-27-15	10-27-15	
Pyrene	**0.75**	0.078	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[a]anthracene	**1.4**	0.078	EPA 8270D/SIM	10-27-15	10-27-15	
Chrysene	**1.7**	0.078	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[b]fluoranthene	**3.5**	0.078	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo(j,k)fluoranthene	**1.0**	0.078	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[a]pyrene	**1.9**	0.078	EPA 8270D/SIM	10-27-15	10-27-15	
Indeno(1,2,3-c,d)pyrene	**1.7**	0.078	EPA 8270D/SIM	10-27-15	10-27-15	
Dibenz[a,h]anthracene	**0.47**	0.078	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[g,h,i]perylene	**1.6**	0.078	EPA 8270D/SIM	10-27-15	10-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*62*	*32 - 115*				
Pyrene-d10	*73*	*30 - 124*				
Terphenyl-d14	*69*	*30 - 117*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T2-30**					
Laboratory ID:	10-176-15					
Naphthalene	**0.058**	0.0089	EPA 8270D/SIM	10-26-15	10-27-15	
2-Methylnaphthalene	**0.019**	0.0089	EPA 8270D/SIM	10-26-15	10-27-15	
1-Methylnaphthalene	**0.016**	0.0089	EPA 8270D/SIM	10-26-15	10-27-15	
Acenaphthylene	**ND**	0.0089	EPA 8270D/SIM	10-26-15	10-27-15	
Acenaphthene	**0.018**	0.0089	EPA 8270D/SIM	10-26-15	10-27-15	
Fluorene	**0.027**	0.0089	EPA 8270D/SIM	10-26-15	10-27-15	
Phenanthrene	**0.43**	0.0089	EPA 8270D/SIM	10-26-15	10-27-15	
Anthracene	**0.12**	0.0089	EPA 8270D/SIM	10-26-15	10-27-15	
Fluoranthene	**1.5**	0.018	EPA 8270D/SIM	10-27-15	10-27-15	
Pyrene	**1.2**	0.018	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[a]anthracene	**0.85**	0.0089	EPA 8270D/SIM	10-26-15	10-27-15	
Chrysene	**0.83**	0.0089	EPA 8270D/SIM	10-26-15	10-27-15	
Benzo[b]fluoranthene	**0.85**	0.0089	EPA 8270D/SIM	10-26-15	10-27-15	
Benzo(j,k)fluoranthene	**0.30**	0.0089	EPA 8270D/SIM	10-26-15	10-27-15	
Benzo[a]pyrene	**0.51**	0.0089	EPA 8270D/SIM	10-26-15	10-27-15	
Indeno(1,2,3-c,d)pyrene	**0.30**	0.0089	EPA 8270D/SIM	10-26-15	10-27-15	
Dibenz[a,h]anthracene	**0.088**	0.0089	EPA 8270D/SIM	10-26-15	10-27-15	
Benzo[g,h,i]perylene	**0.24**	0.0089	EPA 8270D/SIM	10-26-15	10-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*46*	*32 - 115*				
Pyrene-d10	*62*	*30 - 124*				
Terphenyl-d14	*63*	*30 - 117*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T3-20**					
Laboratory ID:	10-176-20					
Naphthalene	**0.014**	0.0085	EPA 8270D/SIM	10-27-15	10-28-15	
2-Methylnaphthalene	**ND**	0.0085	EPA 8270D/SIM	10-27-15	10-28-15	
1-Methylnaphthalene	**ND**	0.0085	EPA 8270D/SIM	10-27-15	10-28-15	
Acenaphthylene	**ND**	0.0085	EPA 8270D/SIM	10-27-15	10-28-15	
Acenaphthene	**0.0096**	0.0085	EPA 8270D/SIM	10-27-15	10-28-15	
Fluorene	**0.012**	0.0085	EPA 8270D/SIM	10-27-15	10-28-15	
Phenanthrene	**0.30**	0.0085	EPA 8270D/SIM	10-27-15	10-28-15	
Anthracene	**0.085**	0.0085	EPA 8270D/SIM	10-27-15	10-28-15	
Fluoranthene	**1.4**	0.085	EPA 8270D/SIM	10-27-15	10-28-15	
Pyrene	**0.81**	0.0085	EPA 8270D/SIM	10-27-15	10-28-15	
Benzo[a]anthracene	**0.97**	0.0085	EPA 8270D/SIM	10-27-15	10-28-15	
Chrysene	**1.4**	0.085	EPA 8270D/SIM	10-27-15	10-28-15	
Benzo[b]fluoranthene	**1.5**	0.085	EPA 8270D/SIM	10-27-15	10-28-15	
Benzo(j,k)fluoranthene	**0.40**	0.0085	EPA 8270D/SIM	10-27-15	10-28-15	
Benzo[a]pyrene	**0.91**	0.0085	EPA 8270D/SIM	10-27-15	10-28-15	
Indeno(1,2,3-c,d)pyrene	**0.83**	0.0085	EPA 8270D/SIM	10-27-15	10-28-15	
Dibenz[a,h]anthracene	**0.23**	0.0085	EPA 8270D/SIM	10-27-15	10-28-15	
Benzo[g,h,i]perylene	**0.63**	0.0085	EPA 8270D/SIM	10-27-15	10-28-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*69*	*32 - 115*				
Pyrene-d10	*81*	*30 - 124*				
Terphenyl-d14	*92*	*30 - 117*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-BG**					
Laboratory ID:	10-176-21					
Naphthalene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
2-Methylnaphthalene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
1-Methylnaphthalene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
Acenaphthylene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
Acenaphthene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
Fluorene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
Phenanthrene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
Anthracene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
Fluoranthene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
Pyrene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
Benzo[a]anthracene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
Chrysene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
Benzo[b]fluoranthene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
Benzo(j,k)fluoranthene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
Benzo[a]pyrene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
Dibenz[a,h]anthracene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
Benzo[g,h,i]perylene	**ND**	0.0097	EPA 8270D/SIM	10-26-15	10-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*46*	*32 - 115*				
Pyrene-d10	*64*	*30 - 124*				
Terphenyl-d14	*70*	*30 - 117*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1026S1					
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	10-26-15	10-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*82*	*32 - 115*				
Pyrene-d10	*87*	*30 - 124*				
Terphenyl-d14	*112*	*30 - 117*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1027S1					
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	10-27-15	10-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*76*	*32 - 115*				
Pyrene-d10	*108*	*30 - 124*				
Terphenyl-d14	*106*	*30 - 117*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1026S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0758**	**0.0724**	0.0833	0.0833	91	87	61 - 112	5	15	
Acenaphthylene	**0.0708**	**0.0671**	0.0833	0.0833	85	81	65 - 116	5	15	
Acenaphthene	**0.0699**	**0.0671**	0.0833	0.0833	84	81	62 - 116	4	13	
Fluorene	**0.0815**	**0.0772**	0.0833	0.0833	98	93	60 - 115	5	12	
Phenanthrene	**0.0773**	**0.0720**	0.0833	0.0833	93	86	54 - 114	7	12	
Anthracene	**0.0909**	**0.0843**	0.0833	0.0833	109	101	70 - 140	8	12	
Fluoranthene	**0.0804**	**0.0739**	0.0833	0.0833	97	89	60 - 115	8	11	
Pyrene	**0.0738**	**0.0695**	0.0833	0.0833	89	83	65 - 115	6	11	
Benzo[a]anthracene	**0.0921**	**0.0856**	0.0833	0.0833	111	103	59 - 129	7	15	
Chrysene	**0.0793**	**0.0736**	0.0833	0.0833	95	88	60 - 122	7	12	
Benzo[b]fluoranthene	**0.0766**	**0.0786**	0.0833	0.0833	92	94	53 - 124	3	17	
Benzo(j,k)fluoranthene	**0.0747**	**0.0789**	0.0833	0.0833	90	95	58 - 124	5	16	
Benzo[a]pyrene	**0.0814**	**0.0888**	0.0833	0.0833	98	107	62 - 127	9	12	
Indeno(1,2,3-c,d)pyrene	**0.0825**	**0.0732**	0.0833	0.0833	99	88	60 - 117	12	12	
Dibenz[a,h]anthracene	**0.0810**	**0.0737**	0.0833	0.0833	97	88	60 - 117	9	12	
Benzo[g,h,i]perylene	**0.0777**	**0.0741**	0.0833	0.0833	93	89	63 - 117	5	12	
Surrogate:										
2-Fluorobiphenyl					*78*	*74*	*32 - 115*			
Pyrene-d10					*92*	*86*	*30 - 124*			
Terphenyl-d14					*92*	*85*	*30 - 117*			

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1027S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0738**	**0.0702**	0.0833	0.0833	89	84	61 - 112	5	15	
Acenaphthylene	**0.0699**	**0.0703**	0.0833	0.0833	84	84	65 - 116	1	15	
Acenaphthene	**0.0691**	**0.0671**	0.0833	0.0833	83	81	62 - 116	3	13	
Fluorene	**0.0863**	**0.0829**	0.0833	0.0833	104	100	60 - 115	4	12	
Phenanthrene	**0.0795**	**0.0773**	0.0833	0.0833	95	93	54 - 114	3	12	
Anthracene	**0.0862**	**0.0845**	0.0833	0.0833	103	101	70 - 140	2	12	
Fluoranthene	**0.0833**	**0.0856**	0.0833	0.0833	100	103	60 - 115	3	11	
Pyrene	**0.0780**	**0.0827**	0.0833	0.0833	94	99	65 - 115	6	11	
Benzo[a]anthracene	**0.0927**	**0.0917**	0.0833	0.0833	111	110	59 - 129	1	15	
Chrysene	**0.0833**	**0.0806**	0.0833	0.0833	100	97	60 - 122	3	12	
Benzo[b]fluoranthene	**0.0771**	**0.0818**	0.0833	0.0833	93	98	53 - 124	6	17	
Benzo(j,k)fluoranthene	**0.0715**	**0.0839**	0.0833	0.0833	86	101	58 - 124	16	16	
Benzo[a]pyrene	**0.0727**	**0.0738**	0.0833	0.0833	87	89	62 - 127	2	12	
Indeno(1,2,3-c,d)pyrene	**0.0860**	**0.0842**	0.0833	0.0833	103	101	60 - 117	2	12	
Dibenz[a,h]anthracene	**0.0864**	**0.0853**	0.0833	0.0833	104	102	60 - 117	1	12	
Benzo[g,h,i]perylene	**0.0825**	**0.0836**	0.0833	0.0833	99	100	63 - 117	1	12	
Surrogate:										
2-Fluorobiphenyl					*77*	*75*	*32 - 115*			
Pyrene-d10					*96*	*101*	*30 - 124*			
Terphenyl-d14					*86*	*95*	*30 - 117*			

