SoundEarth Strategies, Inc.
2811 Fairview Avenue East, Suite 2000
Seattle, Washington 98102

May 8, 2018

Ms. Shannon Straws
Seattle City Light
P.O. Box 30423
Seattle, Washington 98124

SUBJECT: ENVIRONMENTAL CHARACTERIZATION REPORT
Phinney Former Substation Property
6109 Phinney Avenue North
Seattle, Washington
Project Number: 1267-013-01

Dear Ms. Straws:

SoundEarth Strategies, Inc. (SoundEarth) has prepared this letter report to present the results of the environmental assessment of near-surface soil, the concrete pad, and electrical conduits within the concrete pad at the Phinney Former Substation Property, located at 6109 Phinney Avenue North in Seattle, Washington (the Property). The Property consists of one irregularly shaped tax parcel (King County Parcel No. 9523101290) that covers a total of approximately 6,000 square feet (0.14 acre) of land. The Property was acquired by Seattle City Light in 1948 and used to house equipment for the transmission of power. Equipment was de-energized and removed from the Property in 1994. The Property location is shown on Figure 1. A site plan with exploration locations is shown on Figures 2 through 4.

The purpose of this investigation was to investigate the presence and concentrations of metals, petroleum hydrocarbons, pesticides, herbicides, and polychlorinated biphenyls (PCBs) in near-surface soil and the concrete pad at the Property, as well as potential asbestos-containing material (ACM) in the electrical conduits present within the concrete pad. Sampling for metals, petroleum hydrocarbons, and PCBs was conducted to address potential impacts that may have resulted from historical Seattle City Light operations at the Property or from surface water run-off from the equipment and fencing to the landscaping areas and concrete pad. Sampling for pesticides and herbicides was conducted to address potential impacts that may have resulted from historical vegetation management activities within the landscaping areas. This investigation was conducted in general accordance with the proposal prepared by SoundEarth dated January 25, 2018. This letter report summarizes the field activities and results of the investigation and provides SoundEarth's conclusions regarding the extent of impacts to soil and concrete and the potential presence of ACM in the electrical conduit.

FIELD WORK

To evaluate soil conditions at the Property, SoundEarth conducted a near-surface soil investigation on February 13, 2018. In addition, concrete samples were collected from the concrete pad and asbestos samples were collected from electrical conduits within the concrete pad.

The investigation consisted of collecting soil samples from 12 sampling areas (Areas 1 through 12), as shown on Figure 2. Two to five discrete soil samples were collected from each area at depths of 0 to 0.5 foot below ground surface (bgs). Ground cover, vegetation, and organic material were removed from the surface prior to sample collection, and each discrete sample was collected using pre-cleaned stainless-steel tools. Each sample was screened in the field for potential evidence of contamination using visual observations and notations of odor, and by conducting headspace analysis using a photoionization detector (PID) to detect the presence of volatile organic vapors.

In addition to the soil samples, SoundEarth collected six discrete concrete samples from the uppermost 1 inch of the concrete in two composite concrete sampling areas within the fenced yard of the Property (Concrete Areas 1 and 2; Figure 2). The samples were collected using a Roto Hammer with a pre-cleaned steel chipping bit.

The soil and concrete samples were placed directly into laboratory-supplied 4-ounce jars that were labeled with a unique sample ID, placed on ice in a cooler, and delivered to OnSite Environmental, Inc. (OnSite) of Redmond, Washington, under standard chain-of-custody protocols. Discrete soil and concrete samples were composited by the laboratory (one composite for each area) to ensure homogeneity in each composite sample. Each composite soil sample was analyzed for one or more of the following:

- Diesel- and lube oil-range petroleum hydrocarbons (DRPH and ORPH, respectively) by Northwest Total Petroleum Hydrocarbon (NWTPH) Method NWTPH-Dx
- Chlorinated acid herbicides by U.S. Environmental Protection Agency (EPA) Method 8151A
- Organochlorine pesticides by EPA Method 8081B
- Resource Conservation and Recovery Act (RCRA) 8 metals by EPA Methods 7471B and 6010D
- PCBs by EPA Method 8082A

Each composite concrete sample was analyzed for the following:

- DRPH and ORPH by Method NWTPH-Dx
- RCRA 8 metals by EPA Methods 7471B and 6010D
- PCBs by EPA Method 8082A

Samples of material collected from the electrical conduits within the concrete slab were analyzed for bulk asbestos fibers by EPA Methods 600/M4-82-020 and 600/R-93-116.

Analytical results of composite samples were compared to project screening levels, which were established for this project by dividing the Washington State Model Toxics Control Act (MTCA) cleanup level for each analyte by the number of discrete sub-samples from which the composite sample was comprised. If the screening level for any analyte was exceeded by the result of a composite sample, the individual discrete sub-samples from that area were then analyzed for that analyte. This sampling methodology ensures that each Composite Soil Sample Area is in compliance with MTCA cleanup levels.

Concentrations of DRPH, ORPH, herbicides, and PCBs were not detected above the applicable MTCA cleanup levels or project screening levels in any of the analyzed composite samples. Analytical results

from the composite soil sampling indicated that concentrations of arsenic and lead exceeding the applicable MTCA Method A cleanup levels are present in Areas 1 and 3, respectively. Various metals were detected in composite samples at concentrations exceeding the applicable project screening levels but below the applicable MTCA Method A cleanup levels. These include cadmium in Areas 4 and 11; lead in Areas 1, 2, 4 through 7, and 11; and mercury in Areas 3 and 6. Additionally, the composite sample from Area 3 contained a concentration of dieldrin exceeding the applicable project screening level. Discrete sub-samples from each of these areas were subsequently analyzed for the analytes that were found to exceed the applicable project screening levels. The remaining metals and pesticides were not detected at concentrations above the applicable MTCA cleanup levels or project screening levels in any of the composited samples.

To further assess the depths of arsenic, lead, and mercury impacts in soil due to discrete sample exceedances, SoundEarth returned to the Property on March 16, 2018, to advance hand auger borings to a depth of 4 feet bgs in each of the impacted areas, except for Area 1, where refusal was encountered at 2.75 feet bgs, and Areas 4 and 6, where refusal was encountered at 3.5 feet bgs due to rocky soil conditions. In areas with multiple discrete sub-samples exhibiting concentrations that exceeded the applicable MTCA cleanup levels, hand auger borings were advanced in the location of the highest concentration of each analyte detected within that area. For incremental depth analysis, discrete soil samples were collected from each hand auger boring at depths of 1, 2, 3, and 4 feet bgs, except for the boring in Area 1 (where the bottom sample was collected at 2.75 feet bgs) and Areas 4 and 6 (where the bottom samples were collected at 3.5 feet bgs), due to augering limitations. Each sample was screened in the field for potential evidence of contamination using visual observations and notations of odor and by conducting headspace analysis using a PID to detect the presence of volatile organic vapors. Samples were placed directly into laboratory-supplied 4-ounce jars that were labelled with a unique sample ID, placed on ice in a cooler, and delivered to OnSite under standard chain-of-custody protocols. Samples collected from 1 and 2 feet bgs were analyzed for one or more of the following: arsenic, lead, and mercury. Samples collected below 2 feet bgs in each hand auger boring were not analyzed since no contaminants of concern were detected at concentrations exceeding the applicable cleanup levels in the corresponding overlying 2-foot samples.

SOIL CONDITIONS AND ANALYTICAL RESULTS

Shallow soil conditions at the Property generally consisted of medium dense, moist, dark brown to reddish brown, silty sand with variable amounts of gravel and organic material to the maximum depth of exploration of 4 feet bgs. Field screening of near-surface and hand auger soil samples from each of the sampling areas revealed no obvious visual or olfactory indications of soil contamination. No elevated PID readings were observed in any of the soil samples.

The analytical results for the soil samples collected during the investigation at the Property are presented in Tables 1 through 6 and on Figures 2 through 4. The laboratory analytical reports for the samples collected are included in Attachment B.

Soil Sample Results

Composite and discrete soil sample analytical results are presented in Tables 1 through 5 and Figures 2 and 3, and are summarized below:

- **Petroleum hydrocarbons.** DRPH or ORPH or both were detected in all composite soil samples submitted for analysis at concentrations below the applicable MTCA Method A cleanup levels

and project screening levels. Based on these results, no discrete soil samples were analyzed for DRPH or ORPH.

- **Chlorinated acid herbicides.** The chlorinated acid herbicide pentachlorophenol was detected at a concentration below the MTCA Method B cleanup level and the project screening level in the composite soil sample collected from the southern portion of Area 6. Herbicides were not detected in composite soil samples collected from any of the other sampling areas. Based on these results, no discrete soil samples were analyzed for herbicides.
- **Organochlorine pesticides.** The organochlorine pesticide dieldrin was detected at a concentration below the MTCA Method B cleanup level but exceeding the applicable project screening level in the composite soil sample collected from Area 3.

  One or more of the other pesticides, including alpha-chlordane, 4,4'-DDE, 4,4'-DDD, and 4,4'-DDT, were detected at concentrations below the applicable MTCA cleanup levels (if established) and project screening levels in composite soil samples collected from Areas 1 through 9 and 11.

  To further evaluate dieldrin concentrations in Area 3, the two discrete soil samples collected from this area were analyzed. Dieldrin was not detected at concentrations exceeding the MTCA Method B cleanup level in either of these discrete soil samples.
- **RCRA 8 Metals.** Arsenic was detected at a concentration exceeding the MTCA Method A cleanup level of 20 milligrams per kilogram (mg/kg) in the composite sample collected from Area 1 (76 mg/kg). Lead was detected at a concentration exceeding the MTCA Method A cleanup level of 250 mg/kg in the composite sample collected from Area 3 (300 mg/kg), and at concentrations below the cleanup level but above the applicable project screening levels in the composite samples collected from Areas 1, 2, 4 through 7, and 11. Cadmium was detected at concentrations of 0.75 and 0.64 mg/kg in the composite samples collected from Areas 4 and 11, respectively; these concentrations are below the applicable MTCA Method A cleanup level of 2 mg/kg, but above the applicable project screening levels for these samples. Mercury was detected at concentrations of 1.6 and 1.0 mg/kg in Areas 3 and the southern portion of Area 6, respectively; these concentrations are below the applicable MTCA Method A cleanup level of 2 mg/kg, but above the applicable project screening level for these samples.

  To further evaluate metals concentrations in areas where composite sample concentrations exceeded the MTCA Method A cleanup levels and/or the project screening levels, discrete soil samples from Areas 1 through 7 and 11 were analyzed for the applicable metals. Arsenic was detected at concentrations exceeding the MTCA Method A cleanup level in discrete soil samples collected from the eastern and central portions of Area 1 (110 and 70 mg/kg, respectively). Lead was detected at concentrations exceeding the MTCA Method A cleanup level in discrete soil samples collected from Area 3 (270 and 320 mg/kg), the southern portion of Area 4 (340 mg/kg), the northwestern portion of Area 5 (320 mg/kg), and the northern portion of Area 6 (270 mg/kg). Mercury was detected at concentrations exceeding the MTCA Method A cleanup level in discrete soil samples collected from the western portion of Area 3 (2.4 mg/kg) and the southeastern portion of Area 6 (2.6 mg/kg).

  The two discrete soil samples with the highest concentrations of lead (PH-3-SS2 at 320 mg/kg and PH-4-SS3 at 340 mg/kg) and the discrete soil sample with the highest concentration of arsenic (PH-1-SS1 at 110 mg/kg) were analyzed for toxicity characteristic leaching procedure (TCLP) lead and arsenic to determine whether these areas should be designated as a dangerous

waste disposal area. TCLP lead and arsenic were not detected in these samples above the laboratory reporting limits. Concentrations of mercury detected in discrete soil samples from Areas 3 and 6 (2.4 and 2.6 mg/kg, respectively) were not above the level where TCLP analysis for mercury is required for soil disposal.

- **PCBs.** PCBs were not detected above the laboratory reporting limit in any of the composite soil samples submitted for analysis. Based on these results, no discrete soil samples were analyzed for PCBs.

Hand Auger Soil Sample Results

Based on the discrete soil sample analytical results, hand auger borings were advanced to depths of 2.75 to 4 feet bgs in Areas 1 and 3 through 6 to evaluate the depth of arsenic, lead, and mercury impacts in soil. Discrete soil samples were collected at 1-foot depth intervals in each of the hand auger borings and analyzed for one or more of these metals. Discrete hand auger soil sample analytical results are presented in Table 6 and shown on Figure 4.

Concentrations of arsenic, lead, and mercury were not detected above the applicable MTCA Method A cleanup levels in the 1- or 2-foot samples collected from any of the hand auger borings. Based on this data, the samples collected below 2 feet bgs were not analyzed.

Composite Concrete Sample Results

Composite concrete sample analytical results are presented in Tables 1, 4A, and 5 and are summarized below:

- **Petroleum Hydrocarbons.** DRPH and ORPH were not detected above laboratory reporting limits in either of the analyzed composite concrete samples.
- **RCRA 8 Metals.** Arsenic was detected at concentrations exceeding the MTCA Method A cleanup level in the composite concrete samples collected from Concrete Area 1 and Concrete Area 2 (23 and 26 mg/kg, respectively). Concentrations of barium, chromium, and lead were detected at concentrations below the applicable cleanup levels and project screening levels in composite concrete samples from both concrete areas.
- **PCBs.** PCBs were not detected above laboratory reporting limits in either of the analyzed composite concrete samples.

Asbestos Sample Results

Asbestos was not detected in any of the three samples collected from the electrical conduits within the concrete slab.

DATA VALIDATION

SoundEarth contracted with Validata, LLC to conduct a Stage 2A level quality assurance/quality control (QA/QC) review of the analytical results for soil and concrete. The data was reviewed using the guidance and QC criteria documented in *USEPA National Functional Guidelines for Organic Data Review* (EPA 1999 and 2008) and *USEPA National Functional Guidelines for Inorganic Data Review* (EPA 2010 and 2014). The QC requirements that were reviewed included sample receipt, handling, holding times, recoveries for method blanks, surrogates, spikes, field duplicates, and reporting limits.

DRPH and ORPH results for composite soil samples from Areas 1 and 4 through 12 were qualified as estimated since the laboratory indicated that hydrocarbons in the diesel range are impacting the oil range results. DRPH and ORPH results for the composite soil sample from Area 3 were qualified as estimated since the laboratory indicated that hydrocarbons in the oil range are impacting the diesel range results. The alpha-Chlordane result for the composite soil sample from Area 3 was qualified as estimated due to a relative percent difference (RPD) of detected concentrations between the two columns that exceeded 40 percent. Lead results for all discrete soil samples were qualified as estimated because the laboratory duplicate RPD for lead was outside control limits due to sample inhomogeneity.

All QA/QC criteria were confirmed to be acceptable for the soil and concrete samples, and the analytical results are considered to be acceptable for use. Copies of the Validata, LLC Data Validation Reports are provided as Attachment C.

CONCLUSIONS AND RECOMMENDATIONS

The results of the soil investigation indicate that in some locations, near-surface soils within the substation are impacted with arsenic, lead, and mercury at concentrations exceeding the applicable MTCA cleanup levels. Discrete near-surface soil samples (0 to 0.5 foot bgs) from Area 1 contained concentrations of arsenic exceeding the cleanup level. Discrete near-surface soil samples from Areas 3 through 5 and the northern portion of Area 6 contained concentrations of lead exceeding the cleanup level. Discrete near-surface soil samples from Areas 3 and the southeastern portion of Area 6 also contained concentrations of mercury exceeding the cleanup level. Concentrations of arsenic, lead, and mercury did not exceed the applicable cleanup levels in any of the discrete hand auger samples collected at or below one-foot bgs from Areas 1 and 3 through 6, indicating that impacts in these areas are limited to the upper 1 foot of soil. Samples exhibiting the highest concentrations of arsenic and lead did not exceed TCLP limits for these analytes.

No evidence of impacts from DRPH, ORPH, pesticides, herbicides, PCBs, or other metals above the applicable MTCA cleanup levels was observed in any of the near-surface soil samples collected within the substation.

Concentrations of arsenic above the applicable MTCA Method A cleanup level were identified in composite concrete samples collected from the two concrete pad areas within the fenced yard of the Property. DPRH, ORPH, and PCBs were not detected at concentrations above the applicable cleanup levels in samples from either of the composite concrete areas.

A Remediation Recommendation and Scoping Memorandum providing guidance for remediation work to address the identified near-surface soil and concrete impacts is included as Attachment A.

LIMITATIONS

The services described in this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, expressed or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report are derived, in part, from data gathered by others, and from conditions evaluated when services were performed, and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We do not warrant and are not responsible for the accuracy or validity of work performed by others, or for the impacts of changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the use of segregated portions of this report.

Respectfully,
SoundEarth Strategies, Inc.

Clare Tochilin, LG
Project Hydrogeologist

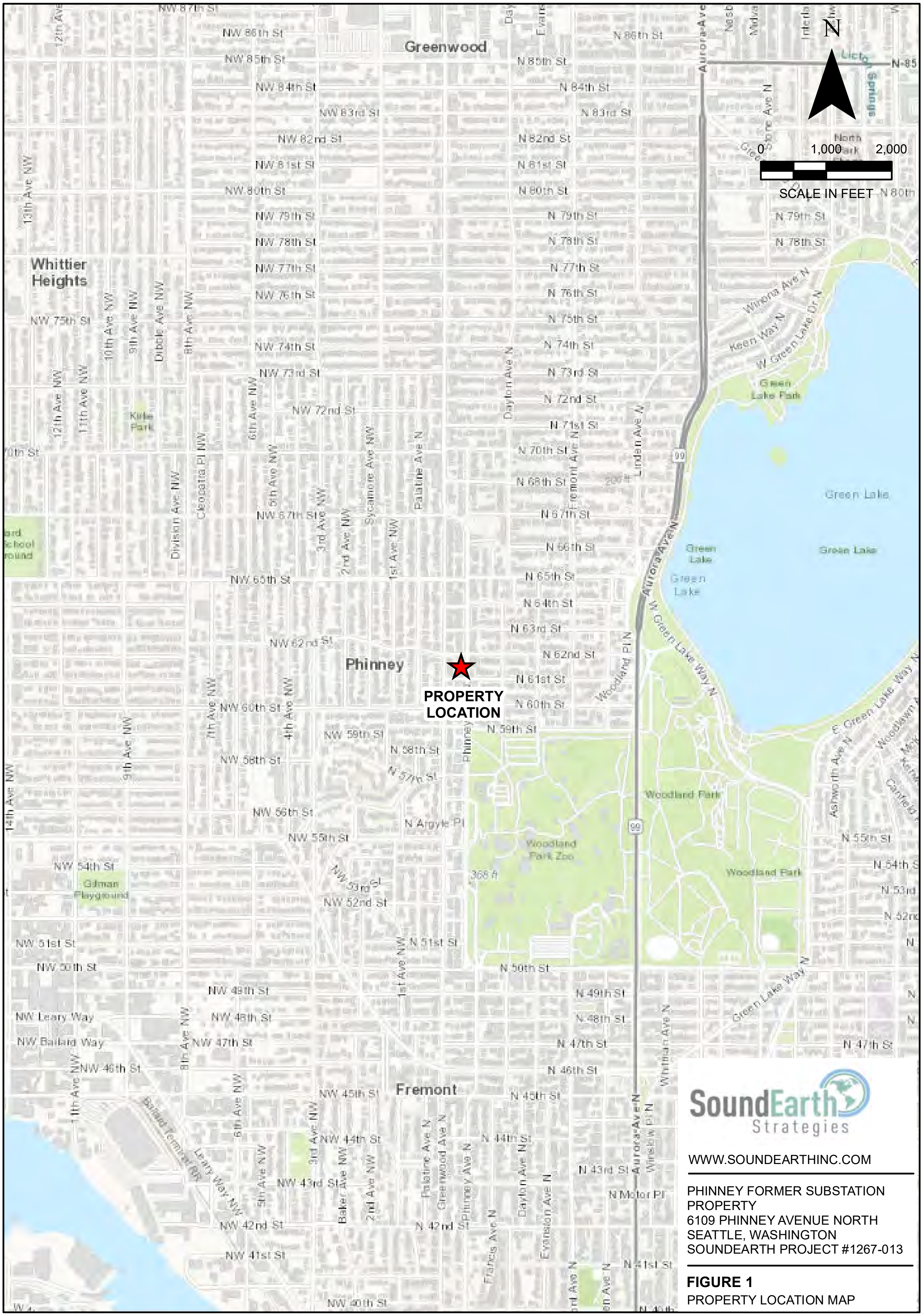
Rob Roberts
Senior Scientist

Attachments: Figure 1, Property Location Map
Figure 2, Composite Soil and Concrete Sample Analytical Results
Figure 3, Discrete Soil Sub-Sample Analytical Results for Metals and Dieldrin
Figure 4, Hand Auger Soil Sample Analytical Results for Metals
Table 1, Composite Soil and Concrete Sample Analytical Results for DRPH and ORPH
Table 2, Composite Soil Sample Analytical Results for Herbicides
Table 3A, Composite Soil Sample Analytical Results for Pesticides
Table 3B, Discrete Soil Sample Analytical Results for Pesticides
Table 4A, Composite Soil and Concrete Sample Analytical Results for RCRA 8 Metals
Table 4B, Discrete Soil Sample Analytical Results for RCRA 8 Metals
Table 5, Composite Soil and Concrete Sample Analytical Results for PCBs
Table 6, Hand Auger Soil Sample Analytical Results for Metals
A, Remediation Recommendation and Scoping Memorandum
B, Laboratory Analytical Reports
OnSite Environmental, Inc. #1802-150
OnSite Environmental, Inc. #1802-151
OnSite Environmental, Inc. #1802-151B
OnSite Environmental, Inc. #1803-167
NVL Laboratories, Inc. #1803172.00
C, Data Validation Reports

cc: Ms. Jennifer Kindred, Seattle City Light

CJT/CER:rt/hsb

FIGURES



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PHINNEY FORMER SUBSTATION PROPERTY
6109 PHINNEY AVENUE NORTH
SEATTLE, WASHINGTON
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FIGURE 1
PROPERTY LOCATION MAP

4/26/2018

P:\1267 SEATTLE CITY LIGHT\1267-013 PHINNEY FORMER SUBSTATION\TECHNICAL\CAD\2018\ENVIRONMENTAL CHARACTERIZATION REPORT\1267-013_2018_SD_AREAS.DWG

AREA 5
AREA 4
AREA 11
AREA 12
AREA 10
AREA 9
AREA 8
AREA 7
AREA 6
AREA 1
AREA 2
AREA 3
CONCRETE AREA 1
CONCRETE AREA 2
CONCRETE PAD
DRIVEWAY
SS1
SS2
SS3
SS4
SS5
01
02
03
ACM-01A
ACM-01B
ACM-01C

PARCEL: 9523101290
6315 PHINNEY AVENUE NORTH

SINGLE FAMILY RESIDENCE
6109 PHINNEY AVENUE NORTH

PHINNEY AVENUE NORTH

Area	Sample ID	Lead
5	PH-5-SS1,SS2,SS3,SS4,SS5 Comp	**140**

Area	Sample ID	Arsenic
CON1	PH-CON1-01,03,02 Comp	**23**

Area	Sample ID	Cadmium	Lead
4	PH-4-SS1,SS2,SS3 Comp	**0.75**	**190**

Area	Sample ID	Mercury
6	PH-6-SS2,SS1 Comp	**1.0**

Area	Sample ID	Lead
6	PH-6-SS3,SS4,SS5 Comp	**160**

Area	Sample ID	Arsenic
CON2	PH-CON2-01,03,02 Comp	**26**

Area	Sample ID	Cadmium	Lead
11	PH-11-SS1,SS2,SS3,SS4 Comp	**0.64**	**74**

Area	Sample ID	Dieldrin	Lead	Mercury
3	PH-3-SS1,SS2 Comp	**33**	**300**	**1.6**

Area	Sample ID	Arsenic	Lead
1	PH-1-SS1,SS2,SS3 Comp	**76**	**87**

Area	Sample ID	Lead
2	PH-2-SS1,SS2,SS3 Comp	**100**

Area	Sample ID	Lead
7	PH-7-SS3,SS2,SS1 Comp	**100**

N

0 5 10

APPROXIMATE SCALE IN FEET

	Arsenic	Cadmium	Lead	Mercury	Dieldrin
MTCA Method A Cleanup Level	20	2	250	2	62.5

LEGEND

- DISCRETE SOIL SUB-SAMPLE
- CONCRETE SUB-SAMPLE
- ASBESTOS SAMPLE
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SOIL SAMPLING AREA
- CONCRETE SAMPLING AREA
- MTCA — WASHINGTON STATE MODEL TOXICS CONTROL ACT
- RED — DENOTES CONCENTRATION EXCEEDS MTCA CLEANUP LEVEL
- METALS RESULTS SHOWN IN MILLIGRAMS PER KILOGRAM
- DIELDRIN RESULTS SHOWN IN MICROGRAMS PER KILOGRAM

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FIGURE 2
COMPOSITE SOIL AND CONCRETE ANALYTICAL RESULTS EXCEEDING PROJECT SCREENING LEVELS

4/26/2018

P:\1267 SEATTLE CITY LIGHT\1267-013 PHINNEY FORMER SUBSTATION\TECHNICAL\CAD\2018\ENVIRONMENTAL CHARACTERIZATION REPORT\1267-013_2018_SD.DWG

N

0 5 10

APPROXIMATE SCALE IN FEET

	Arsenic	Lead	Mercury	Dieldrin
MTCA Cleanup Level	20	250	2	62.5

PHINNEY AVENUE NORTH

SINGLE FAMILY RESIDENCE
6109 PHINNEY AVENUE NORTH

PARCEL: 9523101290
6315 PHINNEY AVENUE NORTH

AREA 5
SS4 PB: 80
SS5 PB: 140
CD: <0.60
PB: 85
SS1 AREA 4
AREA 11
SS1 CD: 1.7
PB: 160
PB: 320 SS3
SS5 PB: 270
SS1
01
03
CONCRETE AREA 1
SS2 CD: <0.62
PB: 88
CONCRETE PAD
ACM-01C
02
ACM-01B
ACM-01A
CD: <0.64
PB: 49
SS2
SS1
AREA 12
AREA 10
AREA 11
AREA 4
AREA 9
SS2
SS4 PB: 93
PB: 170 SS2
SS2
AREA 5
03
SS3 CD: 1.3
PB: 340
AREA 6
CONCRETE AREA 2
01
02
SS3
CD: <0.56
PB: 47
CD: <0.57
PB: 52
AREA 11
SS4
SS3 PB: 59
PB: 110 SS1
SS1
AREA 8
SS2
SS3
SS3 AS: <14
PB: 250
DRIVEWAY
AS: 70
PB: 66
SS2
AREA 1
SS1 AS: 110
PB: 65
SS1 PB: 84
AREA 7
SS2 PB: 40
SS3 PB: 69
SS1 HG: <0.32
AREA 6
SS2 HG: 2.6
SS3 PB: 98
PB: 320
HG: 2.4
SS2 DIELDRIN: <15
AREA 2
SS2 PB: 140
PB: 270
HG: 1.6
DIELDRIN: 48
SS1 PB: 40
AREA 3
SS1

LEGEND

- DISCRETE SOIL SUB-SAMPLE
- CONCRETE SUB-SAMPLE
- ASBESTOS SAMPLE
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SOIL SAMPLING AREA
- CONCRETE SAMPLING AREA

AS	ARSENIC
CD	CADMIUM
PB	LEAD
HG	MERCURY
<	RESULT BELOW LABORATORY REPORTING LIMIT
MTCA	WASHINGTON STATE MODEL TOXICS CONTROL ACT
RED	DENOTES CONCENTRATION EXCEEDS MTCA CLEANUP LEVEL
	METALS RESULTS SHOWN IN MILLIGRAMS PER KILOGRAM
	DIELDRIN RESULTS SHOWN IN MICROGRAMS PER KILOGRAM

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FIGURE 3
DISCRETE SOIL SUB-SAMPLE ANALYTICAL RESULTS FOR METALS AND DIELDRIN

4/26/2018

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AREA 5

AREA 4

AREA 11

AREA 12

AREA 10

AREA 9

AREA 6

AREA 8

AREA 7

AREA 1

AREA 2

AREA 3

CONCRETE AREA 1

CONCRETE AREA 2

CONCRETE PAD

ACM-01C

ACM-01B

ACM-01A

SS1 SS2 SS3 SS4 SS5

HA-1 HA-2

01 02 03

PARCEL: 9523101290
6315 PHINNEY AVENUE NORTH

SINGLE FAMILY RESIDENCE
6109 PHINNEY AVENUE NORTH

DRIVEWAY

PHINNEY AVENUE NORTH

Area	Depth (ft bgs)	Lead (mg/kg)
5	1	170
	2	8.6

Area	Depth (ft bgs)	Lead (mg/kg)
6 (HA-2)	1	190
	2	21

Area	Depth (ft bgs)	Lead (mg/kg)
4	1	15
	2	<6.1

Area	Depth (ft bgs)	Lead (mg/kg)	Mercury (mg/kg)
3	1	42	<0.31
	2	14	0.92

Area	Depth (ft bgs)	Arsenic (mg/kg)
1	1	<12
	2	<11

Area	Depth (ft bgs)	Mercury (mg/kg)
6 (HA-1)	1	0.94
	2	0.48

	Arsenic (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)
MTCA Method A Cleanup Level	20	250	2

N

0 5 10

APPROXIMATE SCALE IN FEET

LEGEND

- DISCRETE SOIL SUB-SAMPLE
- CONCRETE SUB-SAMPLE
- ASBESTOS SAMPLE
- HAND AUGER BORING
- PROPERTY BOUNDARY
- PARCEL BOUNDARY
- SOIL SAMPLING AREA
- CONCRETE SAMPLING AREA
- ft bgs — FEET BELOW GROUND SURFACE
- mg/kg — MILLIGRAMS PER KILOGRAM
- < — RESULT BELOW LABORATORY REPORTING LIMIT
- MTCA — WASHINGTON STATE MODEL TOXICS CONTROL ACT

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FIGURE 4
HAND AUGER SOIL SAMPLE ANALYTICAL RESULTS FOR METALS

TABLES

Table 1
Composite Soil and Concrete Sample Analytical Results for DRPH and ORPH
Phinney Former Substation Property
6109 Phinney Avenue North
Seattle, Washington

Sample ID	Sampled By	Date Sampled	Sample Type	Depth (feet bgs)	Analytical Results (milligrams per kilogram) DRPH[(1)]	ORPH[(1)]
PH-1-SS1,SS2,SS3 Comp	SoundEarth	02/13/18	Soil	0 - 0.5	<41[U1, J]	570[J]
PH-2-SS1,SS2,SS3 Comp			Soil	0 - 0.5	<29	210
PH-3-SS1,SS2 Comp			Soil	0 - 0.5	95[N, J]	690[J]
PH-4-SS1,SS2,SS3 Comp			Soil	0 - 0.5	130[J]	370[N1, J]
PH-5-SS1,SS2,SS3,SS4,SS5 Comp			Soil	0 - 0.5	99[J]	290[N1, J]
PH-6-SS2,SS1 Comp			Soil	0 - 0.5	110	590
PH-6-SS3,SS4,SS5 Comp			Soil	0 - 0.5	87[J]	370[N1, J]
PH-7-SS3,SS2,SS1 Comp			Soil	0 - 0.5	51[J]	140[N1, J]
PH-8-SS1,SS2,SS3 Comp			Soil	0 - 0.5	66[J]	140[N1, J]
PH-9-SS1,SS2,SS3 Comp			Soil	0 - 0.5	66[J]	250[N1, J]
PH-10-SS1,SS2,SS3 Comp			Soil	0 - 0.5	160[J]	420[N1, J]
PH-11-SS1,SS2,SS3,SS4 Comp			Soil	0 - 0.5	140[J]	270[N1, J]
PH-12-SS1,SS2 Comp			Soil	0 - 0.5	49[J]	72[N1, J]
PH-CON1-01,03,02 Comp			Concrete	--	<26	<52
PH-CON2-01,03,02 Comp			Concrete	--	<26	<52
MTCA Cleanup Level for Soil[(2)]					**2,000**	**2,000**

NOTES:

Sample analyses conducted by OnSite Environmental, Inc. of Redmond, Washington.

[(1)]Analyzed by Method NWTPH-Dx.

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

OnSite Environmental, Inc. Laboratory Notes:

[N1] Hydrocarbons in the diesel range are impacting the lube oil range result.