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-WT1**					
Laboratory ID:	10-176-01					
Naphthalene	**ND**	0.096	EPA 8270D/SIM	10-27-15	10-28-15	
2-Methylnaphthalene	**ND**	0.096	EPA 8270D/SIM	10-27-15	10-28-15	
1-Methylnaphthalene	**ND**	0.096	EPA 8270D/SIM	10-27-15	10-28-15	
Acenaphthylene	**ND**	0.096	EPA 8270D/SIM	10-27-15	10-28-15	
Acenaphthene	**ND**	0.096	EPA 8270D/SIM	10-27-15	10-28-15	
Fluorene	**ND**	0.096	EPA 8270D/SIM	10-27-15	10-28-15	
Phenanthrene	**ND**	0.096	EPA 8270D/SIM	10-27-15	10-28-15	
Anthracene	**ND**	0.096	EPA 8270D/SIM	10-27-15	10-28-15	
Fluoranthene	**ND**	0.096	EPA 8270D/SIM	10-27-15	10-28-15	
Pyrene	**ND**	0.096	EPA 8270D/SIM	10-27-15	10-28-15	
Benzo[a]anthracene	**0.029**	0.0096	EPA 8270D/SIM	10-27-15	10-28-15	
Chrysene	**0.025**	0.0096	EPA 8270D/SIM	10-27-15	10-28-15	
Benzo[b]fluoranthene	**0.018**	0.0096	EPA 8270D/SIM	10-27-15	10-28-15	
Benzo(j,k)fluoranthene	**0.012**	0.0096	EPA 8270D/SIM	10-27-15	10-28-15	
Benzo[a]pyrene	**ND**	0.0096	EPA 8270D/SIM	10-27-15	10-28-15	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0096	EPA 8270D/SIM	10-27-15	10-28-15	
Dibenz[a,h]anthracene	**ND**	0.0096	EPA 8270D/SIM	10-27-15	10-28-15	
Benzo[g,h,i]perylene	**0.011**	0.0096	EPA 8270D/SIM	10-27-15	10-28-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*70*	*33 - 117*				
Pyrene-d10	*77*	*35 - 140*				
Terphenyl-d14	*71*	*33 - 117*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1027W1					
Naphthalene	**ND**	0.10	EPA 8270D/SIM	10-27-15	10-28-15	
2-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	10-27-15	10-28-15	
1-Methylnaphthalene	**ND**	0.10	EPA 8270D/SIM	10-27-15	10-28-15	
Acenaphthylene	**ND**	0.10	EPA 8270D/SIM	10-27-15	10-28-15	
Acenaphthene	**ND**	0.10	EPA 8270D/SIM	10-27-15	10-28-15	
Fluorene	**ND**	0.10	EPA 8270D/SIM	10-27-15	10-28-15	
Phenanthrene	**ND**	0.10	EPA 8270D/SIM	10-27-15	10-28-15	
Anthracene	**ND**	0.10	EPA 8270D/SIM	10-27-15	10-28-15	
Fluoranthene	**ND**	0.10	EPA 8270D/SIM	10-27-15	10-28-15	
Pyrene	**ND**	0.10	EPA 8270D/SIM	10-27-15	10-28-15	
Benzo[a]anthracene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-28-15	
Chrysene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-28-15	
Benzo[b]fluoranthene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-28-15	
Benzo(j,k)fluoranthene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-28-15	
Benzo[a]pyrene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-28-15	
Indeno(1,2,3-c,d)pyrene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-28-15	
Dibenz[a,h]anthracene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-28-15	
Benzo[g,h,i]perylene	**ND**	0.010	EPA 8270D/SIM	10-27-15	10-28-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*59*	*33 - 117*				
Pyrene-d10	*79*	*35 - 140*				
Terphenyl-d14	*82*	*33 - 117*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1027W1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.271**	**0.310**	0.500	0.500	54	62	46 - 99	13	37	
Acenaphthylene	**0.307**	**0.352**	0.500	0.500	61	70	37 - 116	14	26	
Acenaphthene	**0.294**	**0.313**	0.500	0.500	59	63	51 - 106	6	30	
Fluorene	**0.347**	**0.396**	0.500	0.500	69	79	55 - 108	13	31	
Phenanthrene	**0.368**	**0.415**	0.500	0.500	74	83	53 - 107	12	30	
Anthracene	**0.371**	**0.484**	0.500	0.500	74	97	52 - 140	26	27	
Fluoranthene	**0.342**	**0.432**	0.500	0.500	68	86	62 - 112	23	24	
Pyrene	**0.316**	**0.408**	0.500	0.500	63	82	59 - 118	25	28	
Benzo[a]anthracene	**0.495**	**0.502**	0.500	0.500	99	100	58 - 132	1	26	
Chrysene	**0.389**	**0.433**	0.500	0.500	78	87	63 - 113	11	25	
Benzo[b]fluoranthene	**0.397**	**0.434**	0.500	0.500	79	87	56 - 124	9	27	
Benzo(j,k)fluoranthene	**0.403**	**0.429**	0.500	0.500	81	86	62 - 121	6	31	
Benzo[a]pyrene	**0.383**	**0.424**	0.500	0.500	77	85	50 - 131	10	25	
Indeno(1,2,3-c,d)pyrene	**0.388**	**0.462**	0.500	0.500	78	92	60 - 120	17	26	
Dibenz[a,h]anthracene	**0.393**	**0.471**	0.500	0.500	79	94	61 - 115	18	26	
Benzo[g,h,i]perylene	**0.371**	**0.452**	0.500	0.500	74	90	60 - 116	20	26	
Surrogate:										
2-Fluorobiphenyl					*56*	*57*	*33 - 117*			
Pyrene-d10					*70*	*84*	*35 - 140*			
Terphenyl-d14					*87*	*89*	*33 - 117*			

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-176-02					
Client ID:	**HC-LC-T1-(-5)**					
Arsenic	**25**	12	6010C	10-23-15	10-23-15	
Barium	**78**	2.9	6010C	10-23-15	10-23-15	
Cadmium	**ND**	0.59	6010C	10-23-15	10-23-15	
Chromium	**34**	0.59	6010C	10-23-15	10-23-15	
Lead	**26**	5.9	6010C	10-23-15	10-23-15	
Mercury	**ND**	0.29	7471B	10-23-15	10-23-15	
Selenium	**ND**	12	6010C	10-23-15	10-23-15	
Silver	**ND**	1.2	6010C	10-23-15	10-23-15	
Lab ID:	10-176-04					
Client ID:	**HC-LC-T1-5**					
Arsenic	**ND**	15	6010C	10-23-15	10-23-15	
Barium	**120**	3.6	6010C	10-23-15	10-23-15	
Cadmium	**ND**	0.73	6010C	10-23-15	10-23-15	
Chromium	**45**	0.73	6010C	10-23-15	10-23-15	
Lead	**28**	7.3	6010C	10-23-15	10-23-15	
Mercury	**ND**	0.36	7471B	10-23-15	10-23-15	
Selenium	**ND**	15	6010C	10-23-15	10-23-15	
Silver	**ND**	1.5	6010C	10-23-15	10-23-15	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-176-05					
Client ID:	**HC-LC-T1-10**					
Arsenic	**26**	14	6010C	10-23-15	10-23-15	
Barium	**130**	3.5	6010C	10-23-15	10-23-15	
Cadmium	**ND**	0.69	6010C	10-23-15	10-23-15	
Chromium	**38**	0.69	6010C	10-23-15	10-23-15	
Lead	**39**	6.9	6010C	10-23-15	10-23-15	
Mercury	**ND**	0.35	7471B	10-23-15	10-23-15	
Selenium	**ND**	14	6010C	10-23-15	10-23-15	
Silver	**ND**	1.4	6010C	10-23-15	10-23-15	
Lab ID:	10-176-07					
Client ID:	**HC-LC-T1-30**					
Arsenic	**ND**	13	6010C	10-23-15	10-23-15	
Barium	**46**	3.4	6010C	10-23-15	10-23-15	
Cadmium	**ND**	0.67	6010C	10-23-15	10-23-15	
Chromium	**6.8**	0.67	6010C	10-23-15	10-23-15	
Lead	**13**	6.7	6010C	10-23-15	10-23-15	
Mercury	**ND**	0.34	7471B	10-23-15	10-23-15	
Selenium	**ND**	13	6010C	10-23-15	10-23-15	
Silver	**ND**	1.3	6010C	10-23-15	10-23-15	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-176-10					
Client ID:	**HC-LC-T2-(-5)**					
Arsenic	**ND**	13	6010C	10-23-15	10-23-15	
Barium	**150**	3.2	6010C	10-23-15	10-23-15	
Cadmium	**ND**	0.64	6010C	10-23-15	10-23-15	
Chromium	**62**	0.64	6010C	10-23-15	10-23-15	
Lead	**16**	6.4	6010C	10-23-15	10-23-15	
Mercury	**ND**	0.32	7471B	10-23-15	10-23-15	
Selenium	**ND**	13	6010C	10-23-15	10-23-15	
Silver	**ND**	1.3	6010C	10-23-15	10-23-15	
Lab ID:	10-176-12					
Client ID:	**HC-LC-T2-5**					
Arsenic	**ND**	16	6010C	10-23-15	10-23-15	
Barium	**210**	3.9	6010C	10-23-15	10-23-15	
Cadmium	**ND**	0.78	6010C	10-23-15	10-23-15	
Chromium	**69**	0.78	6010C	10-23-15	10-23-15	
Lead	**79**	7.8	6010C	10-23-15	10-23-15	
Mercury	**ND**	0.39	7471B	10-23-15	10-23-15	
Selenium	**ND**	16	6010C	10-23-15	10-23-15	
Silver	**ND**	1.6	6010C	10-23-15	10-23-15	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-176-15					
Client ID:	**HC-LC-T2-30**					
Arsenic	**ND**	13	6010C	10-23-15	10-23-15	
Barium	**150**	3.3	6010C	10-23-15	10-23-15	
Cadmium	**ND**	0.67	6010C	10-23-15	10-23-15	
Chromium	**19**	0.67	6010C	10-23-15	10-23-15	
Lead	**24**	6.7	6010C	10-23-15	10-23-15	
Mercury	**ND**	0.33	7471B	10-23-15	10-23-15	
Selenium	**ND**	13	6010C	10-23-15	10-23-15	
Silver	**ND**	1.3	6010C	10-23-15	10-23-15	
Lab ID:	10-176-18					
Client ID:	**HC-LC-T3-5**					
Arsenic	**ND**	11	6010C	10-23-15	10-23-15	
Barium	**68**	2.7	6010C	10-23-15	10-23-15	
Cadmium	**ND**	0.54	6010C	10-23-15	10-23-15	
Chromium	**22**	0.54	6010C	10-23-15	10-23-15	
Lead	**12**	5.4	6010C	10-23-15	10-23-15	
Mercury	**ND**	0.27	7471B	10-23-15	10-23-15	
Selenium	**ND**	11	6010C	10-23-15	10-23-15	
Silver	**ND**	1.1	6010C	10-23-15	10-23-15	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-176-20					
Client ID:	**HC-LC-T3-20**					
Arsenic	**ND**	13	6010C	10-23-15	10-23-15	
Barium	**110**	3.2	6010C	10-23-15	10-23-15	
Cadmium	**ND**	0.64	6010C	10-23-15	10-23-15	
Chromium	**30**	0.64	6010C	10-23-15	10-23-15	
Lead	**16**	6.4	6010C	10-23-15	10-23-15	
Mercury	**ND**	0.32	7471B	10-23-15	10-23-15	
Selenium	**ND**	13	6010C	10-23-15	10-23-15	
Silver	**ND**	1.3	6010C	10-23-15	10-23-15	
Lab ID:	10-176-21					
Client ID:	**HC-LC-BG**					
Arsenic	**ND**	15	6010C	10-23-15	10-23-15	
Barium	**260**	3.6	6010C	10-23-15	10-23-15	
Cadmium	**ND**	0.73	6010C	10-23-15	10-23-15	
Chromium	**33**	0.73	6010C	10-23-15	10-23-15	
Lead	**8.9**	7.3	6010C	10-23-15	10-23-15	
Mercury	**ND**	0.36	7471B	10-23-15	10-23-15	
Selenium	**ND**	15	6010C	10-23-15	10-23-15	
Silver	**ND**	1.5	6010C	10-23-15	10-23-15	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 6010C/7471B
METHOD BLANK QUALITY CONTROL