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

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

Data Validation Report Note:

[J]The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

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

-- = not applicable

bgs = below ground surface

DRPH = diesel-range petroleum hydrocarbons

MTCA = Washington State Model Toxics Control Act

NWTPH = Northwest Total Petroleum Hydrocarbon

ORPH = oil-range petroleum hydrocarbons

SoundEarth = SoundEarth Strategies, Inc.

WAC = Washignton Administrative Code

Table 2
Composite Soil Sample Analytical Results for Herbicides
Phinney Former Substation Property
6109 Phinney Avenue North
Seattle, Washington

Sample ID	Sampled By	Date Sampled	Depth (feet bgs)	Analytical Results[1] (micrograms per kilogram)										
				Dalapon	Dicamba	MCPP	MCPA	Dichlorprop	2,4-D	Pentachlorophenol	2,4,5-TP (Silvex)	2,4,5-T	2,4-DB	Dinoseb
PH-1-SS1,SS2,SS3 Comp	SoundEarth	02/13/18	0 - 0.5	<270	<11	<1,100	<1,100	<84	<11	<5.6	<11	<11	<11	<11
PH-2-SS1,SS2,SS3 Comp			0 - 0.5	<260	<11	<1,100	<1,100	<81	<11	<5.5	<11	<11	<11	<11
PH-3-SS1,SS2 Comp			0 - 0.5	<310	<13	<1,300	<1,300	<97	<13	<6.5	<13	<13	<13	<13
PH-4-SS1,SS2,SS3 Comp			0 - 0.5	<280	<11	<1,100	<1,100	<85	<11	<5.7	<11	<11	<11	<11
PH-5-SS1,SS2,SS3,SS4,SS5 Comp			0 - 0.5	<280	<11	<1,100	<1,100	<86	<11	<5.7	<11	<11	<11	<11
PH-6-SS2,SS1 Comp			0 - 0.5	<280	<11	<1,100	<1,100	<86	<11	6.4	<12	<12	<12	<11
PH-6-SS3,SS4,SS5 Comp			0 - 0.5	<290	<12	<1,200	<1,200	<89	<12	<6.0	<12	<12	<12	<12
PH-7-SS3,SS2,SS1 Comp			0 - 0.5	<260	<11	<1,100	<1,100	<82	<11	<5.5	<11	<11	<11	<11
PH-8-SS1,SS2,SS3 Comp			0 - 0.5	<260	<10	<1,000	<1,000	<79	<10	<5.3	<11	<11	<11	<11
PH-9-SS1,SS2,SS3 Comp			0 - 0.5	<280	<11	<1,100	<1,100	<86	<11	<5.8	<12	<12	<12	<12
PH-10-SS1,SS2,SS3 Comp			0 - 0.5	<260	<11	<1,100	<1,100	<81	<11	<5.4	<11	<11	<11	<11
PH-11-SS1,SS2,SS3,SS4 Comp			0 - 0.5	<270	<11	<1,100	<1,100	<83	<11	<5.6	<11	<11	<11	<11
PH-12-SS1,SS2 Comp			0 - 0.5	<260	<11	<1,000	<1,000	<79	<11	<5.3	<11	<11	<11	<11
MTCA Cleanup Level for Soil				**2,400,000**[2]	**2,400,000**[2]	**80,000**[2]	**10,000**[2]	**NE**	**800,000**[2]	**2,500**[3]	**640,000**[2]	**800,000**[2]	**640,000**[2]	**80,000**[2]

NOTES:

Sample analyses conducted by OnSite Environmental, Inc. of Redmond, Washington.

[1]Analyzed by EPA Method 8151A.

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

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

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

2,4-D = 2,4-dichlorophenoxyacetic acid

2,4,5-TP = 2-(2,4,5-trichlorophenoxy)propanoic acid

2,4,5-T = 2,4,5-trichlorophenoxyacetic acid

2,4-DB = 4-(2,4-dichlorophenoxy)butyric acid

bgs = below ground surface

CLARC = Cleanup Levels and Risk Calculations

EPA = U.S. Environmental Protection Agency

MCPA = 2-methyl-4-chlorophenoxyacetic acid

MCPP = mecoprop or methylchlorophenoxypropionic acid

MTCA = Washington State Model Toxics Control Act

NE = not established

SoundEarth = SoundEarth Strategies, Inc.

WAC = Washington Administrative Code

Table 3A
Composite Soil Sample Analytical Results for Pesticides
Phinney Former Substation Property
6109 Phinney Avenue North
Seattle, Washington

Sample ID	Date Sampled	Depth (feet bgs)	Analytical Results[(1)] (micrograms per kilogram)																			
			alpha-BHC	gamma-BHC	beta-BHC	delta-BHC	Heptachlor	Aldrin	Heptachlor Epoxide	gamma-Chlordane	alpha-Chlordane	4,4'-DDE	Endosulfan I	Dieldrin	Endrin	4,4'-DDD	Endosulfan II	4,4'-DDT	Endrin Aldehyde	Methoxychlor	Endosulfan Sulfate	Endrin Ketone	Toxaphene
PH-1-SS1,SS2,SS3 Comp	02/13/18	0 - 0.5	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	<12	<12	<12	<5.9	<12	<12	<12	<12	17	<12	<12	<12	<12	<59
PH-2-SS1,SS2,SS3 Comp		0 - 0.5	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<11	<11	<11	<5.7	<11	<11	<11	<11	12	<11	<11	<11	<11	<57
PH-3-SS1,SS2 Comp		0 - 0.5	<6.9	<6.9	<6.9	<6.9	<6.9	<6.9	<6.9	<14	41[P, J]	<14	<6.9	**33***	<14	<14	<14	33	<14	<14	<14	<14	<69
PH-4-SS1,SS2,SS3 Comp		0 - 0.5	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<12	<12	<12	<6.0	<12	<12	<12	<12	52	<12	<12	<12	<12	<60
PH-5-SS1,SS2,SS3,SS4,SS5 Comp		0 - 0.5	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<6.0	<12	<12	<12	<6.0	<12	<12	<12	<12	22	<12	<12	<12	<12	<60
PH-6-SS2,SS1 Comp		0 - 0.5	<6.1	<6.1	<6.1	<6.1	<6.1	<6.1	<6.1	<12	<12	41	<6.1	<12	<12	12	<12	270	<12	<12	<12	<12	<61
PH-6-SS3,SS4,SS5 Comp		0 - 0.5	<6.3	<6.3	<6.3	<6.3	<6.3	<6.3	<6.3	<13	<13	<13	<6.3	<13	<13	<13	<13	48	<13	<13	<13	<13	<63
PH-7-SS3,SS2,SS1 Comp		0 - 0.5	<5.8	<5.8	<5.8	<5.8	<5.8	<5.8	<5.8	<12	<12	<12	<5.8	<12	<12	<12	<12	57	<12	<12	<12	<12	<58
PH-8-SS1,SS2,SS3 Comp		0 - 0.5	<5.6	<5.6	<5.6	<5.6	<5.6	<5.6	<5.6	<11	<11	<11	<5.6	<11	<11	<11	<11	18	<11	<11	<11	<11	<56
PH-9-SS1,SS2,SS3 Comp		0 - 0.5	<6.1	<6.1	<6.1	<6.1	<6.1	<6.1	<6.1	<12	<12	<12	<6.1	<12	<12	<12	<12	25	<12	<12	<12	<12	<61
PH-10-SS1,SS2,SS3 Comp		0 - 0.5	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<5.7	<11	<11	<11	<5.7	<11	<11	<11	<11	<11	<11	<11	<11	<11	<57
PH-11-SS1,SS2,SS3,SS4 Comp		0 - 0.5	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	<5.9	<12	<12	<12	<5.9	<12	<12	<12	<12	12	<12	<12	<12	<12	<59
PH-12-SS1,SS2 Comp		0 - 0.5	<5.6	<5.6	<5.6	<5.6	<5.6	<5.6	<5.6	<11	<11	<11	<5.6	<11	<11	<11	<11	<11	<11	<11	<11	<11	<56
MTCA Cleanup Level for Soil			**158.73**[(2)]	**909**[(2)]	**555**[(2)]	**NE**	**222**[(2)]	**58.8**[(2)]	**109.89**[(2)]	**NE**	**NE**	**2,941**[**(2)**]	**NE**	**62.5**[(2)]	**24,000**[(3)]	**4,166**[(2)]	**NE**	**2,941**[(2)]	**NE**	**400,000**[(3)]	**480,000**[(3)]	**NE**	**909**[(2)]

NOTES:

Bold denotes concentration exceeds Project Screening Level but below MTCA Cleanup Level.

Sample analyses conducted by OnSite Environmental, Inc. of Redmond, Washington.

*Project Screening Level for dieldrin (31.25 micrograms per kilogram) determined by dividing the MTCA Cleanup Level by the number of discrete samples composited.

[(1)]Analyzed by EPA Method 8081B.

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

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

OnSite Environmental, Inc. Laboratory Note:

[P]The relative percent difference of the detected concentrations between the two columns is greater than 40.

Data Validation Report Note:

[J]The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

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

bgs = below ground surface

BHC = hexachlorocyclohexane

CLARC = Cleanup Levels and Risk Calculations

DDD = dichlorodiphenyldichloroethane

DDE = dichlorodiphenyldichloroethylene

DDT = dichlorodiphenyltrichloroethane

EPA = U.S. Environmental Protection Agency

MTCA = Washington State Model Toxics Control Act

NE = not established

WAC = Washington Administrative Code

Table 4A
Composite Soil and Concrete Sample Analytical Results for RCRA 8 Metals
Phinney Former Substation Property
6109 Phinney Avenue North
Seattle, Washington

Sample ID	Date Sampled	Sample Type	Depth (feet bgs)	Analytical Results (milligrams per kilogram)							
				Arsenic[1]	Barium[1]	Cadmium[1]	Chromium[1]	Lead[1]	Mercury[2]	Selenium[1]	Silver[1]
PH-1-SS1,SS2,SS3 Comp	02/13/18	Soil	0 - 0.5	**76**	110	<0.59	29	**87**	<0.30	<12	<1.2
PH-2-SS1,SS2,SS3 Comp		Soil	0 - 0.5	<11	46	<0.57	16	**100**	<0.29	<11	<1.1
PH-3-SS1,SS2 Comp		Soil	0 - 0.5	<14	92	0.79	32	**300**	**1.6**	<14	<1.4
PH-4-SS1,SS2,SS3 Comp		Soil	0 - 0.5	<12	62	**0.75**	27	**190**	<0.30	<12	<1.2
PH-5-SS1,SS2,SS3,SS4,SS5 Comp		Soil	0 - 0.5	<12	99	<0.60	22	**140**	<0.30	<12	<1.2
PH-6-SS2,SS1 Comp		Soil	0 - 0.5	<12	59	0.61	17	120	**1.0**	<12	<1.2
PH-6-SS3,SS4,SS5 Comp		Soil	0 - 0.5	<13	130	<0.63	27	**160**	<0.32	<13	<1.3
PH-7-SS3,SS2,SS1 Comp		Soil	0 - 0.5	<12	45	<0.58	24	**100**	<0.29	<12	<1.2
PH-8-SS1,SS2,SS3 Comp		Soil	0 - 0.5	<11	28	<0.56	15	61	<0.28	<11	<1.1
PH-9-SS1,SS2,SS3 Comp		Soil	0 - 0.5	<12	53	<0.61	15	81	<0.31	<12	<1.2
PH-10-SS1,SS2,SS3 Comp		Soil	0 - 0.5	<11	54	<0.57	15	80	<0.29	<11	<1.1
PH-11-SS1,SS2,SS3,SS4 Comp		Soil	0 - 0.5	<12	46	**0.64**	15	**74**	<0.29	<12	<1.2
PH-12-SS1,SS2 Comp		Soil	0 - 0.5	<11	31	0.59	15	72	0.36	<11	<1.1
PH-CON1-01,03,02 Comp		Concrete	--	**23**	83	<0.52	19	<5.2	<0.26	<10	<1.0
PH-CON2-01,03,02 Comp		Concrete	--	**26**	87	<0.52	20	5.9	<0.26	<10	<1.0
MTCA Cleanup Level for Soil				**20**[3]	**16,000**[4]	**2**[3]	**2,000**[3]	**250**[3]	**2**[3]	**400**[4]	**400**[4]

NOTES:

Red denotes concentration exceeds MTCA cleanup level for soil.

Bold denotes concentration exceeds Project Screening Level for soil.

Project Screening Levels are variable and determined by dividing the MTCA Cleanup Level by the number of discrete samples composited.

[1]Analyzed by EPA Method 6010D.

[2]Analyzed by EPA Method 7471B.

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

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

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

bgs = below ground surface

CLARC = Cleanup Levels and Risk Calculations

EPA = U.S. Environmental Protection Agency

MTCA = Washington State Model Toxics Control Act

RCRA = Resource Conservation and Recovery Act

WAC = Washington Administrative Code

Table 5
Composite Soil and Concrete Sample Analytical Results for PCBs
Phinney Former Substation Property
6109 Phinney Avenue North
Seattle, Washington

Sample ID	Sampled By	Date Sampled	Sample Type	Depth (feet bgs)	Analytical Results[1] (milligrams per kilogram)							
					Arocolor 1016	Arocolor 1221	Arocolor 1232	Arocolor 1242	Arocolor 1248	Arocolor 1254	Arocolor 1260	Total PCBs[2]
PH-1-SS1,SS2,SS3 Comp	SoundEarth	02/13/18	Soil	0 - 0.5	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059
PH-2-SS1,SS2,SS3 Comp			Soil	0 - 0.5	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057
PH-3-SS1,SS2 Comp			Soil	0 - 0.5	<0.069	<0.069	<0.069	<0.069	<0.069	<0.069	<0.069	<0.069
PH-4-SS1,SS2,SS3 Comp			Soil	0 - 0.5	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060
PH-5-SS1,SS2,SS3,SS4,SS5 Comp			Soil	0 - 0.5	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060	<0.060
PH-6-SS2,SS1 Comp			Soil	0 - 0.5	<0.061	<0.061	<0.061	<0.061	<0.061	<0.061	<0.061	<0.061
PH-6-SS3,SS4,SS5 Comp			Soil	0 - 0.5	<0.063	<0.063	<0.063	<0.063	<0.063	<0.063	<0.063	<0.063
PH-7-SS3,SS2,SS1 Comp			Soil	0 - 0.5	<0.058	<0.058	<0.058	<0.058	<0.058	<0.058	<0.058	<0.058
PH-8-SS1,SS2,SS3 Comp			Soil	0 - 0.5	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056
PH-9-SS1,SS2,SS3 Comp			Soil	0 - 0.5	<0.061	<0.061	<0.061	<0.061	<0.061	<0.061	<0.061	<0.061
PH-10-SS1,SS2,SS3 Comp			Soil	0 - 0.5	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057	<0.057
PH-11-SS1,SS2,SS3,SS4 Comp			Soil	0 - 0.5	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059	<0.059
PH-12-SS1,SS2 Comp			Soil	0 - 0.5	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056	<0.056
PH-CON1-01,03,02 Comp			Concrete	--	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052
PH-CON2-01,03,02 Comp			Concrete	--	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052	<0.052
MTCA Cleanup Level for Soil[3]					--	--	--	--	--	--	--	**1.0**

NOTES:

Sample analyses conducted by OnSite Environmental, Inc. of Redmond, Washington.

[1]Analyzed by EPA Method 8082A.

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

[3]Total PCBs are calculated by summing the detected PCB concentrations.

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

bgs = below ground surface

EPA = U.S. Environmental Protection Agency

MTCA = Washington State Model Toxics Control Act

PCB = polychlorinated biphenyl

SoundEarth = SoundEarth Strategies, Inc.

WAC = Washington Administrative Code

Table 6
Hand Auger Soil Sample Analytical Results for Metals
Phinney Former Substation Property
6109 Phinney Avenue North
Seattle, Washington

Sample ID	Date Sampled	Depth (feet bgs)	Analytical Results (milligrams per kilogram)		
			Arsenic[1]	Lead[1]	Mercury[2]
PH-01-HA1-01	03/16/18	1	<12	--	--
PH-01-HA1-02		2	<11	--	--
PH-03-HA1-01		1	--	42	<0.31
PH-03-HA1-02		2	--	14	0.92
PH-04-HA1-01		1	--	15	--
PH-04-HA1-02		2	--	<6.1	--
PH-05-HA1-01		1	--	170	--
PH-05-HA1-02		2	--	8.6	--
PH-06-HA1-01		1	--	--	0.94
PH-06-HA1-02		2	--	--	0.48
PH-06-HA2-01		1	--	190	--
PH-06-HA2-02		2	--	21	--
MTCA Cleanup Level for Soil[3]			**20**	**250**	**2**

NOTES:

Sample analyses conducted by OnSite Environmental Inc. of Redmond, Washington.

[1]Samples analyzed by EPA Method 6010D.

[2]Samples analyzed by EPA Method 7471B.

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

-- = not analyzed

< = less than laboratory reporting limit

bgs = below ground surface

EPA = U.S. Environmental Protection Agency

MTCA = Washington State Model Toxics Control Act

WAC = Washington Administrative Code

ATTACHMENT A
REMEDIATION RECOMMENDATION AND SCOPING MEMORANDUM

SoundEarth Strategies, Inc.
2811 Fairview Avenue East, Suite 2000
Seattle, Washington 98102

May 8, 2018

Ms. Shannon Straws
Seattle City Light
P.O. Box 30423
Seattle, Washington 98124

SUBJECT: ATTACHMENT A—REMEDIATION RECOMMENDATION AND SCOPING MEMORANDUM
Phinney Former Substation Property
6109 Phinney Avenue North
Seattle, Washington
Project Number: 1267-013-01

Dear Ms. Straws:

SoundEarth Strategies, Inc. (SoundEarth) has prepared this memorandum as an attachment to the Environmental Characterization Report to provide guidance for remediation work to address identified near-surface soil and concrete impacts at the Phinney Former Substation Property, located at 6109 Phinney Avenue North in Seattle, Washington (the Property).

REMEDIATION SCOPE

Based on the results of the near-surface and hand auger soil investigations, SoundEarth has prepared the following recommendations, which detail remediation work elements that will remove contaminated soil and concrete identified at the Property and verify that the remaining soil does not exceed applicable Washington State Model Toxic Control Act (MTCA) cleanup levels. SoundEarth has identified the following remediation work elements for Seattle City Light's selected remediation contractor:

- Prepare a health and safety plan.
- Perform public and private utility locates.
- Prepare and implement a temporary erosion and sediment control plan, as well as monitoring and updating control measures, as needed.
- Obtain applicable permitting, which may include fill and grading permits and street use permits. It is recommended that the contractor be responsible for submitting a traffic control plan as necessary.
- Install temporary security fencing around the Property.
- Excavate contaminated soil to a depth of 12 inches below ground surface (bgs), as indicated in Figure C-1. The actual depth of contamination will be determined by verification sample results in each area. It is recommended that confirmation samples be collected at the minimum proposed excavation depth and resampled following additional excavation if contamination remains above MTCA cleanup levels.

- Preserve vegetation in the landscaped areas as directed by Seattle City Light. An air knife and vacuum truck may be used to remove soil around root systems of selected trees. It is recommended that the soil be replaced the same day using clean amended soil as specified by Seattle City Light. An arborist representing Seattle City Light may be on-site during these activities.
- Backfill and compaction of excavated areas per Seattle City Light's restoration plan.
- Haul soil for disposal at a properly permitted and authorized solid waste landfill. It is recommended that the contractor coordinate with all disposal facilities. Seattle City Light will obtain necessary bill(s) of lading prior to the start of work.
- Protect utilities, fences, adjacent structures, and vegetation outside of the excavation area, or as directed by Seattle City Light.
- Implement dust control measures during soil disturbing activities.

Based on discrete near-surface and hand auger soil sample results, recommended excavation activities include the removal of impacted soil to the following depths (Figure C-1):

- 12 inches bgs in the central and eastern portion of Area 1, all of Area 3, the southern portion of Area 4, the northwestern portion of Area 5, and the northern portion of Area 6. These 12-inch-deep excavation areas are shown shaded in green on Figure C-1.

The Environmental Representative will be present during remediation activities and will be responsible for the following:

- Observe and document field activities, including erosion control measures.
- Monitor remediation activities for compliance with applicable environmental codes and regulations.
- Collect confirmation soil samples from excavated areas.
- Observe backfilling activities.

In addition, if vactor removal of soils from vegetation roots is required, a Certified Arborist will be on-site to observe vactor excavation activities and restoration work in the root zones.

Samples collected during remediation activities will be submitted to Seattle City Light's contracted environmental laboratory. Sampling strategies and locations will be defined in consultation with Seattle City Light. Chemical analyses for soil will include arsenic, lead, and mercury, depending on the remedial area. Samples will be analyzed on a 24-hour turnaround time. Laboratory reports will undergo data validation.

Respectfully,
SoundEarth Strategies, Inc.

Clare Tochilin, LG
Project Hydrogeologist

Rob Roberts
Senior Scientist

Attachment: Figure A-1, Remedial Excavation Plan

CJT/CER:rt/hsb

FIGURE


AREA 5
SS4
SS5
AREA 4
SS1
AREA 11
SS1
SS3
HA-1
HA-2
SS5
SS1
01
03
CONCRETE AREA 1
SS2
CONCRETE PAD
ACM-01C
02
ACM-01B
ACM-01A
SS1
SS2
AREA 12
SS2
AREA 10
AREA 11
AREA 4
AREA 9
SS2
SS4
SS2
AREA 5
PARCEL: 9523101290
6315 PHINNEY AVENUE NORTH
03
SS3
HA-1
AREA 6
CONCRETE AREA 2
01
SS3
SS3
02
SS3
AREA 11
SS4
SS3
SS1
AREA 8
SS1
SS2
SS3
SS3
HA-1
SS2
AREA 1
DRIVEWAY
SS1
SS1
AREA 7
SS2
SS3
SS3
AREA 2
SS2
SS1
SS1
AREA 6
SS2
HA-1
SS2
HA-1
AREA 3
SS1
SINGLE FAMILY RESIDENCE
6109 PHINNEY AVENUE NORTH
PHINNEY AVENUE NORTH
N
0
5
10
APPROXIMATE SCALE IN FEET
LEGEND
DISCRETE SOIL SUB-SAMPLE
CONCRETE SUB-SAMPLE
ASBESTOS SAMPLE
HAND AUGER BORING
PROPERTY BOUNDARY
PARCEL BOUNDARY
AREA TO BE EXCAVATED TO A DEPTH OF 12 INCHES BELOW GROUND SURFACE
CONCRETE PAD AREAS TO BE REMOVED
SoundEarth Strategies
WWW.SOUNDEARTHINC.COM
PHINNEY FORMER SUBSTATION PROPERTY
6109 PHINNEY AVENUE NORTH
SEATTLE, WASHINGTON
SOUNDEARTH PROJECT #1267-013
FIGURE A-1
REMEDIAL EXCAVATION PLAN
4/26/2018
P:\1267 SEATTLE CITY LIGHT\1267-013 PHINNEY FORMER SUBSTATION\TECHNICAL\CAD\2018\ENVIRONMENTAL CHARACTERIZATION REPORT\1267-013_2018_EXCA.DWG

ATTACHMENT B
LABORATORY ANALYTICAL REPORTS

OnSite Environmental, Inc. #1802-150

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

February 27, 2018

Rob Roberts
Sound Earth Strategies
2811 Fairview Avenue East, Suite 2000
Seattle, WA 98102

Re: Analytical Data for Project 1267-013
Laboratory Reference No. 1802-150

Dear Rob:

Enclosed are the analytical results and associated quality control data for samples submitted on February 14, 2018.

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

Date of Report: February 27, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-150
Project: 1267-013

Case Narrative

Samples were collected on February 13, 2018 and received by the laboratory on February 14, 2018. 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.

Date of Report: February 27, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-150
Project: 1267-013

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-CON2-01,03,02 Comp.**					
Laboratory ID:	02-150-01,02,03 Comp.					
Diesel Range Organics	**ND**	26	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**ND**	52	NWTPH-Dx	2-15-18	2-16-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***100***	***50-150***				
Client ID:	**PH-CON1-01,03,02 Comp.**					
Laboratory ID:	02-150-04,05,06 Comp.					
Diesel Range Organics	**ND**	26	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**ND**	52	NWTPH-Dx	2-15-18	2-16-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***78***	***50-150***				

Date of Report: February 27, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-150
Project: 1267-013

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0215S2					
Diesel Range Organics	**ND**	25	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	2-15-18	2-16-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
o-Terphenyl	***87***	***50-150***				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	02-150-01,02,03 Comp.									
	ORIG	DUP								
Diesel Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						***100*** ***94***	***50-150***			

Date of Report: February 27, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-150
Project: 1267-013

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-CON2-01,03,02 Comp.**					
Laboratory ID:	02-150-01,02,03 Comp.					
Aroclor 1016	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***86***	***40-134***				
Client ID:	**PH-CON1-01,03,02 Comp.**					
Laboratory ID:	02-150-04,05,06 Comp.					
Aroclor 1016	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***89***	***40-134***				

Date of Report: February 27, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-150
Project: 1267-013

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0220S2					
Aroclor 1016	**ND**	0.050	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.050	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.050	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.050	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.050	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.050	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.050	EPA 8082A	2-20-18	2-20-18	
Surrogate:	***Percent Recovery***	***Control Limits***				
DCB	***90***	***40-134***				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0220S2										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	**0.456**	**0.463**	0.500	0.500	N/A	**91**	**93**	56-130	2	15	
Surrogate:											
DCB						***86***	***91***	***40-134***			

Date of Report: February 27, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-150
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-150-01,02,03 Comp.					
Client ID:	**PH-CON2-01,03,02 Comp.**					
Arsenic	**26**	10	6010D	2-23-18	2-26-18	
Barium	**87**	5.2	6010D	2-23-18	2-26-18	
Cadmium	**ND**	0.52	6010D	2-23-18	2-26-18	
Chromium	**20**	0.52	6010D	2-23-18	2-26-18	
Lead	**5.9**	5.2	6010D	2-23-18	2-26-18	
Mercury	**ND**	0.26	7471B	2-21-18	2-21-18	
Selenium	**ND**	10	6010D	2-23-18	2-26-18	
Silver	**ND**	1.0	6010D	2-23-18	2-26-18	
Lab ID:	02-150-04,05,06 Comp.					
Client ID:	**PH-CON1-01,03,02 Comp.**					
Arsenic	**23**	10	6010D	2-23-18	2-26-18	
Barium	**83**	2.6	6010D	2-23-18	2-26-18	
Cadmium	**ND**	0.52	6010D	2-23-18	2-26-18	
Chromium	**19**	0.52	6010D	2-23-18	2-26-18	
Lead	**ND**	5.2	6010D	2-23-18	2-26-18	
Mercury	**ND**	0.26	7471B	2-21-18	2-21-18	
Selenium	**ND**	10	6010D	2-23-18	2-26-18	
Silver	**ND**	1.0	6010D	2-23-18	2-26-18	

Date of Report: February 27, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-150
Project: 1267-013

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

Date Extracted: 2-21&23-18
Date Analyzed: 2-21&26-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0223SH1&MB0221S2

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

Date of Report: February 27, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-150
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 2-21&23-18
Date Analyzed: 2-21&26-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 02-150-01,02,03 Comp.

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**24.6**	**26.8**	9	10	
Barium	**84.1**	**88.7**	5	5	
Cadmium	**ND**	**ND**	NA	0.50	
Chromium	**19.3**	**20.5**	6	0.50	
Lead	**5.65**	**5.00**	12	5.0	
Mercury	**ND**	**ND**	NA	0.25	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

Date of Report: February 27, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-150
Project: 1267-013

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

Date Extracted: 2-21&23-18
Date Analyzed: 2-21&26-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 02-150-01,02,03 Comp.

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**119**	94	**122**	98	3	
Barium	100	**174**	90	**179**	95	3	
Cadmium	50.0	**44.9**	90	**46.4**	93	3	
Chromium	100	**101**	82	**104**	85	2	
Lead	250	**214**	83	**222**	87	4	
Mercury	0.500	**0.514**	103	**0.509**	102	1	
Selenium	100	**99.1**	99	**101**	101	2	
Silver	25.0	**20.1**	80	**20.9**	83	4	

Date of Report: February 27, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-150
Project: 1267-013

% MOISTURE

Date Analyzed: 2-15-18

Client ID	Lab ID	% Moisture
PH-CON2-01,03,02 Comp.	02-150-01,02,03 Comp.	4
PH-CON1-01,03,02 Comp.	02-150-04,05,06 Comp.	4

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-naphthalene) 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

Chain of Custody

Page 1 of 1

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

Laboratory Number: 02-150

Company: Sound Earth Strategies
Project Number: 1267-013
Project Name: SCL-Phinney Substation
Project Manager: Rob Roberts
Sampled by: Sarah Wetter / Kevin Bartelt

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 (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	PH-CON2-01	2/13/18	1014	Soil	1				X						X				X								X
2	PH-CON2-03		1042																								
3	PH-CON2-02		1110																								
4	PH-CON1-01		1133						X						X				X								X
5	PH-CON1-03		1158																								
6	PH-CON1-02		1210																								

	Signature	Company	Date	Time
Relinquished	Colleen Sutter	Sound Earth Strategies	2/14/18	1430
Received	[illegible]	Speedy Msngr	2-14-18	450
Relinquished	[illegible]	" "	"	1804
Received	[illegible]	OSE	2/14/18	1804
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Sample/Cooler Receipt and Acceptance Checklist

Client: SES

Client Project Name/Number: 1267-013

OnSite Project Number: 02-150

Initiated by: MW

Date Initiated: 2/14/18

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	(N/A)	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	(N/A)	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	(N/A)	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	(Yes)	No		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	(Yes)	No	Temperature: 3		
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	(N/A)			
1.7 How were the samples delivered?	Client	(Courier)	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	(Yes)	No	1 2 3 4	
2.2 Was the COC legible and written in permanent ink?	(Yes)	No	1 2 3 4	
2.3 Have samples been relinquished and accepted by each custodian?	(Yes)	No	1 2 3 4	
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	(Yes)	No	1 2 3 4	
2.5 Were all of the samples listed on the COC submitted?	(Yes)	No	1 2 3 4	
2.6 Were any of the samples submitted omitted from the COC?	(Yes)	(No)	1 2 3 4	

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	(No)		1 2 3 4	
3.2 Were any sample labels missing or illegible?	Yes	(No)		1 2 3 4	
3.3 Have the correct containers been used for each analysis requested?	(Yes)	No		1 2 3 4	
3.4 Have the samples been correctly preserved?	Yes	No	(N/A)	1 2 3 4	
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	(N/A)	1 2 3 4	
3.6 Is there sufficient sample submitted to perform requested analyses?	(Yes)	No		1 2 3 4	
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	(No)		1 2 3 4	
3.8 Was method 5035A used?	Yes	No	(N/A)	1 2 3 4	
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		(N/A)	1 2 3 4	

Explain any discrepancies:

2-6) Sample 1-6) Extra jars submitted

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

OnSite Environmental, Inc. #1802-151

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

March 5, 2018

Rob Roberts
Sound Earth Strategies
2811 Fairview Avenue East, Suite 2000
Seattle, WA 98102

Re: Analytical Data for Project 1267-013
Laboratory Reference No. 1802-151

Dear Rob:

Enclosed are the analytical results and associated quality control data for samples submitted on February 14, 2018.

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

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

Case Narrative

Samples were collected on February 13, 2018 and received by the laboratory on February 14, 2018. 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 6010D/7471B Analysis

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

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.