Date Extracted: 10-23-15
Date Analyzed: 10-23-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB1023SM2&MB1023S1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Barium	6010C	**ND**	2.5
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Mercury	7471B	**ND**	0.25
Selenium	6010C	**ND**	10
Silver	6010C	**ND**	1.0

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 6010C/7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 10-23-15
Date Analyzed: 10-23-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-088-09

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**76.7**	**86.9**	12	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**28.4**	**32.8**	14	0.50	
Lead	**97.3**	**95.8**	2	5.0	
Mercury	**ND**	**ND**	NA	0.25	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 6010C/7471B
MS/MSD QUALITY CONTROL

Date Extracted: 10-23-15
Date Analyzed: 10-23-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-088-09

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**99.3**	99	**101**	101	1	
Barium	100	**194**	117	**185**	109	4	
Cadmium	50.0	**48.6**	97	**50.4**	101	4	
Chromium	100	**130**	102	**125**	96	4	
Lead	250	**382**	114	**380**	113	0	
Mercury	0.500	**0.562**	112	**0.554**	111	1	
Selenium	100	**93.2**	93	**96.3**	96	3	
Silver	25.0	**22.7**	91	**22.7**	91	0	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 6010C/7471B
SPIKE BLANK QUALITY CONTROL

Date Extracted: 10-23-15
Date Analyzed: 10-23-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: SB1023SM2&SB1023S1

Analyte	Method	Spike Level	SB Result	Percent Recovery
Arsenic	6010C	100	**104**	104
Barium	6010C	100	**101**	101
Cadmium	6010C	50.0	**51.2**	102
Chromium	6010C	100	**102**	102
Lead	6010C	250	**264**	106
Mercury	7471B	0.500	**0.504**	101
Selenium	6010C	100	**99.3**	99
Silver	6010C	25.0	**26.1**	104

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-176-01 Comp.					
Client ID:	**HC-LC-WT1**					
Arsenic	**21**	3.3	200.8	10-27-15	10-27-15	
Barium	**110**	28	200.8	10-27-15	10-27-15	
Cadmium	**ND**	4.4	200.8	10-27-15	10-27-15	
Chromium	**58**	11	200.8	10-27-15	10-27-15	
Lead	**30**	1.1	200.8	10-27-15	10-27-15	
Mercury	**ND**	0.50	7470A	10-27-15	10-27-15	
Selenium	**ND**	5.6	200.8	10-27-15	10-27-15	
Silver	**ND**	11	200.8	10-27-15	10-27-15	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted: 10-27-15
Date Analyzed: 10-27-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB1027WM1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.3
Barium	200.8	**ND**	28
Cadmium	200.8	**ND**	4.4
Chromium	200.8	**ND**	11
Lead	200.8	**ND**	1.1
Selenium	200.8	**ND**	5.6
Silver	200.8	**ND**	11

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL MERCURY
EPA 7470A
METHOD BLANK QUALITY CONTROL

Date Extracted: 10-27-15
Date Analyzed: 10-27-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB1027W1

Analyte	Method	Result	PQL
Mercury	7470A	**ND**	0.50

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Extracted: 10-27-15
Date Analyzed: 10-27-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: 10-188-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	3.3	
Barium	**ND**	**ND**	NA	28	
Cadmium	**ND**	**ND**	NA	4.4	
Chromium	**ND**	**ND**	NA	11	
Lead	**ND**	**ND**	NA	1.1	
Selenium	**ND**	**ND**	NA	5.6	
Silver	**ND**	**ND**	NA	11	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL MERCURY
EPA 7470A
DUPLICATE QUALITY CONTROL

Date Extracted: 10-27-15
Date Analyzed: 10-27-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: 10-182-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.50	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 10-27-15
Date Analyzed: 10-27-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: 10-188-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	111	**120**	108	**119**	107	1	
Barium	111	**129**	116	**119**	108	7	
Cadmium	111	**123**	111	**119**	107	4	
Chromium	111	**117**	105	**113**	102	3	
Lead	111	**116**	104	**109**	98	6	
Selenium	111	**135**	121	**110**	99	20	
Silver	111	**113**	102	**108**	97	4	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL MERCURY
EPA 7470A
MS/MSD QUALITY CONTROL

Date Extracted: 10-27-15
Date Analyzed: 10-27-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: 10-182-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	12.5	**12.5**	100	**11.9**	95	5	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 200.8
SPIKE BLANK QUALITY CONTROL

Date Extracted: 10-27-15
Date Analyzed: 10-27-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB1027WM1

Analyte	Method	Spike Level	Result	Percent Recovery
Arsenic	200.8	111	**105**	95
Barium	200.8	111	**105**	95
Cadmium	200.8	111	**108**	97
Chromium	200.8	111	**107**	96
Lead	200.8	111	**105**	95
Selenium	200.8	111	**97.8**	88
Silver	200.8	111	**100**	90

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL MERCURY
EPA 7470A
SPIKE BLANK QUALITY CONTROL

Date Extracted: 10-27-15
Date Analyzed: 10-27-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB1027W1

Analyte	Method	Spike Level	Result	Percent Recovery
Mercury	7470A	12.5	**12.8**	102

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T1-0**					
Laboratory ID:	10-176-03					
Naphthalene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
2-Methylnaphthalene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
1-Methylnaphthalene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
Acenaphthylene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
Acenaphthene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
Fluorene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
Phenanthrene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
Anthracene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
Fluoranthene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
Pyrene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[a]anthracene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
Chrysene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[b]fluoranthene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo(j,k)fluoranthene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[a]pyrene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
Dibenz[a,h]anthracene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[g,h,i]perylene	**ND**	0.0099	EPA 8270D/SIM	11-2-15	11-2-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*60*	*32 - 115*				
Pyrene-d10	*73*	*30 - 124*				
Terphenyl-d14	*86*	*30 - 117*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T1-50**					
Laboratory ID:	10-176-09					
Naphthalene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
2-Methylnaphthalene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
1-Methylnaphthalene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
Acenaphthylene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
Acenaphthene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
Fluorene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
Phenanthrene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
Anthracene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
Fluoranthene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
Pyrene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[a]anthracene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
Chrysene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[b]fluoranthene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo(j,k)fluoranthene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[a]pyrene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
Dibenz[a,h]anthracene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[g,h,i]perylene	**ND**	0.0095	EPA 8270D/SIM	11-2-15	11-2-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*58*	*32 - 115*				
Pyrene-d10	*70*	*30 - 124*				
Terphenyl-d14	*86*	*30 - 117*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T2-0**					
Laboratory ID:	10-176-11					
Naphthalene	**0.072**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
2-Methylnaphthalene	**0.025**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
1-Methylnaphthalene	**0.017**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
Acenaphthylene	**0.0076**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
Acenaphthene	**0.0092**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
Fluorene	**0.0089**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
Phenanthrene	**0.27**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
Anthracene	**0.018**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
Fluoranthene	**0.42**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
Pyrene	**0.20**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[a]anthracene	**0.13**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
Chrysene	**0.16**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[b]fluoranthene	**0.096**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo(j,k)fluoranthene	**0.034**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[a]pyrene	**0.043**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
Indeno(1,2,3-c,d)pyrene	**0.021**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
Dibenz[a,h]anthracene	**ND**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[g,h,i]perylene	**0.026**	0.0076	EPA 8270D/SIM	11-2-15	11-2-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*64*	*32 - 115*				
Pyrene-d10	*63*	*30 - 124*				
Terphenyl-d14	*76*	*30 - 117*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**HC-LC-T2-50**					
Laboratory ID:	10-176-17					
Naphthalene	**0.016**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
2-Methylnaphthalene	**0.011**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
1-Methylnaphthalene	**0.0093**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
Acenaphthylene	**ND**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
Acenaphthene	**ND**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
Fluorene	**0.017**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
Phenanthrene	**0.047**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
Anthracene	**0.011**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
Fluoranthene	**0.085**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
Pyrene	**0.078**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[a]anthracene	**0.078**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
Chrysene	**0.075**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[b]fluoranthene	**0.085**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo(j,k)fluoranthene	**0.025**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[a]pyrene	**0.043**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
Indeno(1,2,3-c,d)pyrene	**0.030**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
Dibenz[a,h]anthracene	**0.0085**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[g,h,i]perylene	**0.029**	0.0078	EPA 8270D/SIM	11-2-15	11-2-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*60*	*32 - 115*				
Pyrene-d10	*79*	*30 - 124*				
Terphenyl-d14	*102*	*30 - 117*				

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1102S1					
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	11-2-15	11-2-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*66*	*32 - 115*				
Pyrene-d10	*77*	*30 - 124*				
Terphenyl-d14	*103*	*30 - 117*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1102S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0616**	**0.0654**	0.0833	0.0833	74	79	61 - 112	6	15	
Acenaphthylene	**0.0710**	**0.0751**	0.0833	0.0833	85	90	65 - 116	6	15	
Acenaphthene	**0.0600**	**0.0622**	0.0833	0.0833	72	75	62 - 116	4	13	
Fluorene	**0.0870**	**0.0800**	0.0833	0.0833	104	96	60 - 115	8	12	
Phenanthrene	**0.0732**	**0.0739**	0.0833	0.0833	88	89	54 - 114	1	12	
Anthracene	**0.0781**	**0.0795**	0.0833	0.0833	94	95	70 - 140	2	12	
Fluoranthene	**0.0796**	**0.0762**	0.0833	0.0833	96	91	60 - 115	4	11	
Pyrene	**0.0776**	**0.0744**	0.0833	0.0833	93	89	65 - 115	4	11	
Benzo[a]anthracene	**0.0881**	**0.0867**	0.0833	0.0833	106	104	59 - 129	2	15	
Chrysene	**0.0693**	**0.0688**	0.0833	0.0833	83	83	60 - 122	1	12	
Benzo[b]fluoranthene	**0.0853**	**0.0749**	0.0833	0.0833	102	90	53 - 124	13	17	
Benzo(j,k)fluoranthene	**0.0798**	**0.0702**	0.0833	0.0833	96	84	58 - 124	13	16	
Benzo[a]pyrene	**0.0648**	**0.0632**	0.0833	0.0833	78	76	62 - 127	3	12	
Indeno(1,2,3-c,d)pyrene	**0.0785**	**0.0701**	0.0833	0.0833	94	84	60 - 117	11	12	
Dibenz[a,h]anthracene	**0.0771**	**0.0737**	0.0833	0.0833	93	88	60 - 117	5	12	
Benzo[g,h,i]perylene	**0.0697**	**0.0704**	0.0833	0.0833	84	85	63 - 117	1	12	
Surrogate:										
2-Fluorobiphenyl					*67*	*65*	*32 - 115*			
Pyrene-d10					*90*	*90*	*30 - 124*			
Terphenyl-d14					*88*	*89*	*30 - 117*			

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-176-03					
Client ID:	**HC-LC-T1-0**					
Arsenic	**20**	15	6010C	10-29-15	10-29-15	
Barium	**130**	3.7	6010C	10-29-15	10-29-15	
Cadmium	**ND**	0.74	6010C	10-29-15	10-29-15	
Chromium	**45**	0.74	6010C	10-29-15	10-29-15	
Lead	**27**	7.4	6010C	10-29-15	10-29-15	
Mercury	**ND**	0.37	7471B	11-3-15	11-3-15	
Selenium	**ND**	15	6010C	10-29-15	10-29-15	
Silver	**ND**	1.5	6010C	10-29-15	10-29-15	
Lab ID:	10-176-09					
Client ID:	**HC-LC-T1-50**					
Arsenic	**ND**	14	6010C	10-29-15	10-29-15	
Barium	**66**	3.6	6010C	10-29-15	10-29-15	
Cadmium	**ND**	0.71	6010C	10-29-15	10-29-15	
Chromium	**4.7**	0.71	6010C	10-29-15	10-29-15	
Lead	**13**	7.1	6010C	10-29-15	10-29-15	
Mercury	**ND**	0.36	7471B	11-3-15	11-3-15	
Selenium	**ND**	14	6010C	10-29-15	10-29-15	
Silver	**ND**	1.4	6010C	10-29-15	10-29-15	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-176-11					
Client ID:	**HC-LC-T2-0**					
Arsenic	**34**	11	6010C	10-29-15	10-29-15	
Barium	**82**	2.9	6010C	10-29-15	10-29-15	
Cadmium	**ND**	0.57	6010C	10-29-15	10-29-15	
Chromium	**69**	0.57	6010C	10-29-15	10-29-15	
Lead	**140**	5.7	6010C	10-29-15	10-29-15	
Mercury	**ND**	0.29	7471B	11-3-15	11-3-15	
Selenium	**ND**	11	6010C	10-29-15	10-29-15	
Silver	**ND**	1.1	6010C	10-29-15	10-29-15	
Lab ID:	10-176-17					
Client ID:	**HC-LC-T2-50**					
Arsenic	**ND**	12	6010C	10-29-15	10-29-15	
Barium	**96**	2.9	6010C	10-29-15	10-29-15	
Cadmium	**ND**	0.59	6010C	10-29-15	10-29-15	
Chromium	**20**	0.59	6010C	10-29-15	10-29-15	
Lead	**14**	5.9	6010C	10-29-15	10-29-15	
Mercury	**ND**	0.29	7471B	11-3-15	11-3-15	
Selenium	**ND**	12	6010C	10-29-15	10-29-15	
Silver	**ND**	1.2	6010C	10-29-15	10-29-15	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted: 10-29-15
Date Analyzed: 10-29-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB1029SM1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Barium	6010C	**ND**	2.5
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Selenium	6010C	**ND**	10
Silver	6010C	**ND**	1.0

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL MERCURY
EPA 7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	11-3-15
Date Analyzed:	11-3-15
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1103S1

Analyte	Method	Result	PQL
Mercury	7471B	**ND**	0.25

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 10-29-15
Date Analyzed: 10-29-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-230-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**96.2**	**95.1**	1	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**32.5**	**30.4**	7	0.50	
Lead	**21.3**	**19.6**	8	5.0	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL MERCURY
EPA 7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 11-3-15
Date Analyzed: 11-3-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-255-08

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.25	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 10-29-15
Date Analyzed: 10-29-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-230-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**107**	107	**105**	105	2	
Barium	100	**201**	105	**204**	108	2	
Cadmium	50.0	**50.6**	101	**50.1**	100	1	
Chromium	100	**128**	96	**127**	95	1	
Lead	250	**275**	101	**272**	100	1	
Selenium	100	**103**	103	**99.2**	99	4	
Silver	25.0	**23.3**	93	**23.6**	94	2	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL MERCURY
EPA 7471B
MS/MSD QUALITY CONTROL

Date Extracted: 11-3-15
Date Analyzed: 11-3-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-255-08

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.500	**0.500**	100	**0.505**	101	1	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL METALS
EPA 6010C
SPIKE BLANK QUALITY CONTROL

Date Extracted: 10-29-15
Date Analyzed: 10-29-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: SB1029SM1

Analyte	Method	Spike Level	SB Result	Percent Recovery
Arsenic	6010C	100	**104**	104
Barium	6010C	100	**103**	103
Cadmium	6010C	50.0	**52.3**	105
Chromium	6010C	100	**106**	106
Lead	6010C	250	**273**	109
Selenium	6010C	100	**102**	102
Silver	6010C	25.0	**27.3**	109

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

TOTAL MERCURY
EPA 7471B
SPIKE BLANK QUALITY CONTROL

Date Extracted: 11-3-15
Date Analyzed: 11-3-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: SB1103S1

Analyte	Method	Spike Level	SB Result	Percent Recovery
Mercury	7471B	0.500	**0.543**	109

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-176-12					
Client ID:	**HC-LC-T2-5**					
Hexavalent Chromium	**ND**	1.6	7196A mod	10-30-15	10-30-15	

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
METHOD BLANK QUALITY CONTROL

Date Extracted:	10-30-15
Date Analyzed:	10-30-15
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1030S1

Analyte	Method	Result	PQL
Hexavalent Chromium	7196A mod	**ND**	1.0

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
DUPLICATE QUALITY CONTROL

Date Extracted:	10-30-15
Date Analyzed:	10-30-15
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	10-133-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Hexavalent Chromium	**ND**	**ND**	NA	1.0	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
MS/MSD QUALITY CONTROL

Date Extracted:	10-30-15
Date Analyzed:	10-30-15
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	10-133-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Hexavalent Chromium	5.00	**5.01**	100	**5.06**	101	1	

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
SPIKE BLANK QUALITY CONTROL

Date Extracted: 10-30-15
Date Analyzed: 10-30-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: SB1030S1

Analyte	Method	Spike Level	SB	Percent Recovery
Hexavalent Chromium	7196A mod	5.00	**4.99**	100

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Date of Report: November 3, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176
Project: 17843-71

% MOISTURE

Date Analyzed: 10-23&29-15

Client ID	Lab ID	% Moisture
HC-LC-T1-(-5)	10-176-02	15
HC-LC-T1-0	10-176-03	33
HC-LC-T1-5	10-176-04	31
HC-LC-T1-10	10-176-05	28
HC-LC-T1-30	10-176-07	25
HC-LC-T1-50	10-176-09	30
HC-LC-T2-(-5)	10-176-10	22
HC-LC-T2-0	10-176-11	13
HC-LC-T2-5	10-176-12	36
HC-LC-T2-10	10-176-13	15
HC-LC-T2-30	10-176-15	25
HC-LC-T2-50	10-176-17	15
HC-LC-T3-5	10-176-18	8
HC-LC-T3-20	10-176-20	22
HC-LC-BG	10-176-21	31

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Laboratory Number: 10-176

Company: HART CROWSER
Project Number: 17843-71
Project Name: LADDER CREEK
Project Manager: N. GALVIN, R. STAINSBY
Sampled by: MWG

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☒ 3 Days (SOILS)
☒ Standard (7 Days) (WATERS)
(TPH analysis 5 Days)
☐ _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
1	HC-LC-WT1	10/21/15	1217	H2O	4								X					X								
2	HC-LC-T1-(-5)		1249	SOIL								X						X								X
3	HC-LC-T1-0		1326										X					X								X
4	HC-LC-T1-5		1307									X						X								X
5	HC-LC-T1-10		1312										X					X								X
6	HC-LC-T1-20		1317																							
7	HC-LC-T1-30		1321										X					X								X
8	HC-LC-T1-40		1330																							
9	HC-LC-T1-50		1335										X					X								X
10	HC-LC-T2-(-5)		1357									X						X								X

	Signature	Company	Date	Time
Relinquished	[signature]	Hart Crowser	10/22/15	0850
Received	[signature]	OSE	10/22/15	1200
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
FOLLOW HC SAP
SCL PM: JEN KINDRED
PLEASE CC: SCL, HC w/ RESULTS
HOLD ALL ADDITIONAL VOLUME FOR FOLLOW-UP.
X Added 10/29/15 - D8 (3 day TAT)

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: HART CROWSER
Project Number: 17843-71
Project Name: (see pg. 1)
Project Manager:
Sampled by:

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☐ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-176

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Hexchrome				% Moisture
11	HC-LC-T2-0	10/21/15	1400	SOIL	1								X					X								X
12	HC-LC-T2-5		~~1415~~ 1409									X						X				X				X
13	HC-LC-T2-10		1413										X													X
14	HC-LC-T2-20		1417																							
15	HC-LC-T2-30		1420										X					X								X
16	HC-LC-T2-40		1428																							
17	HC-LC-T2-50		1448										X					X								X
18	HC-LC-T3-5		1459									X						X								X
19	HC-LC-T3-10		1510																							
20	HC-LC-T3 20		1513										X					X								X

	Signature	Company	Date	Time
Relinquished	[signature]	Hart Crowser	10/22/15	0850
Received	[signature]	OSE	10/22/15	1200
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions
(see pg. 1)

Reviewed/Date
Reviewed/Date
Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐
Electronic Data Deliverables (EDDs) ☐ _____

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: HART CROWSER
Project Number: 17843-71
Project Name: (see pg. 1)
Project Manager:
Sampled by:

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☐ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-176

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
21	HC-LC-BG	10/21/15	1627	SOIL	1								X					X								X

	Signature	Company	Date	Time
Relinquished	Natalie Glass	Hart Crowser	10/22/15	0850
Received	[illegible]	[illegible]	10/22/15	1200
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
(see pg. 1)