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-6-SS2,SS1 Comp.**					
Laboratory ID:	02-151-01,02 Comp.					
Diesel Range Organics	**110**	30	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**590**	61	NWTPH-Dx	2-15-18	2-16-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*111*	*50-150*				
Client ID:	**PH-7-SS3,SS2,SS1 Comp.**					
Laboratory ID:	02-151-03,04,05 Comp.					
Diesel Range Organics	**51**	29	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**140**	58	NWTPH-Dx	2-15-18	2-16-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*105*	*50-150*				
Client ID:	**PH-8-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-06,07,08 Comp.					
Diesel Range Organics	**66**	28	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**140**	56	NWTPH-Dx	2-15-18	2-16-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				
Client ID:	**PH-6-SS3,SS4,SS5 Comp.**					
Laboratory ID:	02-151-09,10,11 Comp.					
Diesel Range Organics	**87**	32	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**370**	63	NWTPH-Dx	2-15-18	2-16-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*94*	*50-150*				
Client ID:	**PH-9-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-12,13,14 Comp.					
Diesel Range Organics	**66**	31	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**250**	61	NWTPH-Dx	2-15-18	2-16-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				
Client ID:	**PH-1-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-15,16,17 Comp.					
Diesel Range Organics	**ND**	41	NWTPH-Dx	2-15-18	2-20-18	U1
Lube Oil	**570**	59	NWTPH-Dx	2-15-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-2-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-18,19,20 Comp.					
Diesel Range Organics	**ND**	29	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil	**210**	57	NWTPH-Dx	2-15-18	2-16-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				
Client ID:	**PH-3-SS1,SS2 Comp.**					
Laboratory ID:	02-151-21,22 Comp.					
Diesel Range Organics	**95**	34	NWTPH-Dx	2-15-18	2-20-18	N
Lube Oil Range Organics	**690**	69	NWTPH-Dx	2-15-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*104*	*50-150*				
Client ID:	**PH-5-SS1,SS2,SS3,SS4,SS5 Comp.**					
Laboratory ID:	02-151-23,24,25,26,27 Comp.					
Diesel Range Organics	**99**	30	NWTPH-Dx	2-15-18	2-21-18	
Lube Oil Range Organics	**290**	60	NWTPH-Dx	2-15-18	2-21-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*94*	*50-150*				
Client ID:	**PH-12-SS1,SS2 Comp.**					
Laboratory ID:	02-151-28,29 Comp.					
Diesel Range Organics	**49**	28	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**72**	56	NWTPH-Dx	2-15-18	2-16-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**PH-11-SS1,SS2,SS3,SS4 Comp.**					
Laboratory ID:	02-151-30,31,32,33 Comp.					
Diesel Range Organics	**140**	29	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**270**	59	NWTPH-Dx	2-15-18	2-16-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*111*	*50-150*				
Client ID:	**PH-10-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-34,35,36 Comp.					
Diesel Range Organics	**160**	29	NWTPH-Dx	2-15-18	2-20-18	
Lube Oil Range Organics	**420**	57	NWTPH-Dx	2-15-18	2-20-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*119*	*50-150*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-4-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-37,38,39 Comp.					
Diesel Range Organics	**130**	30	NWTPH-Dx	2-15-18	2-20-18	
Lube Oil Range Organics	**370**	60	NWTPH-Dx	2-15-18	2-20-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*116*	*50-150*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0215S2					
Diesel Range Organics	**ND**	25	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	2-15-18	2-16-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*87*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	02-150-01,02,03 Comp.									
	ORIG	DUP								
Diesel Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						*100* *94*	*50-150*			
Laboratory ID:	02-151-01,02 Comp.									
	ORIG	DUP								
Diesel Range Organics	**92.9**	**84.6**	NA	NA		NA	NA	9	NA	
Lube Oil Range Organics	**486**	**475**	NA	NA		NA	NA	2	NA	
Surrogate:										
o-Terphenyl						*111* *117*	*50-150*			

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-6-SS2,SS1 Comp.**					
Laboratory ID:	02-151-01,02 Comp.					
Aroclor 1016	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*65*	*40-134*				
Client ID:	**PH-7-SS3,SS2,SS1 Comp.**					
Laboratory ID:	02-151-03,04,05 Comp.					
Aroclor 1016	**ND**	0.058	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.058	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.058	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.058	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.058	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.058	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.058	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*71*	*40-134*				
Client ID:	**PH-8-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-06,07,08 Comp.					
Aroclor 1016	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*74*	*40-134*				

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Project: 1267-013

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-6-SS3,SS4,SS5 Comp.**					
Laboratory ID:	02-151-09,10,11 Comp.					
Aroclor 1016	**ND**	0.063	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.063	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.063	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.063	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.063	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.063	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.063	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*78*	*40-134*				
Client ID:	**PH-9-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-12,13,14 Comp.					
Aroclor 1016	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*69*	*40-134*				
Client ID:	**PH-1-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-15,16,17 Comp.					
Aroclor 1016	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*82*	*40-134*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
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Project: 1267-013

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-2-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-18,19,20 Comp.					
Aroclor 1016	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*88*	*40-134*				
Client ID:	**PH-3-SS1,SS2 Comp.**					
Laboratory ID:	02-151-21,22 Comp.					
Aroclor 1016	**ND**	0.069	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.069	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.069	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.069	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.069	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.069	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.069	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*73*	*40-134*				
Client ID:	**PH-5-SS1,SS2,SS3,SS4,SS5 Comp.**					
Laboratory ID:	02-151-23,24,25,26,27 Comp.					
Aroclor 1016	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*76*	*40-134*				

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Project: 1267-013

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-12-SS1,SS2 Comp.**					
Laboratory ID:	02-151-28,29 Comp.					
Aroclor 1016	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*84*	*40-134*				
Client ID:	**PH-11-SS1,SS2,SS3,SS4 Comp.**					
Laboratory ID:	02-151-30,31,32,33 Comp.					
Aroclor 1016	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*70*	*40-134*				
Client ID:	**PH-10-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-34,35,36 Comp.					
Aroclor 1016	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*82*	*40-134*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-4-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-37,38,39 Comp.					
Aroclor 1016	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*82*	*40-134*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0220S2					
Aroclor 1016	**ND**	0.050	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.050	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.050	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.050	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.050	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.050	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.050	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*90*	*40-134*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0220S2										
	SB	SBD	SB	SBD		SB	SBD				
Aroclor 1260	**0.456**	**0.463**	0.500	0.500	N/A	**91**	**93**	56-130	2	15	
Surrogate:											
DCB						*86*	*91*	*40-134*			

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-6-SS2,SS1 Comp.**					
Laboratory ID:	02-151-01,02 Comp.					
alpha-BHC	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**41**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**12**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**270**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	61	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*48*	*41-106*				
DCB	*53*	*40-123*				

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ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-7-SS3,SS2,SS1 Comp.**					
Laboratory ID:	02-151-03,04,05 Comp.					
alpha-BHC	**ND**	5.8	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	5.8	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	5.8	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	5.8	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	5.8	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	5.8	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	5.8	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	5.8	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**57**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	58	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*56*	*41-106*				
DCB	*58*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-8-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-06,07,08 Comp.					
alpha-BHC	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	11	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**18**	11	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	56	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*49*	*41-106*				
DCB	*54*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-6-SS3,SS4,SS5 Comp.**					
Laboratory ID:	02-151-09,10,11 Comp.					
alpha-BHC	**ND**	6.3	EPA 8081B	2-20-18	2-26-18	
gamma-BHC	**ND**	6.3	EPA 8081B	2-20-18	2-26-18	
beta-BHC	**ND**	6.3	EPA 8081B	2-20-18	2-26-18	
delta-BHC	**ND**	6.3	EPA 8081B	2-20-18	2-26-18	
Heptachlor	**ND**	6.3	EPA 8081B	2-20-18	2-26-18	
Aldrin	**ND**	6.3	EPA 8081B	2-20-18	2-26-18	
Heptachlor Epoxide	**ND**	6.3	EPA 8081B	2-20-18	2-26-18	
gamma-Chlordane	**ND**	13	EPA 8081B	2-20-18	2-26-18	
alpha-Chlordane	**ND**	13	EPA 8081B	2-20-18	2-26-18	
4,4'-DDE	**ND**	13	EPA 8081B	2-20-18	2-26-18	
Endosulfan I	**ND**	6.3	EPA 8081B	2-20-18	2-26-18	
Dieldrin	**ND**	13	EPA 8081B	2-20-18	2-26-18	
Endrin	**ND**	13	EPA 8081B	2-20-18	2-26-18	
4,4'-DDD	**ND**	13	EPA 8081B	2-20-18	2-26-18	
Endosulfan II	**ND**	13	EPA 8081B	2-20-18	2-26-18	
4,4'-DDT	**48**	13	EPA 8081B	2-20-18	2-26-18	
Endrin Aldehyde	**ND**	13	EPA 8081B	2-20-18	2-26-18	
Methoxychlor	**ND**	13	EPA 8081B	2-20-18	2-26-18	
Endosulfan Sulfate	**ND**	13	EPA 8081B	2-20-18	2-26-18	
Endrin Ketone	**ND**	13	EPA 8081B	2-20-18	2-26-18	
Toxaphene	**ND**	63	EPA 8081B	2-20-18	2-26-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*44*	*41-106*				
DCB	*53*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-9-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-12,13,14 Comp.					
alpha-BHC	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**25**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	61	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*44*	*41-106*				
DCB	*53*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-1-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-15,16,17 Comp.					
alpha-BHC	**ND**	5.9	EPA 8081B	2-20-18	2-21-18	
gamma-BHC	**ND**	5.9	EPA 8081B	2-20-18	2-21-18	
beta-BHC	**ND**	5.9	EPA 8081B	2-20-18	2-21-18	
delta-BHC	**ND**	5.9	EPA 8081B	2-20-18	2-21-18	
Heptachlor	**ND**	5.9	EPA 8081B	2-20-18	2-21-18	
Aldrin	**ND**	5.9	EPA 8081B	2-20-18	2-21-18	
Heptachlor Epoxide	**ND**	5.9	EPA 8081B	2-20-18	2-21-18	
gamma-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-21-18	
alpha-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-21-18	
4,4'-DDE	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endosulfan I	**ND**	5.9	EPA 8081B	2-20-18	2-21-18	
Dieldrin	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endrin	**ND**	12	EPA 8081B	2-20-18	2-21-18	
4,4'-DDD	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endosulfan II	**ND**	12	EPA 8081B	2-20-18	2-21-18	
4,4'-DDT	**17**	12	EPA 8081B	2-20-18	2-21-18	
Endrin Aldehyde	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Methoxychlor	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endosulfan Sulfate	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endrin Ketone	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Toxaphene	**ND**	59	EPA 8081B	2-20-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*55*	*41-106*				
DCB	*55*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-2-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-18,19,20 Comp.					
alpha-BHC	**ND**	5.7	EPA 8081B	2-20-18	2-21-18	
gamma-BHC	**ND**	5.7	EPA 8081B	2-20-18	2-21-18	
beta-BHC	**ND**	5.7	EPA 8081B	2-20-18	2-21-18	
delta-BHC	**ND**	5.7	EPA 8081B	2-20-18	2-21-18	
Heptachlor	**ND**	5.7	EPA 8081B	2-20-18	2-21-18	
Aldrin	**ND**	5.7	EPA 8081B	2-20-18	2-21-18	
Heptachlor Epoxide	**ND**	5.7	EPA 8081B	2-20-18	2-21-18	
gamma-Chlordane	**ND**	11	EPA 8081B	2-20-18	2-21-18	
alpha-Chlordane	**ND**	11	EPA 8081B	2-20-18	2-21-18	
4,4'-DDE	**ND**	11	EPA 8081B	2-20-18	2-21-18	
Endosulfan I	**ND**	5.7	EPA 8081B	2-20-18	2-21-18	
Dieldrin	**ND**	11	EPA 8081B	2-20-18	2-21-18	
Endrin	**ND**	11	EPA 8081B	2-20-18	2-21-18	
4,4'-DDD	**ND**	11	EPA 8081B	2-20-18	2-21-18	
Endosulfan II	**ND**	11	EPA 8081B	2-20-18	2-21-18	
4,4'-DDT	**12**	11	EPA 8081B	2-20-18	2-21-18	
Endrin Aldehyde	**ND**	11	EPA 8081B	2-20-18	2-21-18	
Methoxychlor	**ND**	11	EPA 8081B	2-20-18	2-21-18	
Endosulfan Sulfate	**ND**	11	EPA 8081B	2-20-18	2-21-18	
Endrin Ketone	**ND**	11	EPA 8081B	2-20-18	2-21-18	
Toxaphene	**ND**	57	EPA 8081B	2-20-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*66*	*41-106*				
DCB	*64*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-3-SS1,SS2 Comp.**					
Laboratory ID:	02-151-21,22 Comp.					
alpha-BHC	**ND**	6.9	EPA 8081B	2-20-18	2-21-18	
gamma-BHC	**ND**	6.9	EPA 8081B	2-20-18	2-21-18	
beta-BHC	**ND**	6.9	EPA 8081B	2-20-18	2-21-18	
delta-BHC	**ND**	6.9	EPA 8081B	2-20-18	2-21-18	
Heptachlor	**ND**	6.9	EPA 8081B	2-20-18	2-21-18	
Aldrin	**ND**	6.9	EPA 8081B	2-20-18	2-21-18	
Heptachlor Epoxide	**ND**	6.9	EPA 8081B	2-20-18	2-21-18	
gamma-Chlordane	**ND**	14	EPA 8081B	2-20-18	2-21-18	
alpha-Chlordane	**41**	14	EPA 8081B	2-20-18	2-21-18	P
4,4'-DDE	**ND**	14	EPA 8081B	2-20-18	2-21-18	
Endosulfan I	**ND**	6.9	EPA 8081B	2-20-18	2-21-18	
Dieldrin	**33**	14	EPA 8081B	2-20-18	2-21-18	
Endrin	**ND**	14	EPA 8081B	2-20-18	2-21-18	
4,4'-DDD	**ND**	14	EPA 8081B	2-20-18	2-21-18	
Endosulfan II	**ND**	14	EPA 8081B	2-20-18	2-21-18	
4,4'-DDT	**33**	14	EPA 8081B	2-20-18	2-21-18	
Endrin Aldehyde	**ND**	14	EPA 8081B	2-20-18	2-21-18	
Methoxychlor	**ND**	14	EPA 8081B	2-20-18	2-21-18	
Endosulfan Sulfate	**ND**	14	EPA 8081B	2-20-18	2-21-18	
Endrin Ketone	**ND**	14	EPA 8081B	2-20-18	2-21-18	
Toxaphene	**ND**	69	EPA 8081B	2-20-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*60*	*41-106*				
DCB	*57*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-5-SS1,SS2,SS3,SS4,SS5 Comp.**					
Laboratory ID:	02-151-23,24,25,26,27 Comp.					
alpha-BHC	**ND**	6.0	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	6.0	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	6.0	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	6.0	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	6.0	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	6.0	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	6.0	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	6.0	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**22**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	60	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*55*	*41-106*				
DCB	*58*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-12-SS1,SS2 Comp.**					
Laboratory ID:	02-151-28,29 Comp.					
alpha-BHC	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	11	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	56	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*59*	*41-106*				
DCB	*65*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-11-SS1,SS2,SS3,SS4 Comp.**					
Laboratory ID:	02-151-30,31,32,33 Comp.					
alpha-BHC	**ND**	5.9	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	5.9	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	5.9	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	5.9	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	5.9	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	5.9	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	5.9	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	5.9	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**12**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	59	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*54*	*41-106*				
DCB	*58*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-10-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-34,35,36 Comp.					
alpha-BHC	**ND**	5.7	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	5.7	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	5.7	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	5.7	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	5.7	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	5.7	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	5.7	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	11	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	5.7	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	57	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*48*	*41-106*				
DCB	*54*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-4-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-37,38,39 Comp.					
alpha-BHC	**ND**	6.0	EPA 8081B	2-20-18	2-21-18	
gamma-BHC	**ND**	6.0	EPA 8081B	2-20-18	2-21-18	
beta-BHC	**ND**	6.0	EPA 8081B	2-20-18	2-21-18	
delta-BHC	**ND**	6.0	EPA 8081B	2-20-18	2-21-18	
Heptachlor	**ND**	6.0	EPA 8081B	2-20-18	2-21-18	
Aldrin	**ND**	6.0	EPA 8081B	2-20-18	2-21-18	
Heptachlor Epoxide	**ND**	6.0	EPA 8081B	2-20-18	2-21-18	
gamma-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-21-18	
alpha-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-21-18	
4,4'-DDE	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endosulfan I	**ND**	6.0	EPA 8081B	2-20-18	2-21-18	
Dieldrin	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endrin	**ND**	12	EPA 8081B	2-20-18	2-21-18	
4,4'-DDD	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endosulfan II	**ND**	12	EPA 8081B	2-20-18	2-21-18	
4,4'-DDT	**52**	12	EPA 8081B	2-20-18	2-21-18	
Endrin Aldehyde	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Methoxychlor	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endosulfan Sulfate	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endrin Ketone	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Toxaphene	**ND**	60	EPA 8081B	2-20-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*63*	*41-106*				
DCB	*65*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0220S2					
alpha-BHC	**ND**	5.0	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	5.0	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	5.0	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	5.0	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	5.0	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	5.0	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	5.0	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	10	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	10	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**ND**	10	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	5.0	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	10	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	10	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**ND**	10	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	10	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**ND**	10	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	10	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	10	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	10	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	10	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	50	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*80*	*41-106*				
DCB	*89*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B MS/MSD QUALITY CONTROL