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

November 12, 2015

Nick Galvin
Hart Crowser, Inc.
3131 Elliott, Suite 600
Seattle, WA 98121

Re: Analytical Data for Project 17843-71
Laboratory Reference No. 1510-176B

Dear Nick:

Enclosed are the analytical results and associated quality control data for samples submitted on October 22, 2015.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 12, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176B
Project: 17843-71

Case Narrative

Samples were collected on October 21, 2015 and received by the laboratory on October 22, 2015. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 12, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176B
Project: 17843-71

DISSOLVED METALS
EPA 200.8/7470A

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-176-01					
Client ID:	**HC-LC-WT1**					
Arsenic	**ND**	3.0	200.8	11-11-15	11-12-15	
Barium	**66**	25	200.8	11-11-15	11-12-15	
Cadmium	**ND**	4.0	200.8	11-11-15	11-12-15	
Chromium	**ND**	10	200.8	11-11-15	11-12-15	
Lead	**1.2**	1.0	200.8	11-11-15	11-12-15	
Mercury	**ND**	0.50	7470A	11-11-15	11-12-15	
Selenium	**ND**	5.0	200.8	11-11-15	11-12-15	
Silver	**ND**	10	200.8	11-11-15	11-12-15	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 12, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176B
Project: 17843-71

DISSOLVED METALS
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Filtered: 11-11-15
Date Analyzed: 11-12-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB1111F1

Analyte	Method	Result	PQL
Arsenic	200.8	**ND**	3.0
Barium	200.8	**ND**	25
Cadmium	200.8	**ND**	4.0
Chromium	200.8	**ND**	10
Lead	200.8	**ND**	1.0
Selenium	200.8	**ND**	5.0
Silver	200.8	**ND**	10

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 12, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176B
Project: 17843-71

DISSOLVED MERCURY
EPA 7470A
METHOD BLANK QUALITY CONTROL

Date Filtered:	11-11-15
Date Analyzed:	11-12-15
Matrix:	Water
Units:	ug/L (ppb)
Lab ID:	MB1111F1

Analyte	Method	Result	PQL
Mercury	7470A	**ND**	0.50

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 12, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176B
Project: 17843-71

DISSOLVED METALS
EPA 200.8
DUPLICATE QUALITY CONTROL

Date Filtered: 11-12-15
Date Analyzed: 11-12-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: 11-098-11

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**5.56**	**4.89**	13	3.0	
Barium	**69.9**	**64.6**	8	25	
Cadmium	**ND**	**ND**	NA	4.0	
Chromium	**ND**	**ND**	NA	10	
Lead	**ND**	**ND**	NA	1.0	
Selenium	**ND**	**ND**	NA	5.0	
Silver	**ND**	**ND**	NA	10	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 12, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176B
Project: 17843-71

DISSOLVED MERCURY
EPA 7470A
DUPLICATE QUALITY CONTROL

Date Filtered: 11-11-15
Date Analyzed: 11-12-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: 10-176-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Mercury	**ND**	**ND**	NA	0.50	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 12, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176B
Project: 17843-71

DISSOLVED METALS
EPA 200.8
MS/MSD QUALITY CONTROL

Date Filtered: 11-12-15
Date Analyzed: 11-12-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: 11-098-11

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	200	**211**	103	**209**	102	1	
Barium	200	**274**	102	**272**	101	1	
Cadmium	200	**195**	97	**196**	98	1	
Chromium	200	**197**	98	**196**	98	1	
Lead	200	**196**	98	**195**	97	1	
Selenium	200	**191**	95	**189**	95	1	
Silver	200	**181**	91	**179**	89	1	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 12, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176B
Project: 17843-71

DISSOLVED MERCURY
EPA 7470A
MS/MSD QUALITY CONTROL

Date Filtered: 11-11-15
Date Analyzed: 11-12-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: 10-176-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	12.5	**13.4**	107	**13.7**	110	3	

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 12, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176B
Project: 17843-71

DISSOLVED METALS
EPA 200.8
SPIKE BLANK QUALITY CONTROL

Date Filtered: 11-11-15
Date Analyzed: 11-12-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB1111F1

Analyte	Method	Spike Level	Result	Percent Recovery
Arsenic	200.8	200	**190**	95
Barium	200.8	200	**205**	103
Cadmium	200.8	200	**193**	97
Chromium	200.8	200	**188**	94
Lead	200.8	200	**194**	97
Selenium	200.8	200	**189**	95
Silver	200.8	200	**186**	93

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 12, 2015
Samples Submitted: October 22, 2015
Laboratory Reference: 1510-176B
Project: 17843-71

DISSOLVED MERCURY
EPA 7470A
SPIKE BLANK QUALITY CONTROL

Date Filtered: 11-11-15
Date Analyzed: 11-12-15

Matrix: Water
Units: ug/L (ppb)

Lab ID: SB1111F1

Analyte	Method	Spike Level	Result	Percent Recovery
Mercury	7470A	12.5	**12.5**	100

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

This report pertains to the samples analyzed in accordance with the chain of custody, and is intended only for the use of the individual or company to whom it is addressed.

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Laboratory Number: 10-176

Company: HART CROWSER
Project Number: 17843-71
Project Name: LADDER CREEK
Project Manager: N. GALVIN, R. STAINSBY
Sampled by: MWG

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☒ 3 Days (SOILS)
☒ Standard (7 Days) (WATERS)
(TPH analysis 5 Days)
☐ _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	~~TCLP~~ Metals Dissolved RCRA	HEM (oil and grease) 1664A						% Moisture
1	HC-LC-WT1	10/21/15	1217	H2O	4								X					X		●							
2	HC-LC-T1-(-5)		1249	SOIL								X						X									X
3	HC-LC-T1-0		1326										X					X									X
4	HC-LC-T1-5		1307									X						X									X
5	HC-LC-T1-10		1312										X					X									X
6	HC-LC-T1-20		1317																								
7	HC-LC-T1-30		1321										X					X									X
8	HC-LC-T1-40		1330																								
9	HC-LC-T1-50		1335										X					X									X
10	HC-LC-T2-(-5)		1357									X						X									X

	Signature	Company	Date	Time
Relinquished	[signature]	Hart Crowser	10/22/15	0850
Received	[signature]	OSE	10/22/15	1200
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

FOLLOW HC SAP

SCL PM: JEN KINDRED

PLEASE CC: SCL, HC w/ RESULTS

HOLD ALL ADDITIONAL VOLUME FOR FOLLOW-UP.

X Added 10/29/15. DB (3 day TAT)

● Added 11/01/15. DB (3 day TAT)

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

OnSite Environmental Inc.

Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: HART CROWSER
Project Number: 17843-71
Project Name: (see pg. 1)
Project Manager:
Sampled by:

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☐ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-176

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Hexchrome				% Moisture
11	HC-LC-T2-0	10/21/15	1400	SOIL	1								X					X								X
12	HC-LC-T2-5		~~1415~~ 1409									X						X				X				X
13	HC-LC-T2-10		1413										X													X
14	HC-LC-T2-20		1417																							
15	HC-LC-T2-30		1420										X					X								X
16	HC-LC-T2-40		1428																							
17	HC-LC-T2-50		1448										X					X								X
18	HC-LC-T3-5		1459									X						X								X
19	HC-LC-T3-10		1510																							
20	HC-LC-T3 20		1513										X	~~X~~ NO DB				X								X

	Signature	Company	Date	Time
Relinquished	[signature]	Hart Crowser	10/22/15	0850
Received	[signature]	OSE	10/22/15	1200
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
(see pg. 1)

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: HART CROWSER
Project Number: 17843-71
Project Name: (SEE PG. 1)
Project Manager:
Sampled by:

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☐ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-176

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A						% Moisture
21	HC-LC-BG	10/21/15	1627	SOIL	1								X					X									X

	Signature	Company	Date	Time
Relinquished	Natalie Glass	Hart Crowser	10/22/15	0850
Received	[illegible]	OSE	10/22/15	1200
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
(SEE PG. 1)

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

November 9, 2015

Tom Meyer
Seattle City Light
3613 4th Avenue S.
Seattle, WA 98134

Re: Analytical Data for Project Ladder Creek
Laboratory Reference No. 1511-039

Dear Tom:

Enclosed are the analytical results and associated quality control data for samples submitted on November 4, 2015.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

Case Narrative

Samples were collected on November 3, 2015 and received by the laboratory on November 4, 2015. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

This report pertains to the samples analyzed in accordance with the chain of custody,
and is intended only for the use of the individual or company to whom it is addressed.

Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SCL-LC-BG1**					
Laboratory ID:	11-039-01					
n-Nitrosodimethylamine	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Pyridine	**ND**	0.58	EPA 8270D	11-5-15	11-6-15	
Phenol	**0.83**	0.058	EPA 8270D	11-5-15	11-6-15	
Aniline	**ND**	0.29	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroethyl)ether	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
2-Chlorophenol	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
1,3-Dichlorobenzene	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
1,4-Dichlorobenzene	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Benzyl alcohol	**ND**	0.29	EPA 8270D	11-5-15	11-6-15	
1,2-Dichlorobenzene	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
2-Methylphenol (o-Cresol)	**0.27**	0.058	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroisopropyl)ether	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
(3+4)-Methylphenol (m,p-Cresol)	**0.66**	0.058	EPA 8270D	11-5-15	11-6-15	
n-Nitroso-di-n-propylamine	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Hexachloroethane	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Nitrobenzene	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Isophorone	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
2-Nitrophenol	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
2,4-Dimethylphenol	**0.31**	0.058	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroethoxy)methane	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
2,4-Dichlorophenol	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
1,2,4-Trichlorobenzene	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Naphthalene	**0.43**	0.058	EPA 8270D	11-5-15	11-6-15	
4-Chloroaniline	**ND**	0.29	EPA 8270D	11-5-15	11-6-15	
Hexachlorobutadiene	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
4-Chloro-3-methylphenol	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
2-Methylnaphthalene	**0.11**	0.058	EPA 8270D	11-5-15	11-6-15	
1-Methylnaphthalene	**0.12**	0.058	EPA 8270D	11-5-15	11-6-15	
Hexachlorocyclopentadiene	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
2,4,6-Trichlorophenol	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
2,3-Dichloroaniline	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
2,4,5-Trichlorophenol	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
2-Chloronaphthalene	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
2-Nitroaniline	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
1,4-Dinitrobenzene	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Dimethylphthalate	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
1,3-Dinitrobenzene	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
2,6-Dinitrotoluene	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
1,2-Dinitrobenzene	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Acenaphthylene	**ND**	0.012	EPA 8270D/SIM	11-5-15	11-8-15	
3-Nitroaniline	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	

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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SCL-LC-BG1**					
Laboratory ID:	11-039-01					
2,4-Dinitrophenol	**ND**	0.29	EPA 8270D	11-5-15	11-6-15	
Acenaphthene	**ND**	0.012	EPA 8270D/SIM	11-5-15	11-8-15	
4-Nitrophenol	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
2,4-Dinitrotoluene	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Dibenzofuran	**0.082**	0.058	EPA 8270D	11-5-15	11-6-15	
2,3,5,6-Tetrachlorophenol	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
2,3,4,6-Tetrachlorophenol	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Diethylphthalate	**ND**	0.29	EPA 8270D	11-5-15	11-6-15	
4-Chlorophenyl-phenylether	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
4-Nitroaniline	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Fluorene	**0.045**	0.012	EPA 8270D/SIM	11-5-15	11-8-15	
4,6-Dinitro-2-methylphenol	**ND**	0.29	EPA 8270D	11-5-15	11-6-15	
n-Nitrosodiphenylamine	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
1,2-Diphenylhydrazine	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
4-Bromophenyl-phenylether	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Hexachlorobenzene	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Pentachlorophenol	**ND**	0.29	EPA 8270D	11-5-15	11-6-15	
Phenanthrene	**0.11**	0.058	EPA 8270D	11-5-15	11-6-15	
Anthracene	**ND**	0.012	EPA 8270D/SIM	11-5-15	11-8-15	
Carbazole	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Di-n-butylphthalate	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Fluoranthene	**ND**	0.012	EPA 8270D/SIM	11-5-15	11-8-15	
Benzidine	**ND**	0.58	EPA 8270D	11-5-15	11-6-15	
Pyrene	**0.029**	0.012	EPA 8270D/SIM	11-5-15	11-8-15	
Butylbenzylphthalate	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
bis-2-Ethylhexyladipate	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
3,3'-Dichlorobenzidine	**ND**	0.29	EPA 8270D	11-5-15	11-6-15	
Benzo[a]anthracene	**ND**	0.012	EPA 8270D/SIM	11-5-15	11-8-15	
Chrysene	**ND**	0.012	EPA 8270D/SIM	11-5-15	11-8-15	
bis(2-Ethylhexyl)phthalate	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Di-n-octylphthalate	**ND**	0.058	EPA 8270D	11-5-15	11-6-15	
Benzo[b]fluoranthene	**ND**	0.012	EPA 8270D/SIM	11-5-15	11-8-15	
Benzo(j,k)fluoranthene	**ND**	0.012	EPA 8270D/SIM	11-5-15	11-8-15	
Benzo[a]pyrene	**ND**	0.012	EPA 8270D/SIM	11-5-15	11-8-15	
Indeno[1,2,3-cd]pyrene	**ND**	0.012	EPA 8270D/SIM	11-5-15	11-8-15	
Dibenz[a,h]anthracene	**ND**	0.012	EPA 8270D/SIM	11-5-15	11-8-15	
Benzo[g,h,i]perylene	**ND**	0.012	EPA 8270D/SIM	11-5-15	11-8-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*37*	*24 - 117*				
Phenol-d6	*40*	*30 - 120*				
Nitrobenzene-d5	*46*	*27 - 112*				
2-Fluorobiphenyl	*53*	*35 - 113*				
2,4,6-Tribromophenol	*51*	*21 - 120*				
Terphenyl-d14	*49*	*39 - 121*				

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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SCL-LC-BG2**					
Laboratory ID:	11-039-02					
n-Nitrosodimethylamine	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Pyridine	**0.76**	0.56	EPA 8270D	11-5-15	11-6-15	
Phenol	**0.20**	0.056	EPA 8270D	11-5-15	11-6-15	
Aniline	**ND**	0.28	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroethyl)ether	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
2-Chlorophenol	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
1,3-Dichlorobenzene	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
1,4-Dichlorobenzene	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Benzyl alcohol	**ND**	0.28	EPA 8270D	11-5-15	11-6-15	
1,2-Dichlorobenzene	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
2-Methylphenol (o-Cresol)	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroisopropyl)ether	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
(3+4)-Methylphenol (m,p-Cresol)	**0.12**	0.056	EPA 8270D	11-5-15	11-6-15	
n-Nitroso-di-n-propylamine	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Hexachloroethane	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Nitrobenzene	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Isophorone	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
2-Nitrophenol	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
2,4-Dimethylphenol	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroethoxy)methane	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
2,4-Dichlorophenol	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
1,2,4-Trichlorobenzene	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Naphthalene	**0.20**	0.056	EPA 8270D	11-5-15	11-6-15	
4-Chloroaniline	**ND**	0.28	EPA 8270D	11-5-15	11-6-15	
Hexachlorobutadiene	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
4-Chloro-3-methylphenol	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
2-Methylnaphthalene	**0.040**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
1-Methylnaphthalene	**0.041**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Hexachlorocyclopentadiene	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
2,4,6-Trichlorophenol	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
2,3-Dichloroaniline	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
2,4,5-Trichlorophenol	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
2-Chloronaphthalene	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
2-Nitroaniline	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
1,4-Dinitrobenzene	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Dimethylphthalate	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
1,3-Dinitrobenzene	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
2,6-Dinitrotoluene	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
1,2-Dinitrobenzene	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Acenaphthylene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
3-Nitroaniline	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	

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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SCL-LC-BG2**					
Laboratory ID:	11-039-02					
2,4-Dinitrophenol	**ND**	0.28	EPA 8270D	11-5-15	11-6-15	
Acenaphthene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
4-Nitrophenol	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
2,4-Dinitrotoluene	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Dibenzofuran	**0.093**	0.056	EPA 8270D	11-5-15	11-6-15	
2,3,5,6-Tetrachlorophenol	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
2,3,4,6-Tetrachlorophenol	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Diethylphthalate	**ND**	0.28	EPA 8270D	11-5-15	11-6-15	
4-Chlorophenyl-phenylether	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
4-Nitroaniline	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Fluorene	**0.018**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
4,6-Dinitro-2-methylphenol	**ND**	0.28	EPA 8270D	11-5-15	11-6-15	
n-Nitrosodiphenylamine	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
1,2-Diphenylhydrazine	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
4-Bromophenyl-phenylether	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Hexachlorobenzene	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Pentachlorophenol	**ND**	0.28	EPA 8270D	11-5-15	11-6-15	
Phenanthrene	**0.046**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Anthracene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Carbazole	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Di-n-butylphthalate	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Fluoranthene	**0.017**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Benzidine	**ND**	0.56	EPA 8270D	11-5-15	11-6-15	
Pyrene	**0.022**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Butylbenzylphthalate	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
bis-2-Ethylhexyladipate	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
3,3'-Dichlorobenzidine	**ND**	0.28	EPA 8270D	11-5-15	11-6-15	
Benzo[a]anthracene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Chrysene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
bis(2-Ethylhexyl)phthalate	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Di-n-octylphthalate	**ND**	0.056	EPA 8270D	11-5-15	11-6-15	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Benzo[a]pyrene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Indeno[1,2,3-cd]pyrene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Benzo[g,h,i]perylene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*50*	*24 - 117*				
Phenol-d6	*50*	*30 - 120*				
Nitrobenzene-d5	*51*	*27 - 112*				
2-Fluorobiphenyl	*53*	*35 - 113*				
2,4,6-Tribromophenol	*44*	*21 - 120*				
Terphenyl-d14	*51*	*39 - 121*				

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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SCL-LC-BG3**					
Laboratory ID:	11-039-03					
n-Nitrosodimethylamine	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Pyridine	**0.46**	0.45	EPA 8270D	11-5-15	11-6-15	
Phenol	**0.26**	0.045	EPA 8270D	11-5-15	11-6-15	
Aniline	**ND**	0.22	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroethyl)ether	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
2-Chlorophenol	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
1,3-Dichlorobenzene	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
1,4-Dichlorobenzene	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Benzyl alcohol	**ND**	0.22	EPA 8270D	11-5-15	11-6-15	
1,2-Dichlorobenzene	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
2-Methylphenol (o-Cresol)	**0.067**	0.045	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroisopropyl)ether	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
(3+4)-Methylphenol (m,p-Cresol)	**0.19**	0.045	EPA 8270D	11-5-15	11-6-15	
n-Nitroso-di-n-propylamine	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Hexachloroethane	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Nitrobenzene	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Isophorone	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
2-Nitrophenol	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
2,4-Dimethylphenol	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroethoxy)methane	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
2,4-Dichlorophenol	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
1,2,4-Trichlorobenzene	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Naphthalene	**0.11**	0.045	EPA 8270D	11-5-15	11-6-15	
4-Chloroaniline	**ND**	0.22	EPA 8270D	11-5-15	11-6-15	
Hexachlorobutadiene	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
4-Chloro-3-methylphenol	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
2-Methylnaphthalene	**0.039**	0.0090	EPA 8270D/SIM	11-5-15	11-8-15	
1-Methylnaphthalene	**0.034**	0.0090	EPA 8270D/SIM	11-5-15	11-8-15	
Hexachlorocyclopentadiene	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
2,4,6-Trichlorophenol	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
2,3-Dichloroaniline	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
2,4,5-Trichlorophenol	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
2-Chloronaphthalene	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
2-Nitroaniline	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
1,4-Dinitrobenzene	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Dimethylphthalate	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
1,3-Dinitrobenzene	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
2,6-Dinitrotoluene	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
1,2-Dinitrobenzene	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Acenaphthylene	**ND**	0.0090	EPA 8270D/SIM	11-5-15	11-8-15	
3-Nitroaniline	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	