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	02-151-12,13,14 Comp.										
	MS	MSD	MS	MSD		MS	MSD				
alpha-BHC	**66.6**	**63.2**	100	100	ND	**67**	**63**	50-140	5	15	
gamma-BHC	**64.7**	**61.2**	100	100	ND	**65**	**61**	38-112	6	14	
beta-BHC	**67.6**	**60.6**	100	100	ND	**68**	**61**	50-140	11	15	
delta-BHC	**66.9**	**61.5**	100	100	ND	**67**	**61**	50-140	8	15	
Heptachlor	**62.9**	**56.6**	100	100	ND	**63**	**57**	37-103	11	16	
Aldrin	**61.2**	**57.5**	100	100	ND	**61**	**57**	44-105	6	14	
Heptachlor Epoxide	**57.0**	**53.6**	100	100	ND	**57**	**54**	50-140	6	15	
gamma-Chlordane	**56.5**	**53.7**	100	100	ND	**57**	**54**	50-140	5	15	
alpha-Chlordane	**56.5**	**53.3**	100	100	ND	**56**	**53**	50-140	6	15	
4,4'-DDE	**66.6**	**63.2**	100	100	ND	**67**	**63**	50-140	5	15	
Endosulfan I	**61.1**	**57.6**	100	100	ND	**61**	**58**	50-140	6	15	
Dieldrin	**62.3**	**58.8**	100	100	ND	**62**	**59**	40-106	6	14	
Endrin	**59.1**	**56.3**	100	100	ND	**59**	**56**	44-113	5	13	
4,4'-DDD	**68.5**	**65.5**	100	100	ND	**69**	**65**	50-140	4	15	
Endosulfan II	**59.4**	**56.7**	100	100	ND	**59**	**57**	50-140	5	15	
4,4'-DDT	**79.2**	**76.2**	100	100	20.3	**59**	**56**	30-113	4	14	
Endrin Aldehyde	**60.6**	**57.2**	100	100	ND	**61**	**57**	50-140	6	15	
Methoxychlor	**59.3**	**57.0**	100	100	ND	**59**	**57**	50-140	4	15	
Endosulfan Sulfate	**59.8**	**57.0**	100	100	ND	**60**	**57**	50-140	5	15	
Endrin Ketone	**58.4**	**56.1**	100	100	ND	**58**	**56**	50-140	4	15	
Surrogate:											
TCMX						*49*	*48*	*41-106*			
DCB						*56*	*52*	*40-123*			

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

CHLORINATED ACID HERBICIDES EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-6-SS2,SS1 Comp.**					
Laboratory ID:	02-151-01,02 Comp.					
Dalapon	**ND**	280	EPA 8151A	2-16-18	2-21-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-21-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
Dichlorprop	**ND**	86	EPA 8151A	2-16-18	2-21-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Pentachlorophenol	**6.4**	5.8	EPA 8151A	2-16-18	2-21-18	
2,4,5-TP (Silvex)	**ND**	12	EPA 8151A	2-16-18	2-21-18	
2,4,5-T	**ND**	12	EPA 8151A	2-16-18	2-21-18	
2,4-DB	**ND**	12	EPA 8151A	2-16-18	2-21-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*57*	*10-126*				
Client ID:	**PH-7-SS3,SS2,SS1 Comp.**					
Laboratory ID:	02-151-03,04,05 Comp.					
Dalapon	**ND**	260	EPA 8151A	2-16-18	2-21-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-21-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
Dichlorprop	**ND**	82	EPA 8151A	2-16-18	2-21-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Pentachlorophenol	**ND**	5.5	EPA 8151A	2-16-18	2-21-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*47*	*10-126*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

CHLORINATED ACID HERBICIDES EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-8-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-06,07,08 Comp.					
Dalapon	**ND**	260	EPA 8151A	2-16-18	2-21-18	
Dicamba	**ND**	10	EPA 8151A	2-16-18	2-21-18	
MCPP	**ND**	1000	EPA 8151A	2-16-18	2-21-18	
MCPA	**ND**	1000	EPA 8151A	2-16-18	2-21-18	
Dichlorprop	**ND**	79	EPA 8151A	2-16-18	2-21-18	
2,4-D	**ND**	10	EPA 8151A	2-16-18	2-21-18	
Pentachlorophenol	**ND**	5.3	EPA 8151A	2-16-18	2-21-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*53*	*10-126*				
Client ID:	**PH-6-SS3,SS4,SS5 Comp.**					
Laboratory ID:	02-151-09,10,11 Comp.					
Dalapon	**ND**	290	EPA 8151A	2-16-18	2-16-18	
Dicamba	**ND**	12	EPA 8151A	2-16-18	2-16-18	
MCPP	**ND**	1200	EPA 8151A	2-16-18	2-16-18	
MCPA	**ND**	1200	EPA 8151A	2-16-18	2-16-18	
Dichlorprop	**ND**	89	EPA 8151A	2-16-18	2-16-18	
2,4-D	**ND**	12	EPA 8151A	2-16-18	2-16-18	
Pentachlorophenol	**ND**	6.0	EPA 8151A	2-16-18	2-16-18	
2,4,5-TP (Silvex)	**ND**	12	EPA 8151A	2-16-18	2-16-18	
2,4,5-T	**ND**	12	EPA 8151A	2-16-18	2-16-18	
2,4-DB	**ND**	12	EPA 8151A	2-16-18	2-16-18	
Dinoseb	**ND**	12	EPA 8151A	2-16-18	2-16-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*35*	*10-126*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

CHLORINATED ACID HERBICIDES EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-9-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-12,13,14 Comp.					
Dalapon	**ND**	280	EPA 8151A	2-16-18	2-20-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-20-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-20-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-20-18	
Dichlorprop	**ND**	86	EPA 8151A	2-16-18	2-20-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-20-18	
Pentachlorophenol	**ND**	5.8	EPA 8151A	2-16-18	2-20-18	
2,4,5-TP (Silvex)	**ND**	12	EPA 8151A	2-16-18	2-20-18	
2,4,5-T	**ND**	12	EPA 8151A	2-16-18	2-20-18	
2,4-DB	**ND**	12	EPA 8151A	2-16-18	2-20-18	
Dinoseb	**ND**	12	EPA 8151A	2-16-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*72*	*10-126*				
Client ID:	**PH-1-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-15,16,17 Comp.					
Dalapon	**ND**	270	EPA 8151A	2-16-18	2-21-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-21-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
Dichlorprop	**ND**	84	EPA 8151A	2-16-18	2-21-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Pentachlorophenol	**ND**	5.6	EPA 8151A	2-16-18	2-21-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*56*	*10-126*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

CHLORINATED ACID HERBICIDES EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-2-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-18,19,20 Comp.					
Dalapon	**ND**	260	EPA 8151A	2-16-18	2-21-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-21-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
Dichlorprop	**ND**	81	EPA 8151A	2-16-18	2-21-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Pentachlorophenol	**ND**	5.5	EPA 8151A	2-16-18	2-21-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*56*	*10-126*				
Client ID:	**PH-3-SS1,SS2 Comp.**					
Laboratory ID:	02-151-21,22 Comp.					
Dalapon	**ND**	310	EPA 8151A	2-16-18	2-17-18	
Dicamba	**ND**	13	EPA 8151A	2-16-18	2-17-18	
MCPP	**ND**	1300	EPA 8151A	2-16-18	2-17-18	
MCPA	**ND**	1300	EPA 8151A	2-16-18	2-17-18	
Dichlorprop	**ND**	97	EPA 8151A	2-16-18	2-17-18	
2,4-D	**ND**	13	EPA 8151A	2-16-18	2-17-18	
Pentachlorophenol	**ND**	6.5	EPA 8151A	2-16-18	2-17-18	
2,4,5-TP (Silvex)	**ND**	13	EPA 8151A	2-16-18	2-17-18	
2,4,5-T	**ND**	13	EPA 8151A	2-16-18	2-17-18	
2,4-DB	**ND**	13	EPA 8151A	2-16-18	2-17-18	
Dinoseb	**ND**	13	EPA 8151A	2-16-18	2-17-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*45*	*10-126*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

CHLORINATED ACID HERBICIDES EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-5-SS1,SS2,SS3,SS4,SS5 Comp.**					
Laboratory ID:	02-151-23,24,25,26,27 Comp.					
Dalapon	**ND**	280	EPA 8151A	2-16-18	2-17-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-17-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-17-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-17-18	
Dichlorprop	**ND**	86	EPA 8151A	2-16-18	2-17-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Pentachlorophenol	**ND**	5.7	EPA 8151A	2-16-18	2-17-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-17-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-17-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*37*	*10-126*				
Client ID:	**PH-12-SS1,SS2 Comp.**					
Laboratory ID:	02-151-28,29 Comp.					
Dalapon	**ND**	260	EPA 8151A	2-16-18	2-21-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-21-18	
MCPP	**ND**	1000	EPA 8151A	2-16-18	2-21-18	
MCPA	**ND**	1000	EPA 8151A	2-16-18	2-21-18	
Dichlorprop	**ND**	79	EPA 8151A	2-16-18	2-21-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Pentachlorophenol	**ND**	5.3	EPA 8151A	2-16-18	2-21-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*59*	*10-126*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

CHLORINATED ACID HERBICIDES EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-11-SS1,SS2,SS3,SS4 Comp.**					
Laboratory ID:	02-151-30,31,32,33 Comp.					
Dalapon	**ND**	270	EPA 8151A	2-16-18	2-21-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-21-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
Dichlorprop	**ND**	83	EPA 8151A	2-16-18	2-21-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Pentachlorophenol	**ND**	5.6	EPA 8151A	2-16-18	2-21-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*61*	*10-126*				
Client ID:	**PH-10-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-34,35,36 Comp.					
Dalapon	**ND**	260	EPA 8151A	2-16-18	2-17-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-17-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-17-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-17-18	
Dichlorprop	**ND**	81	EPA 8151A	2-16-18	2-17-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Pentachlorophenol	**ND**	5.4	EPA 8151A	2-16-18	2-17-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-17-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-17-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*52*	*10-126*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

CHLORINATED ACID HERBICIDES EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-4-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-37,38,39 Comp.					
Dalapon	**ND**	280	EPA 8151A	2-16-18	2-17-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-17-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-17-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-17-18	
Dichlorprop	**ND**	85	EPA 8151A	2-16-18	2-17-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Pentachlorophenol	**ND**	5.7	EPA 8151A	2-16-18	2-17-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-17-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-17-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*47*	*10-126*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

CHLORINATED ACID HERBICIDES EPA 8151A QUALITY CONTROL

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0216S1					
Dalapon	**ND**	230	EPA 8151A	2-16-18	2-16-18	
Dicamba	**ND**	9.4	EPA 8151A	2-16-18	2-16-18	
MCPP	**ND**	940	EPA 8151A	2-16-18	2-16-18	
MCPA	**ND**	940	EPA 8151A	2-16-18	2-16-18	
Dichlorprop	**ND**	71	EPA 8151A	2-16-18	2-16-18	
2,4-D	**ND**	9.4	EPA 8151A	2-16-18	2-16-18	
Pentachlorophenol	**ND**	4.8	EPA 8151A	2-16-18	2-16-18	
2,4,5-TP (Silvex)	**ND**	9.5	EPA 8151A	2-16-18	2-16-18	
2,4,5-T	**ND**	9.5	EPA 8151A	2-16-18	2-16-18	
2,4-DB	**ND**	9.5	EPA 8151A	2-16-18	2-16-18	
Dinoseb	**ND**	9.5	EPA 8151A	2-16-18	2-16-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*46*	*10-126*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS											
Laboratory ID:	SB0216S1										
	SB	SBD	SB	SBD		SB	SBD				
Dicamba	**84.3**	**92.7**	100	100	N/A	**84**	**93**	26-113	9	20	
2,4-D	**94.2**	**85.3**	100	100	N/A	**94**	**85**	24-117	10	21	
Pentachlorophenol	**9.28**	**10.0**	10.0	10.0	N/A	**93**	**100**	38-112	7	23	
2,4,5-T	**84.2**	**85.0**	100	100	N/A	**84**	**85**	21-110	1	19	
2,4-DB	**82.8**	**75.7**	100	100	N/A	**83**	**76**	22-119	9	19	
Surrogate:											
DCAA						*65*	*66*	*10-126*			

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Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-01,02 Comp.					
Client ID:	**PH-6-SS2,SS1 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**59**	3.0	6010D	2-21-18	2-21-18	
Cadmium	**0.61**	0.61	6010D	2-20-18	2-20-18	
Chromium	**17**	0.61	6010D	2-20-18	2-20-18	
Lead	**120**	6.1	6010D	2-20-18	2-20-18	
Mercury	**1.0**	0.30	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	
Lab ID:	02-151-03,04,05 Comp.					
Client ID:	**PH-7-SS3,SS2,SS1 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**45**	2.9	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.58	6010D	2-20-18	2-20-18	
Chromium	**24**	0.58	6010D	2-20-18	2-20-18	
Lead	**100**	5.8	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.29	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-06,07,08 Comp.					
Client ID:	**PH-8-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	11	6010D	2-20-18	2-20-18	
Barium	**28**	2.8	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.56	6010D	2-20-18	2-20-18	
Chromium	**15**	0.56	6010D	2-20-18	2-20-18	
Lead	**61**	5.6	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.28	7471B	2-21-18	2-21-18	
Selenium	**ND**	11	6010D	2-20-18	2-20-18	
Silver	**ND**	1.1	6010D	2-20-18	2-20-18	
Lab ID:	02-151-09,10,11 Comp.					
Client ID:	**PH-6-SS3,SS4,SS5 Comp.**					
Arsenic	**ND**	13	6010D	2-20-18	2-20-18	
Barium	**130**	3.2	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.63	6010D	2-20-18	2-20-18	
Chromium	**27**	0.63	6010D	2-20-18	2-20-18	
Lead	**160**	6.3	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.32	7471B	2-21-18	2-21-18	
Selenium	**ND**	13	6010D	2-20-18	2-20-18	
Silver	**ND**	1.3	6010D	2-20-18	2-20-18	

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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-12,13,14 Comp.					
Client ID:	**PH-9-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**53**	3.1	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.61	6010D	2-20-18	2-20-18	
Chromium	**15**	0.61	6010D	2-20-18	2-20-18	
Lead	**81**	6.1	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.31	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	
Lab ID:	02-151-15,16,17 Comp.					
Client ID:	**PH-1-SS1,SS2,SS3 Comp.**					
Arsenic	**76**	12	6010D	2-20-18	2-20-18	
Barium	**110**	3.0	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.59	6010D	2-20-18	2-20-18	
Chromium	**29**	0.59	6010D	2-20-18	2-20-18	
Lead	**87**	5.9	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.30	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	

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Samples Submitted: February 14, 2018
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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-18,19,20 Comp.					
Client ID:	**PH-2-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	11	6010D	2-20-18	2-20-18	
Barium	**46**	2.9	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.57	6010D	2-20-18	2-20-18	
Chromium	**16**	0.57	6010D	2-20-18	2-20-18	
Lead	**100**	5.7	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.29	7471B	2-21-18	2-21-18	
Selenium	**ND**	11	6010D	2-20-18	2-20-18	
Silver	**ND**	1.1	6010D	2-20-18	2-20-18	
Lab ID:	02-151-21,22 Comp.					
Client ID:	**PH-3-SS1,SS2 Comp.**					
Arsenic	**ND**	14	6010D	2-20-18	2-20-18	
Barium	**92**	3.4	6010D	2-21-18	2-21-18	
Cadmium	**0.79**	0.69	6010D	2-20-18	2-20-18	
Chromium	**32**	0.69	6010D	2-20-18	2-20-18	
Lead	**300**	6.9	6010D	2-20-18	2-20-18	
Mercury	**1.6**	0.69	7471B	2-21-18	2-21-18	
Selenium	**ND**	14	6010D	2-20-18	2-20-18	
Silver	**ND**	1.4	6010D	2-20-18	2-20-18	

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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flag
Lab ID:	02-151-23,24,25,26,27 Comp.					
Client ID:	**PH-5-SS1,SS2,SS3,SS4,SS5 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**99**	3.0	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.60	6010D	2-20-18	2-20-18	
Chromium	**22**	0.60	6010D	2-20-18	2-20-18	
Lead	**140**	6.0	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.30	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	
Lab ID:	02-151-28,29 Comp.					
Client ID:	**PH-12-SS1,SS2 Comp.**					
Arsenic	**ND**	11	6010D	2-20-18	2-20-18	
Barium	**31**	2.8	6010D	2-21-18	2-21-18	
Cadmium	**0.59**	0.56	6010D	2-20-18	2-20-18	
Chromium	**15**	0.56	6010D	2-20-18	2-20-18	
Lead	**72**	5.6	6010D	2-20-18	2-20-18	
Mercury	**0.36**	0.28	7471B	2-21-18	2-21-18	
Selenium	**ND**	11	6010D	2-20-18	2-20-18	
Silver	**ND**	1.1	6010D	2-20-18	2-20-18	

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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-30,31,32,33 Comp.					
Client ID:	**PH-11-SS1,SS2,SS3,SS4 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**46**	2.9	6010D	2-21-18	2-21-18	
Cadmium	**0.64**	0.59	6010D	2-20-18	2-20-18	
Chromium	**15**	0.59	6010D	2-20-18	2-20-18	
Lead	**74**	5.9	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.29	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	
Lab ID:	02-151-34,35,36 Comp.					
Client ID:	**PH-10-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	11	6010D	2-20-18	2-20-18	
Barium	**54**	2.9	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.57	6010D	2-20-18	2-20-18	
Chromium	**15**	0.57	6010D	2-20-18	2-20-18	
Lead	**80**	5.7	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.29	7471B	2-21-18	2-21-18	
Selenium	**ND**	11	6010D	2-20-18	2-20-18	
Silver	**ND**	1.1	6010D	2-20-18	2-20-18	

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Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-37,38,39 Comp.					
Client ID:	**PH-4-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**62**	3.0	6010D	2-21-18	2-21-18	
Cadmium	**0.75**	0.60	6010D	2-20-18	2-20-18	
Chromium	**27**	0.60	6010D	2-20-18	2-20-18	
Lead	**190**	6.0	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.30	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D
METHOD BLANK QUALITY CONTROL

Date Extracted: 2-20&21-18
Date Analyzed: 2-20&21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0220SM1&MB0221SM4

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

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
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Project: 1267-013

TOTAL MERCURY
EPA 7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	2-21-18
Date Analyzed:	2-21-18
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0221S2

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

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D
DUPLICATE QUALITY CONTROL

Date Extracted: 2-20&21-18
Date Analyzed: 2-20&21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 02-151-01,02 Comp.