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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SCL-LC-BG3**					
Laboratory ID:	11-039-03					
2,4-Dinitrophenol	**ND**	0.22	EPA 8270D	11-5-15	11-6-15	
Acenaphthene	**0.022**	0.0090	EPA 8270D/SIM	11-5-15	11-8-15	
4-Nitrophenol	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
2,4-Dinitrotoluene	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Dibenzofuran	**0.079**	0.045	EPA 8270D	11-5-15	11-6-15	
2,3,5,6-Tetrachlorophenol	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
2,3,4,6-Tetrachlorophenol	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Diethylphthalate	**ND**	0.22	EPA 8270D	11-5-15	11-6-15	
4-Chlorophenyl-phenylether	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
4-Nitroaniline	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Fluorene	**0.027**	0.0090	EPA 8270D/SIM	11-5-15	11-8-15	
4,6-Dinitro-2-methylphenol	**ND**	0.22	EPA 8270D	11-5-15	11-6-15	
n-Nitrosodiphenylamine	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
1,2-Diphenylhydrazine	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
4-Bromophenyl-phenylether	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Hexachlorobenzene	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Pentachlorophenol	**ND**	0.22	EPA 8270D	11-5-15	11-6-15	
Phenanthrene	**0.067**	0.045	EPA 8270D	11-5-15	11-6-15	
Anthracene	**0.011**	0.0090	EPA 8270D/SIM	11-5-15	11-8-15	
Carbazole	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Di-n-butylphthalate	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Fluoranthene	**0.019**	0.0090	EPA 8270D/SIM	11-5-15	11-8-15	
Benzidine	**ND**	0.45	EPA 8270D	11-5-15	11-6-15	
Pyrene	**0.017**	0.0090	EPA 8270D/SIM	11-5-15	11-8-15	
Butylbenzylphthalate	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
bis-2-Ethylhexyladipate	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
3,3'-Dichlorobenzidine	**ND**	0.22	EPA 8270D	11-5-15	11-6-15	
Benzo[a]anthracene	**ND**	0.0090	EPA 8270D/SIM	11-5-15	11-8-15	
Chrysene	**ND**	0.0090	EPA 8270D/SIM	11-5-15	11-8-15	
bis(2-Ethylhexyl)phthalate	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Di-n-octylphthalate	**ND**	0.045	EPA 8270D	11-5-15	11-6-15	
Benzo[b]fluoranthene	**ND**	0.0090	EPA 8270D/SIM	11-5-15	11-8-15	
Benzo(j,k)fluoranthene	**ND**	0.0090	EPA 8270D/SIM	11-5-15	11-8-15	
Benzo[a]pyrene	**ND**	0.0090	EPA 8270D/SIM	11-5-15	11-8-15	
Indeno[1,2,3-cd]pyrene	**ND**	0.0090	EPA 8270D/SIM	11-5-15	11-8-15	
Dibenz[a,h]anthracene	**ND**	0.0090	EPA 8270D/SIM	11-5-15	11-8-15	
Benzo[g,h,i]perylene	**ND**	0.0090	EPA 8270D/SIM	11-5-15	11-8-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*47*	*24 - 117*				
Phenol-d6	*50*	*30 - 120*				
Nitrobenzene-d5	*48*	*27 - 112*				
2-Fluorobiphenyl	*53*	*35 - 113*				
2,4,6-Tribromophenol	*52*	*21 - 120*				
Terphenyl-d14	*51*	*39 - 121*				

This report pertains to the samples analyzed in accordance with the chain of custody,
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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SCL-LC-BG4**					
Laboratory ID:	11-039-04					
n-Nitrosodimethylamine	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Pyridine	**ND**	0.55	EPA 8270D	11-5-15	11-6-15	
Phenol	**0.24**	0.055	EPA 8270D	11-5-15	11-6-15	
Aniline	**ND**	0.27	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroethyl)ether	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
2-Chlorophenol	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
1,3-Dichlorobenzene	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
1,4-Dichlorobenzene	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Benzyl alcohol	**ND**	0.27	EPA 8270D	11-5-15	11-6-15	
1,2-Dichlorobenzene	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
2-Methylphenol (o-Cresol)	**0.079**	0.055	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroisopropyl)ether	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
(3+4)-Methylphenol (m,p-Cresol)	**0.21**	0.055	EPA 8270D	11-5-15	11-6-15	
n-Nitroso-di-n-propylamine	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Hexachloroethane	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Nitrobenzene	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Isophorone	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
2-Nitrophenol	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
2,4-Dimethylphenol	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroethoxy)methane	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
2,4-Dichlorophenol	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
1,2,4-Trichlorobenzene	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Naphthalene	**0.12**	0.055	EPA 8270D	11-5-15	11-6-15	
4-Chloroaniline	**ND**	0.27	EPA 8270D	11-5-15	11-6-15	
Hexachlorobutadiene	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
4-Chloro-3-methylphenol	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
2-Methylnaphthalene	**0.043**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
1-Methylnaphthalene	**0.035**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Hexachlorocyclopentadiene	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
2,4,6-Trichlorophenol	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
2,3-Dichloroaniline	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
2,4,5-Trichlorophenol	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
2-Chloronaphthalene	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
2-Nitroaniline	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
1,4-Dinitrobenzene	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Dimethylphthalate	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
1,3-Dinitrobenzene	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
2,6-Dinitrotoluene	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
1,2-Dinitrobenzene	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Acenaphthylene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
3-Nitroaniline	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	

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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SCL-LC-BG4**					
Laboratory ID:	11-039-04					
2,4-Dinitrophenol	**ND**	0.27	EPA 8270D	11-5-15	11-6-15	
Acenaphthene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
4-Nitrophenol	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
2,4-Dinitrotoluene	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Dibenzofuran	**0.060**	0.055	EPA 8270D	11-5-15	11-6-15	
2,3,5,6-Tetrachlorophenol	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
2,3,4,6-Tetrachlorophenol	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Diethylphthalate	**ND**	0.27	EPA 8270D	11-5-15	11-6-15	
4-Chlorophenyl-phenylether	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
4-Nitroaniline	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Fluorene	**0.019**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
4,6-Dinitro-2-methylphenol	**ND**	0.27	EPA 8270D	11-5-15	11-6-15	
n-Nitrosodiphenylamine	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
1,2-Diphenylhydrazine	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
4-Bromophenyl-phenylether	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Hexachlorobenzene	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Pentachlorophenol	**ND**	0.27	EPA 8270D	11-5-15	11-6-15	
Phenanthrene	**0.043**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Anthracene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Carbazole	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Di-n-butylphthalate	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Fluoranthene	**0.011**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Benzidine	**ND**	0.55	EPA 8270D	11-5-15	11-6-15	
Pyrene	**0.024**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Butylbenzylphthalate	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
bis-2-Ethylhexyladipate	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
3,3'-Dichlorobenzidine	**ND**	0.27	EPA 8270D	11-5-15	11-6-15	
Benzo[a]anthracene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Chrysene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
bis(2-Ethylhexyl)phthalate	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Di-n-octylphthalate	**ND**	0.055	EPA 8270D	11-5-15	11-6-15	
Benzo[b]fluoranthene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Benzo[a]pyrene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Indeno[1,2,3-cd]pyrene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Benzo[g,h,i]perylene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*43*	*24 - 117*				
Phenol-d6	*48*	*30 - 120*				
Nitrobenzene-d5	*45*	*27 - 112*				
2-Fluorobiphenyl	*52*	*35 - 113*				
2,4,6-Tribromophenol	*56*	*21 - 120*				
Terphenyl-d14	*57*	*39 - 121*				

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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

SEMIVOLATILES EPA 8270D/SIM
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SCL-LC-BG5**					
Laboratory ID:	11-039-05					
n-Nitrosodimethylamine	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Pyridine	**ND**	0.57	EPA 8270D	11-5-15	11-6-15	
Phenol	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Aniline	**ND**	0.28	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroethyl)ether	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
2-Chlorophenol	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
1,3-Dichlorobenzene	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
1,4-Dichlorobenzene	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Benzyl alcohol	**ND**	0.28	EPA 8270D	11-5-15	11-6-15	
1,2-Dichlorobenzene	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
2-Methylphenol (o-Cresol)	**0.059**	0.057	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroisopropyl)ether	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
(3+4)-Methylphenol (m,p-Cresol)	**0.13**	0.057	EPA 8270D	11-5-15	11-6-15	
n-Nitroso-di-n-propylamine	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Hexachloroethane	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Nitrobenzene	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Isophorone	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
2-Nitrophenol	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
2,4-Dimethylphenol	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroethoxy)methane	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
2,4-Dichlorophenol	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
1,2,4-Trichlorobenzene	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Naphthalene	**0.14**	0.057	EPA 8270D	11-5-15	11-6-15	
4-Chloroaniline	**ND**	0.28	EPA 8270D	11-5-15	11-6-15	
Hexachlorobutadiene	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
4-Chloro-3-methylphenol	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
2-Methylnaphthalene	**0.042**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
1-Methylnaphthalene	**0.035**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Hexachlorocyclopentadiene	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
2,4,6-Trichlorophenol	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
2,3-Dichloroaniline	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
2,4,5-Trichlorophenol	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
2-Chloronaphthalene	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
2-Nitroaniline	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
1,4-Dinitrobenzene	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Dimethylphthalate	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
1,3-Dinitrobenzene	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
2,6-Dinitrotoluene	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
1,2-Dinitrobenzene	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Acenaphthylene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
3-Nitroaniline	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	

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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

SEMIVOLATILES EPA 8270D/SIM
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SCL-LC-BG5**					
Laboratory ID:	11-039-05					
2,4-Dinitrophenol	**ND**	0.28	EPA 8270D	11-5-15	11-6-15	
Acenaphthene	**0.012**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
4-Nitrophenol	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
2,4-Dinitrotoluene	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Dibenzofuran	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
2,3,5,6-Tetrachlorophenol	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
2,3,4,6-Tetrachlorophenol	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Diethylphthalate	**ND**	0.28	EPA 8270D	11-5-15	11-6-15	
4-Chlorophenyl-phenylether	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
4-Nitroaniline	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Fluorene	**0.015**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
4,6-Dinitro-2-methylphenol	**ND**	0.28	EPA 8270D	11-5-15	11-6-15	
n-Nitrosodiphenylamine	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
1,2-Diphenylhydrazine	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
4-Bromophenyl-phenylether	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Hexachlorobenzene	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Pentachlorophenol	**ND**	0.28	EPA 8270D	11-5-15	11-6-15	
Phenanthrene	**0.042**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Anthracene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Carbazole	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Di-n-butylphthalate	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Fluoranthene	**0.015**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Benzidine	**ND**	0.57	EPA 8270D	11-5-15	11-6-15	
Pyrene	**0.020**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Butylbenzylphthalate	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
bis-2-Ethylhexyladipate	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
3,3'-Dichlorobenzidine	**ND**	0.28	EPA 8270D	11-5-15	11-6-15	
Benzo[a]anthracene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Chrysene	**0.013**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
bis(2-Ethylhexyl)phthalate	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Di-n-octylphthalate	**ND**	0.057	EPA 8270D	11-5-15	11-6-15	
Benzo[b]fluoranthene	**0.013**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Benzo(j,k)fluoranthene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Benzo[a]pyrene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Indeno[1,2,3-cd]pyrene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Benzo[g,h,i]perylene	**ND**	0.011	EPA 8270D/SIM	11-5-15	11-8-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*51*	*24 - 117*				
Phenol-d6	*52*	*30 - 120*				
Nitrobenzene-d5	*53*	*27 - 112*				
2-Fluorobiphenyl	*57*	*35 - 113*				
2,4,6-Tribromophenol	*53*	*21 - 120*				
Terphenyl-d14	*54*	*39 - 121*				

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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1105S2					
n-Nitrosodimethylamine	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Pyridine	**ND**	0.33	EPA 8270D	11-5-15	11-6-15	
Phenol	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Aniline	**ND**	0.17	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroethyl)ether	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
2-Chlorophenol	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
1,3-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
1,4-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Benzyl alcohol	**ND**	0.17	EPA 8270D	11-5-15	11-6-15	
1,2-Dichlorobenzene	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
2-Methylphenol (o-Cresol)	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroisopropyl)ether	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
(3+4)-Methylphenol (m,p-Cresol)	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
n-Nitroso-di-n-propylamine	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Hexachloroethane	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Nitrobenzene	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Isophorone	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
2-Nitrophenol	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
2,4-Dimethylphenol	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
bis(2-Chloroethoxy)methane	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
2,4-Dichlorophenol	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
1,2,4-Trichlorobenzene	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
4-Chloroaniline	**ND**	0.17	EPA 8270D	11-5-15	11-6-15	
Hexachlorobutadiene	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
4-Chloro-3-methylphenol	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
Hexachlorocyclopentadiene	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
2,4,6-Trichlorophenol	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
2,3-Dichloroaniline	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
2,4,5-Trichlorophenol	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
2-Chloronaphthalene	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
2-Nitroaniline	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
1,4-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Dimethylphthalate	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
1,3-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
2,6-Dinitrotoluene	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
1,2-Dinitrobenzene	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
3-Nitroaniline	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	

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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

SEMIVOLATILES EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1105S2					
2,4-Dinitrophenol	**ND**	0.17	EPA 8270D	11-5-15	11-6-15	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
4-Nitrophenol	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
2,4-Dinitrotoluene	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Dibenzofuran	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
2,3,5,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
2,3,4,6-Tetrachlorophenol	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Diethylphthalate	**ND**	0.17	EPA 8270D	11-5-15	11-6-15	
4-Chlorophenyl-phenylether	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
4-Nitroaniline	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
4,6-Dinitro-2-methylphenol	**ND**	0.17	EPA 8270D	11-5-15	11-6-15	
n-Nitrosodiphenylamine	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
1,2-Diphenylhydrazine	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
4-Bromophenyl-phenylether	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Hexachlorobenzene	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Pentachlorophenol	**ND**	0.17	EPA 8270D	11-5-15	11-6-15	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
Carbazole	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Di-n-butylphthalate	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
Benzidine	**ND**	0.33	EPA 8270D	11-5-15	11-6-15	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
Butylbenzylphthalate	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
bis-2-Ethylhexyladipate	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
3,3'-Dichlorobenzidine	**ND**	0.17	EPA 8270D	11-5-15	11-6-15	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
bis(2-Ethylhexyl)phthalate	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Di-n-octylphthalate	**ND**	0.033	EPA 8270D	11-5-15	11-6-15	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
Indeno[1,2,3-cd]pyrene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	11-5-15	11-6-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorophenol	*69*	*24 - 117*				
Phenol-d6	*73*	*30 - 120*				
Nitrobenzene-d5	*61*	*27 - 112*				
2-Fluorobiphenyl	*66*	*35 - 113*				
2,4,6-Tribromophenol	*63*	*21 - 120*				
Terphenyl-d14	*62*	*39 - 121*				

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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

SEMIVOLATILES EPA 8270D/SIM
MS/MSD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	10-256-18										
	MS	MSD	MS	MSD		MS	MSD				
Phenol	**1.56**	**1.58**	2.67	2.67	ND	58	59	31 - 108	1	36	
2-Chlorophenol	**1.59**	**1.54**	2.67	2.67	ND	60	58	38 - 103	3	38	
1,4-Dichlorobenzene	**0.861**	**0.779**	1.33	1.33	ND	65	59	25 - 101	10	40	
n-Nitroso-di-n-propylamine	**0.816**	**0.828**	1.33	1.33	ND	61	62	26 - 102	1	38	
1,2,4-Trichlorobenzene	**0.846**	**0.805**	1.33	1.33	ND	64	61	27 - 101	5	40	
4-Chloro-3-methylphenol	**1.49**	**1.64**	2.67	2.67	ND	56	61	42 - 106	10	29	
Acenaphthene	**0.842**	**0.867**	1.33	1.33	ND	63	65	42 - 103	3	30	
4-Nitrophenol	**1.73**	**1.92**	2.67	2.67	ND	65	72	25 - 125	10	29	
2,4-Dinitrotoluene	**0.849**	**0.970**	1.33	1.33	ND	64	73	45 - 107	13	30	
Pentachlorophenol	**1.72**	**1.90**	2.67	2.67	ND	64	71	30 - 103	10	31	
Pyrene	**0.826**	**0.910**	1.33	1.33	ND	62	68	50 - 118	10	28	
Surrogate:											
2-Fluorophenol						*61*	*59*	*24 - 117*			
Phenol-d6						*62*	*63*	*30 - 120*			
Nitrobenzene-d5						*58*	*59*	*27 - 112*			
2-Fluorobiphenyl						*60*	*61*	*35 - 113*			
2,4,6-Tribromophenol						*54*	*61*	*21 - 120*			
Terphenyl-d14						*60*	*67*	*39 - 121*			

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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	11-039-01					
Client ID:	**SCL-LC-BG1**					
Arsenic	**ND**	17	6010C	11-6-15	11-6-15	
Barium	**83**	4.3	6010C	11-6-15	11-6-15	
Cadmium	**ND**	0.87	6010C	11-6-15	11-6-15	
Chromium	**9.6**	0.87	6010C	11-6-15	11-6-15	
Lead	**87**	8.7	6010C	11-6-15	11-6-15	
Mercury	**ND**	0.43	7471B	11-5-15	11-5-15	
Selenium	**ND**	17	6010C	11-6-15	11-6-15	
Silver	**ND**	1.7	6010C	11-6-15	11-6-15	
Lab ID:	11-039-02					
Client ID:	**SCL-LC-BG2**					
Arsenic	**ND**	17	6010C	11-6-15	11-6-15	
Barium	**150**	4.2	6010C	11-6-15	11-6-15	
Cadmium	**ND**	0.84	6010C	11-6-15	11-6-15	
Chromium	**16**	0.84	6010C	11-6-15	11-6-15	
Lead	**23**	8.4	6010C	11-6-15	11-6-15	
Mercury	**ND**	0.42	7471B	11-5-15	11-5-15	
Selenium	**ND**	17	6010C	11-6-15	11-6-15	
Silver	**ND**	1.7	6010C	11-6-15	11-6-15	

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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	11-039-03					
Client ID:	**SCL-LC-BG3**					
Arsenic	**ND**	13	6010C	11-6-15	11-6-15	
Barium	**290**	3.4	6010C	11-6-15	11-6-15	
Cadmium	**ND**	0.67	6010C	11-6-15	11-6-15	
Chromium	**30**	0.67	6010C	11-6-15	11-6-15	
Lead	**27**	6.7	6010C	11-6-15	11-6-15	
Mercury	**ND**	0.34	7471B	11-5-15	11-5-15	
Selenium	**ND**	13	6010C	11-6-15	11-6-15	
Silver	**ND**	1.3	6010C	11-6-15	11-6-15	
Lab ID:	11-039-04					
Client ID:	**SCL-LC-BG4**					
Arsenic	**ND**	16	6010C	11-6-15	11-6-15	
Barium	**320**	4.1	6010C	11-6-15	11-6-15	
Cadmium	**ND**	0.82	6010C	11-6-15	11-6-15	
Chromium	**31**	0.82	6010C	11-6-15	11-6-15	
Lead	**18**	8.2	6010C	11-6-15	11-6-15	
Mercury	**ND**	0.41	7471B	11-5-15	11-5-15	
Selenium	**ND**	16	6010C	11-6-15	11-6-15	
Silver	**ND**	1.6	6010C	11-6-15	11-6-15	

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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

TOTAL METALS
EPA 6010C/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	11-039-05					
Client ID:	**SCL-LC-BG5**					
Arsenic	**ND**	17	6010C	11-6-15	11-6-15	
Barium	**330**	4.2	6010C	11-6-15	11-6-15	
Cadmium	**ND**	0.85	6010C	11-6-15	11-6-15	
Chromium	**37**	0.85	6010C	11-6-15	11-6-15	
Lead	**24**	8.5	6010C	11-6-15	11-6-15	
Mercury	**ND**	0.42	7471B	11-5-15	11-5-15	
Selenium	**ND**	17	6010C	11-6-15	11-6-15	
Silver	**ND**	1.7	6010C	11-6-15	11-6-15	

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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

TOTAL METALS
EPA 6010C/7471B
METHOD BLANK QUALITY CONTROL

Date Extracted: 11-5&6-15
Date Analyzed: 11-5&6-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB1106SM1&MB1105S1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Barium	6010C	**ND**	2.5
Cadmium	6010C	**ND**	0.50
Chromium	6010C	**ND**	0.50
Lead	6010C	**ND**	5.0
Mercury	7471B	**ND**	0.25
Selenium	6010C	**ND**	10
Silver	6010C	**ND**	1.0

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Date of Report: November 9, 2015
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Laboratory Reference: 1511-039
Project: Ladder Creek

TOTAL METALS
EPA 6010C/7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 11-5&6-15
Date Analyzed: 11-5&6-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 11-033-11

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**44.7**	**38.3**	15	2.5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**28.7**	**23.9**	18	0.50	
Lead	**ND**	**ND**	NA	5.0	
Mercury	**ND**	**ND**	NA	0.25	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

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Date of Report: November 9, 2015
Samples Submitted: November 4, 2015
Laboratory Reference: 1511-039
Project: Ladder Creek

TOTAL METALS
EPA 6010C/7471B
MS/MSD QUALITY CONTROL

Date Extracted: 11-5&6-15
Date Analyzed: 11-5&6-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 11-033-11

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**95.0**	95	**94.8**	95	0	
Barium	100	**134**	89	**140**	96	5	
Cadmium	50.0	**50.0**	100	**49.4**	99	1	
Chromium	100	**120**	92	**120**	91	1	
Lead	250	**245**	98	**242**	97	1	
Mercury	0.500	**0.511**	102	**0.495**	99	3	
Selenium	100	**95.0**	95	**90.0**	90	5	
Silver	25.0	**22.4**	89	**21.6**	86	3	

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Date of Report: November 9, 2015
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Project: Ladder Creek

% MOISTURE

Date Analyzed: 11-5-15

Client ID	Lab ID	% Moisture
SCL-LC-BG1	11-039-01	42
SCL-LC-BG2	11-039-02	40
SCL-LC-BG3	11-039-03	26
SCL-LC-BG4	11-039-04	39
SCL-LC-BG5	11-039-05	41

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OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Laboratory Number: 11-039

Company: City Light
Project Number:
Project Name: Ladder Creek
Project Manager: Tom Meyer
Sampled by: Tom Meyer

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☒ 3 Days
☐ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A						% Moisture
1	SCL-LC-BG1	11/3/15	0900	S	1							X						X									X
2	SCL-LC-BG2	11/3/15	0915	S	1							X						X									X
3	SCL-LC-BG3	11/3/15	0945	S	1							X						X									X
4	SCL-LC-BG4	11/3/15	1005	S	1							X						X									X
5	SCL-LC-BG5	11/3/15	1030	S	1							X						X									X

	Signature	Company	Date	Time
Relinquished	[signature]	SCL	11/4/15 ~~11/3~~	~~11:20~~
Received				
Relinquished	[signature]	SCL	11/4/15	1420
Received	[signature]	SPEEDY	11/4/15	1420
Relinquished	[signature]	"	11/4/15	2:45
Received	[signature]	OSE	11/4/15	1445
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
Hold all additional volume for possible followup analysis.

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____