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Barium	**48.8**	**53.1**	9	2.5	
Cadmium	**0.505**	**0.520**	3	0.50	
Chromium	**14.2**	**17.1**	18	0.50	
Lead	**97.3**	**112**	14	5.0	
Selenium	**ND**	**ND**	NA	10	
Silver	**ND**	**ND**	NA	1.0	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
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Project: 1267-013

TOTAL MERCURY
EPA 7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 2-21-18
Date Analyzed: 2-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 02-150-01,02,03Comp

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

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D
MS/MSD QUALITY CONTROL

Date Extracted: 2-20&21-18
Date Analyzed: 2-20&21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 02-151-01,02 Comp.

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**103**	103	**103**	103	0	
Barium	100	**153**	104	**148**	99	3	
Cadmium	50.0	**46.3**	92	**46.5**	92	0	
Chromium	100	**105**	91	**107**	93	2	
Lead	250	**320**	89	**330**	93	3	
Selenium	100	**91.7**	92	**90.3**	90	2	
Silver	25.0	**22.9**	92	**23.1**	92	1	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL MERCURY
EPA 7471B
MS/MSD QUALITY CONTROL

Date Extracted: 2-21-18
Date Analyzed: 2-21-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 02-150-01,02,03Comp

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.500	**0.514**	103	**0.509**	102	1	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-01					
Client ID:	**PH-6-SS2**					
Mercury	**2.6**	1.6	7471B	2-27-18	2-27-18	
Lab ID:	02-151-02					
Client ID:	**PH-6-SS1**					
Mercury	**ND**	0.32	7471B	2-27-18	2-27-18	
Lab ID:	02-151-03					
Client ID:	**PH-7-SS3**					
Lead	**69**	5.9	6010D	3-2-18	3-2-18	
Lab ID:	02-151-04					
Client ID:	**PH-7-SS2**					
Lead	**40**	5.7	6010D	3-2-18	3-2-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-05					
Client ID:	**PH-7-SS1**					
Lead	**84**	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-09					
Client ID:	**PH-6-SS3**					
Lead	**59**	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-10					
Client ID:	**PH-6-SS4**					
Lead	**93**	6.6	6010D	3-2-18	3-2-18	
Lab ID:	02-151-11					
Client ID:	**PH-6-SS5**					
Lead	**270**	7.6	6010D	3-2-18	3-2-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-15					
Client ID:	**PH-1-SS1**					
Arsenic	**110**	11	6010D	3-2-18	3-2-18	
Lead	**65**	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-16					
Client ID:	**PH-1-SS2**					
Arsenic	**70**	12	6010D	3-2-18	3-2-18	
Lead	**66**	5.8	6010D	3-2-18	3-2-18	
Lab ID:	02-151-17					
Client ID:	**PH-1-SS3**					
Arsenic	**ND**	14	6010D	3-2-18	3-2-18	
Lead	**250**	6.8	6010D	3-2-18	3-2-18	
Lab ID:	02-151-18					
Client ID:	**PH-2-SS1**					
Lead	**40**	5.8	6010D	3-2-18	3-2-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-19					
Client ID:	**PH-2-SS2**					
Lead	**140**	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-20					
Client ID:	**PH-2-SS3**					
Lead	**98**	5.8	6010D	3-2-18	3-2-18	
Lab ID:	02-151-21					
Client ID:	**PH-3-SS1**					
Lead	**270**	6.3	6010D	3-2-18	3-2-18	
Mercury	**1.6**	0.63	7471B	2-27-18	2-27-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-22					
Client ID:	**PH-3-SS2**					
Lead	**320**	7.4	6010D	3-2-18	3-2-18	
Mercury	**2.4**	1.9	7471B	2-27-18	2-27-18	
Lab ID:	02-151-23					
Client ID:	**PH-5-SS1**					
Lead	**110**	5.8	6010D	3-2-18	3-2-18	
Lab ID:	02-151-24					
Client ID:	**PH-5-SS2**					
Lead	**170**	6.6	6010D	3-2-18	3-2-18	
Lab ID:	02-151-25					
Client ID:	**PH-5-SS3**					
Lead	**320**	6.3	6010D	3-2-18	3-2-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-26					
Client ID:	**PH-5-SS4**					
Lead	**80**	5.9	6010D	3-2-18	3-2-18	
Lab ID:	02-151-27					
Client ID:	**PH-5-SS5**					
Lead	**140**	6.1	6010D	3-2-18	3-2-18	
Lab ID:	02-151-30					
Client ID:	**PH-11-SS1**					
Cadmium	**1.7**	0.57	6010D	3-2-18	3-2-18	
Lead	**160**	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-31					
Client ID:	**PH-11-SS2**					
Cadmium	**ND**	0.64	6010D	3-2-18	3-2-18	
Lead	**49**	6.4	6010D	3-2-18	3-2-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-32					
Client ID:	**PH-11-SS3**					
Cadmium	**ND**	0.56	6010D	3-2-18	3-2-18	
Lead	**47**	5.6	6010D	3-2-18	3-2-18	
Lab ID:	02-151-33					
Client ID:	**PH-11-SS4**					
Cadmium	**ND**	0.57	6010D	3-2-18	3-2-18	
Lead	**52**	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-37					
Client ID:	**PH-4-SS1**					
Cadmium	**ND**	0.60	6010D	3-2-18	3-2-18	
Lead	**85**	6.0	6010D	3-2-18	3-2-18	
Lab ID:	02-151-38					
Client ID:	**PH-4-SS2**					
Cadmium	**ND**	0.62	6010D	3-2-18	3-2-18	
Lead	**88**	6.2	6010D	3-2-18	3-2-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-39					
Client ID:	**PH-4-SS3**					
Cadmium	**1.3**	0.59	6010D	3-2-18	3-2-18	
Lead	**340**	5.9	6010D	3-2-18	3-2-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-2-18
Date Analyzed: 3-2-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0302SM1

Analyte	Method	Result	PQL
Arsenic	6010D	**ND**	10
Cadmium	6010D	**ND**	0.50
Lead	6010D	**ND**	5.0

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-2-18
Date Analyzed: 3-2-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0302SM2

Analyte	Method	Result	PQL
Cadmium	6010D	**ND**	0.50
Lead	6010D	**ND**	5.0

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL MERCURY
EPA 7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	2-27-18
Date Analyzed:	2-27-18
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0227S1

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

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D
DUPLICATE QUALITY CONTROL

Date Extracted: 3-2-18
Date Analyzed: 3-2-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 02-151-16

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**60.3**	**62.8**	4	10	
Cadmium	**0.845**	**0.810**	4	0.50	
Lead	**56.4**	**41.6**	30	5.0	K

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D
DUPLICATE QUALITY CONTROL

Date Extracted: 3-2-18
Date Analyzed: 3-2-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 02-265-04

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Cadmium	**ND**	**ND**	NA	0.50	
Lead	**8.25**	**6.70**	21	5.0	C

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL MERCURY
EPA 7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 2-27-18
Date Analyzed: 2-27-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 02-234-29

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

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D
MS/MSD QUALITY CONTROL

Date Extracted: 3-2-18
Date Analyzed: 3-2-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 02-151-16

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**147**	86	**156**	95	6	
Cadmium	50.0	**45.0**	88	**44.7**	88	1	
Lead	250	**329**	109	**273**	87	19	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D
MS/MSD QUALITY CONTROL

Date Extracted: 3-2-18
Date Analyzed: 3-2-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 02-265-04

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Cadmium	50.0	**44.5**	89	**43.9**	88	1	
Lead	250	**219**	84	**218**	84	0	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL MERCURY
EPA 7471B
MS/MSD QUALITY CONTROL

Date Extracted: 2-27-18
Date Analyzed: 2-27-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 02-234-29

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.50	**0.568**	114	**0.564**	113	1	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-3-SS1**					
Laboratory ID:	02-151-21					
Dieldrin	**48**	13	EPA 8081B	2-27-18	3-2-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*57*	*41-106*				
DCB	*49*	*40-123*				
Client ID:	**PH-3-SS2**					
Laboratory ID:	02-151-22					
Dieldrin	**ND**	15	EPA 8081B	2-27-18	3-5-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*44*	*41-106*				
DCB	*40*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B QUALITY CONTROL

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0227S1					
Dieldrin	**ND**	10	EPA 8081B	2-27-18	2-27-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*65*	*41-106*				
DCB	*81*	*40-123*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	02-151-21										
	MS	MSD	MS	MSD		MS	MSD				
Dieldrin	**87.6**	**85.2**	100	100	38.1	**50**	**47**	40-106	3	14	
Surrogate:											
TCMX						*57*	*56*	*41-106*			
DCB						*48*	*47*	*40-123*			

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

% MOISTURE

Date Analyzed: 2-15,27&3-1&2-18

Client ID	Lab ID	% Moisture
PH-4-SS3	02-151-39	16
PH-6-SS2,SS1 Comp.	02-151-01,02 Comp.	18
PH-7-SS3,SS2,SS1 Comp.	02-151-03,04,05 Comp.	13
PH-8-SS1,SS2,SS3 Comp.	02-151-06,07,08 Comp.	10
PH-6-SS3,SS4,SS5 Comp.	02-151-09,10,11 Comp.	21
PH-9-SS1,SS2,SS3 Comp.	02-151-12,13,14 Comp.	18
PH-1-SS1,SS2,SS3 Comp.	02-151-15,16,17 Comp.	16
PH-2-SS1,SS2,SS3 Comp.	02-151-18,19,20 Comp.	13
PH-3-SS1,SS2 Comp.	02-151-21,22 Comp.	27
PH-5-SS1,SS2,SS3,SS4,SS5 Comp.	02-151-23,24,25,26,27 Comp.	17
PH-12-SS1,SS2 Comp.	02-151-28,29 Comp.	11
PH-11-SS1,SS2,SS3,SS4 Comp.	02-151-30,31,32,33 Comp.	15
PH-10-SS1,SS2,SS3 Comp.	02-151-34,35,36 Comp.	13
PH-4-SS1,SS2,SS3 Comp.	02-151-37,38,39 Comp.	17

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

% MOISTURE

Date Analyzed: 2-15,27&3-1&2-18

Client ID	Lab ID	% Moisture
PH-6-SS2	02-151-01	23
PH-6-SS1	02-151-02	21
PH-7-SS3	02-151-03	15
PH-7-SS2	02-151-04	13
PH-7-SS1	02-151-05	12
PH-6-SS3	02-151-09	12
PH-6-SS4	02-151-10	25
PH-6-SS5	02-151-11	34
PH-1-SS1	02-151-15	13
PH-1-SS2	02-151-16	14
PH-1-SS3	02-151-17	26
PH-2-SS1	02-151-18	13
PH-2-SS2	02-151-19	13
PH-2-SS3	02-151-20	14
PH-3-SS1	02-151-21	21
PH-3-SS2	02-151-22	32
PH-5-SS1	02-151-23	14
PH-5-SS2	02-151-24	24
PH-5-SS3	02-151-25	21
PH-5-SS4	02-151-26	15
PH-5-SS5	02-151-27	18
PH-11-SS1	02-151-30	13
PH-11-SS2	02-151-31	22
PH-11-SS3	02-151-32	10
PH-11-SS4	02-151-33	12
PH-4-SS1	02-151-37	17
PH-4-SS2	02-151-38	19

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-naphthalene) 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

Chain of Custody

Page 1 of 5

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

Laboratory Number: 02-151

Company: SundEarth Strategies
Project Number: 1267-013
Project Name: SCL-Phinney Substation
Project Manager: Rob Roberts
Sampled by: SNW / KRB

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 (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	TOTAL LEAD	TOTAL MERCURY			% Moisture
1	PH-6-SS2	2/13/18	1320	Soil	1				⊗						⊗	⊗		⊗	⊗					0			⊗
2	PH-6-SS1		1335		1																			0			
3	PH-7-SS3		1354						⊗						⊗	⊗		⊗	⊗				0				⊗
4	PH-7-SS2		1405																				0				
5	PH-7-SS1		1417																				0				
6	PH-8-SS1		1440						⊗						⊗	⊗		⊗	⊗								⊗
7	PH-8-SS2		1455																								
8	PH-8-SS3		1510						⊗						⊗	⊗		⊗	⊗								⊗
																								(ANY)			

	Signature	Company	Date	Time
Relinquished	Cathryn Smith	SundEarth Strategies	2/14/18	1430
Received	R Boards	Speedy Msngr	2-14-18	1450
Relinquished	R Boards	" "	"	1804
Received			2/14/18	1804
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

O-Added 2/26/18. DB (~~STA~~ 5 DAY)

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

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

Company: SoundEarth Strategies
Project Number: 1267-013
Project Name: SCL-Phinney Substation
Project Manager: Rob Roberts
Sampled by: SNW/KRB

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: 02-151

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	TOTAL ARSENIC	TOTAL LEAD	TOTAL MERCURY	% Moisture
9	PH-6-SS3	2/13/18	1532	Soil	1				X						X	X		X	X					O		X
10	PH-6-SS4	↓	1547	↓	↓				X						X	X		X	X					O		X
11	PH-6-SS5		1559						X						X	X		X	X					O		X
12	PH-9-SS1		1621						X						X	X		X	X							X
13	PH-9-SS2		1632						X						X	X		X	X							X
14	PH-9-SS3		1641						X						X	X		X	X							X
15	PH-1-SS1		0950						X						X	X		X	X				O	O		X
16	PH-1-SS2	2/13/18	1010						X						X	X		X	X				O	O		X
17	PH-1-SS3	↓	1025	↓	↓				X						X	X		X	X				O	O	Hg	X

	Signature	Company	Date	Time
Relinquished	Cathy Scott	SoundEarth Strategies	2/14/18	1430
Received	RB Boards	Speedy Msngr.	2-14-18	1450
Relinquished	RB Boards	" "	"	1804
Received			2/14/18	1804
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

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

Company: SoundEarth Strategies
Project Number: 1267-013
Project Name: SCL-Phinney Substation
Project Manager: Rob Roberts
Sampled by: SNW/KRB

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: 02-151

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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		Dieldrin 8081B	TOTAL LEAD	TOTAL MERCURY	% Moisture
18	PH-2-SS1	2/13/18	1040	Soil	1				X						X	X		X	X						O		O
19	PH-2-SS2		1105																						O		O
20	PH-2-SS3		1115																						O		O
21	PH-3-SS1		1130						X						X	X		X	X					O	O	O	O
22	PH-3-SS2		1145																					O	O	O	O
23	PH-5-SS1		1220																						O		O
24	PH-5-SS2		1230																						O		O
25	PH-5-SS3		1245																						□		O
26	PH-5-SS4		1305																						O		O
27	PH-5-SS5		1320																						O		O

	Signature	Company	Date	Time
Relinquished	[signature]	SoundEarth Strategies	2/14/18	1430
Received	[signature]	Speedy Messenger	2-14-18	1450
Relinquished	[signature]	"	"	1804
Received	[signature]	[signature]	2/14/18	1804
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

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

Company: SoundEarth Strategies
Project Number: 1267-013
Project Name: SCL-Phinney Substation
Project Manager: Rob Roberts
Sampled by: SNW/KRB

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: 02-151

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	TOTAL CADMIUM	TOTAL LEAD			% Moisture
28	PH-12-SS1	2/13/18	1335	soil	1				X						X	X		X	X								X
29	PH-12-SS2		1340																								
30	PH-11-SS1		1400						X						X	X		X	X				0	0			0
31	PH-11-SS2		1410																				0	0			0
32	PH-11-SS3		1420																				0	0			0
33	PH-11-SS4		1435																				0	0			0
34	PH-10-SS1		1450						X						X	X		X	X								
35	PH-10-SS2		1505																								
36	PH-10-SS3		1520																						AV		

	Signature	Company	Date	Time
Relinquished	Catherine Smith	SoundEarth	2/14/18	1430
Received	R B Bard	Speedy Msngr	2-14-18	1450
Relinquished	R B Bard	" "	"	1804
Received			2/14/18	1804
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

Page 5 of 5

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Phone: (425) 883-3881 • www.onsite-env.com

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(Check One)
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☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 02-151

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	TOTAL CADMIUM	TOTAL LEAD			% Moisture
37	PH-4-SS1	2/13/18	1545	Soil	1				X						X	X		X	X				0	0			X
38	PH-4-SS2	↓	1600	↓	↓																		0	0			
39	PH-4-SS3	↓	1610	↓	↓																		0	0			
																						Cd					

	Signature	Company	Date	Time
Relinquished	Cathleen Sutton	SoundEarth	2/14/18	1430
Received	R B Borla	Speedy Msngr	2-14-18	1450
Relinquished	R B Borla	" "	"	1804
Received		CDS	2/14/18	1804
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Sample/Cooler Receipt and Acceptance Checklist

Client: SES

Client Project Name/Number: 1267-013

OnSite Project Number: 02-151

Initiated by: MV

Date Initiated: 2/14/18

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	(No)	N/A	1 2 3 4
1.2 Were the custody seals intact?	Yes	No	(N/A)	1 2 3 4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	(N/A)	1 2 3 4
1.4 Were the samples delivered on ice or blue ice?	(Yes)	No		1 2 3 4
1.5 Were samples received between 0-6 degrees Celsius?	(Yes)	No	Temperature: 1.3	
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	(N/A)		
1.7 How were the samples delivered?	Client	(Courier)	UPS/FedEx	OSE Pickup Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	(Yes)	No	1 2 3 4
2.2 Was the COC legible and written in permanent ink?	(Yes)	No	1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	(Yes)	No	1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	(Yes)	No	1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	(Yes)	No	1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	(No)	1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	(No)		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	(No)		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	(Yes)	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	(N/A)	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	(N/A)	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	(Yes)	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	(No)		1 2 3 4
3.8 Was method 5035A used?	Yes	No	(N/A)	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		(N/A)	1 2 3 4

Explain any discrepancies:

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

OnSite Environmental, Inc. #1802-151B

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

March 14, 2018

Rob Roberts
Sound Earth Strategies
2811 Fairview Avenue East, Suite 2000
Seattle, WA 98102

Re: Analytical Data for Project 1267-013
Laboratory Reference No. 1802-151B

Dear Rob:

Enclosed are the analytical results and associated quality control data for samples submitted on February 14, 2018.

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

Date of Report: March 14, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151B
Project: 1267-013

Case Narrative

Samples were collected on February 13, 2018 and received by the laboratory on February 14, 2018. 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.

Date of Report: March 14, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151B
Project: 1267-013

TCLP METALS
EPA 1311/6010D

Matrix: TCLP Extract
Units: mg/L (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-15					
Client ID:	**PH-1-SS1**					
Arsenic	**ND**	0.40	6010D	3-14-18	3-14-18	
Lab ID:	02-151-22					
Client ID:	**PH-3-SS2**					
Lead	**ND**	0.20	6010D	3-14-18	3-14-18	
Lab ID:	02-151-39					
Client ID:	**PH-4-SS3**					
Lead	**ND**	0.20	6010D	3-14-18	3-14-18	

Date of Report: March 14, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151B
Project: 1267-013

TCLP METALS
EPA 1311/6010D
METHOD BLANK QUALITY CONTROL

Date Prepared:	3-13-18
Date Extracted:	3-14-18
Date Analyzed:	3-14-18
Matrix:	TCLP Extract
Units:	mg/L (ppm)
Lab ID:	MB0314TM1

Analyte	Method	Result	PQL
Arsenic	6010D	**ND**	0.40
Lead	6010D	**ND**	0.20

Date of Report: March 14, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151B
Project: 1267-013

TCLP METALS
EPA 1311/6010D
DUPLICATE QUALITY CONTROL

Date Prepared: 3-13-18
Date Extracted: 3-14-18
Date Analyzed: 3-14-18

Matrix: TCLP Extract
Units: mg/L (ppm)

Lab ID: 02-151-15

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	0.40	
Lead	**ND**	**ND**	NA	0.20	

Date of Report: March 14, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151B
Project: 1267-013

TCLP METALS
EPA 1311/6010D
MS/MSD QUALITY CONTROL

Date Prepared: 3-13-18
Date Extracted: 3-14-18
Date Analyzed: 3-14-18

Matrix: TCLP Extract
Units: mg/L (ppm)

Lab ID: 02-151-15

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	4.00	**4.14**	104	**4.10**	102	1	
Lead	10.0	**9.09**	91	**9.04**	90	1	

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-naphthalene) 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

Chain of Custody

Page 1 of 5

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

Laboratory Number: 02-151

Company: SoundEarth Strategies
Project Number: 1267-013
Project Name: SCL-Phinney Substation
Project Manager: Rob Roberts
Sampled by: SNW / KRB

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 (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	TOTAL LEAD	TOTAL MERCURY			% Moisture
1	PH-6-SS2	2/13/18	1320	Soil	1				●						●	●		●	●					O			●
2	PH-6-SS1		1335																					O			
3	PH-7-SS3		1354						●						●	●		●	●				O				●
4	PH-7-SS2		1405																				O				
5	PH-7-SS1		1417																				O				
6	PH-8-SS1		1440						●						●	●		●	●								●
7	PH-8-SS2		1455																								
8	PH-8-SS3		1510						●						●	●		●	●								●

	Signature	Company	Date	Time
Relinquished	Cathryn Sutton	SoundEarth Strategies	2/14/18	1430
Received	R Boeck	Speedy Msngr	2-14-18	1450
Relinquished	R Boeck	" "	"	1804
Received			2/14/18	1804
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

○ - Added 2/26/18. DB (~~STA~~ 5 DAY)
● - Added 3/6/18. DB (STA)

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

Page 2 of 5

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Project Number: 1267-013
Project Name: SCL-Phinney Substation
Project Manager: Rob Roberts
Sampled by: SNW/KRB

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(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
9	PH-6-SS3	2/13/18	1532	Soil	1
10	PH-6-SS4		1547		
11	PH-6-SS5		1559		
12	PH-9-SS1		1621		
13	PH-9-SS2		1632		
14	PH-9-SS3		1641		
15	PH-1-SS1		0950		
16	PH-1-SS2	2/13/18	1010		
17	PH-1-SS3		1025		

	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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 ARSENIC	~~HEM (oil and grease) 1664~~ TCLP LEAD	TOTAL ARSENIC	TOTAL LEAD	TOTAL MERCURY	% Moisture
9				⊗						⊗	⊗		⊗	⊗					O		
10				⊗						⊗	⊗		⊗	⊗					O		
11				⊗						⊗	⊗		⊗	⊗					O		
12				⊗						⊗	⊗		⊗	⊗							
13				⊗						⊗	⊗		⊗	⊗							
14				⊗						⊗	⊗		⊗	⊗							
15				⊗						⊗	⊗		⊗	⊗		●		O	O		
16				⊗						⊗	⊗		⊗	⊗				O	O		
17				⊗						⊗	⊗		⊗	⊗				O	O		

	Signature	Company	Date	Time
Relinquished	Cathy Smith	SoundEarth Strategies	2/14/18	1430
Received	R B Board	Speedy Msngr.	2-14-18	1450
Relinquished	R B Board	" "	"	1804
Received			2/14/18	1804
Relinquished				
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Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

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19	PH-2-SS2		1105						⊗						⊗	⊗		⊗	⊗						○		⊗
20	PH-2-SS3		1115						⊗						⊗	⊗		⊗	⊗						○		⊗
21	PH-3-SS1		1130						⊗						⊗	⊗		⊗	⊗					○	○	○	⊗
22	PH-3-SS2		1145						⊗						⊗	⊗		⊗	⊗		●			○	○	○	⊗
23	PH-5-SS1		1220						⊗						⊗	⊗		⊗	⊗						○		⊗
24	PH-5-SS2		1230						⊗						⊗	⊗		⊗	⊗						○		⊗
25	PH-5-SS3		1245						⊗						⊗	⊗		⊗	⊗						□		⊗
26	PH-5-SS4		1305						⊗						⊗	⊗		⊗	⊗						○		⊗
27	PH-5-SS5		1320						⊗						⊗	⊗		⊗	⊗						○		⊗

	Signature	Company	Date	Time
Relinquished	[signature]	SoundEarth Strategies	2/14/18	1430
Received	[signature]	Speedy Messenger	2-14-18	1450
Relinquished	[signature]	"		1804
Received	[signature]	[illegible]	2/14/18	1804
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

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28	PH-12-SS1	2/13/18	1335	soil	1				X						X	X		X	X								X
29	PH-12-SS2		1340						X						X	X		X	X								X
30	PH-11-SS1		1400						X						X	X		X	X				0	0			X 0
31	PH-11-SS2		1410						X						X	X		X	X				0	0			X 0
32	PH-11-SS3		1420						X						X	X		X	X				0	0			X 0
33	PH-11-SS4		1435						X						X	X		X	X				0	0			X 0
34	PH-10-SS1		1450						X						X	X		X	X								X
35	PH-10-SS2		1505						X						X	X		X	X								X
36	PH-10-SS3		1520						X						X	X		X	X								X

	Signature	Company	Date	Time
Relinquished	Catherine Scott	SoundEarth	2/14/18	1430
Received	R Bond	Speedy Msngr	2-14-18	1450
Relinquished	R Bond	" "	"	1804
Received		CSE	2/14/18	1804
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

Page 5 of 5

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

Company: SoundEarth Strategies
Project Number: 1267-013
Project Name: SCL-Phinney Substation
Project Manager: Rob Roberts
Sampled by: SNW/KRB

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: 02-151

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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 LEAD ONLY	HEM (oil and grease) 1664A	TOTAL CADMIUM	TOTAL LEAD			% Moisture
37	PH-4-SS1	2/13/18	1545	Soil	1				⊗						⊗	⊗		⊗	⊗				0	0			X
38	PH-4-SS2	↓	1600	↓	↓																		0	0			X
39	PH-4-SS3	↓	1610	↓	↓																		0	0			X

	Signature	Company	Date	Time
Relinquished	Catherine Sutton	SoundEarth	2/14/18	1430
Received	R B Borg	Speedy Msngr	2-14-18	1450
Relinquished	R B Borg	" "	"	1804
Received		COSE	2/14/18	1804
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Sample/Cooler Receipt and Acceptance Checklist

Client: SES

Client Project Name/Number: 1267-013

OnSite Project Number: 02-151

Initiated by: MV

Date Initiated: 2/14/18

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	(No)	N/A	1 2 3 4
1.2 Were the custody seals intact?	Yes	No	(N/A)	1 2 3 4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	(N/A)	1 2 3 4
1.4 Were the samples delivered on ice or blue ice?	(Yes)	No		1 2 3 4
1.5 Were samples received between 0-6 degrees Celsius?	(Yes)	No	Temperature: 1,3	
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	(N/A)		
1.7 How were the samples delivered?	Client	(Courier)	UPS/FedEx	OSE Pickup Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	(Yes)	No	1 2 3 4
2.2 Was the COC legible and written in permanent ink?	(Yes)	No	1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	(Yes)	No	1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	(Yes)	No	1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	(Yes)	No	1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	(No)	1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	(No)		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	(No)		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	(Yes)	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	(N/A)	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	(N/A)	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	(Yes)	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	(No)		1 2 3 4
3.8 Was method 5035A used?	Yes	No	(N/A)	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		(N/A)	1 2 3 4

Explain any discrepancies:

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

OnSite Environmental, Inc. #1802-167

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

March 27, 2018

Rob Roberts
Sound Earth Strategies
2811 Fairview Avenue East, Suite 2000
Seattle, WA 98102

Re: Analytical Data for Project 1267-013
Laboratory Reference No. 1803-167

Dear Rob:

Enclosed are the analytical results and associated quality control data for samples submitted on March 19, 2018.

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

Date of Report: March 27, 2018
Samples Submitted: March 19, 2018
Laboratory Reference: 1803-167
Project: 1267-013

Case Narrative

Samples were collected on March 16, 2018 and received by the laboratory on March 19, 2018. 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.

Date of Report: March 27, 2018
Samples Submitted: March 19, 2018
Laboratory Reference: 1803-167
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-167-01					
Client ID:	**PH-01-HA1-01**					
Arsenic	**ND**	12	6010D	3-22-18	3-22-18	
Lab ID:	03-167-02					
Client ID:	**PH-01-HA1-02**					
Arsenic	**ND**	11	6010D	3-22-18	3-22-18	
Lab ID:	03-167-04					
Client ID:	**PH-03-HA1-01**					
Lead	**42**	6.1	6010D	3-22-18	3-22-18	
Mercury	**ND**	0.31	7471B	3-23-18	3-23-18	
Lab ID:	03-167-05					
Client ID:	**PH-03-HA1-02**					
Lead	**14**	5.8	6010D	3-22-18	3-22-18	
Mercury	**0.92**	0.29	7471B	3-23-18	3-23-18	
Lab ID:	03-167-08					
Client ID:	**PH-04-HA1-01**					
Lead	**15**	5.6	6010D	3-22-18	3-22-18	

Date of Report: March 27, 2018
Samples Submitted: March 19, 2018
Laboratory Reference: 1803-167
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-167-09					
Client ID:	**PH-04-HA1-02**					
Lead	**ND**	6.1	6010D	3-22-18	3-22-18	
Lab ID:	03-167-12					
Client ID:	**PH-05-HA1-01**					
Lead	**170**	6.0	6010D	3-22-18	3-22-18	
Lab ID:	03-167-13					
Client ID:	**PH-05-HA1-02**					
Lead	**8.6**	5.8	6010D	3-22-18	3-22-18	
Lab ID:	03-167-16					
Client ID:	**PH-06-HA1-01**					
Mercury	**0.94**	0.30	7471B	3-22-18	3-22-18	
Lab ID:	03-167-17					
Client ID:	**PH-06-HA1-02**					
Mercury	**0.48**	0.29	7471B	3-22-18	3-22-18	

Date of Report: March 27, 2018
Samples Submitted: March 19, 2018
Laboratory Reference: 1803-167
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-167-20					
Client ID:	**PH-06-HA2-01**					
Lead	**190**	5.8	6010D	3-22-18	3-22-18	
Lab ID:	03-167-21					
Client ID:	**PH-06-HA2-02**					
Lead	**21**	5.9	6010D	3-22-18	3-22-18	

Date of Report: March 27, 2018
Samples Submitted: March 19, 2018
Laboratory Reference: 1803-167
Project: 1267-013

TOTAL METALS
EPA 6010D
METHOD BLANK QUALITY CONTROL

Date Extracted: 3-22-18
Date Analyzed: 3-22-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0322SM2

Analyte	Method	Result	PQL
Arsenic	6010D	**ND**	10
Lead	6010D	**ND**	5.0

Date of Report: March 27, 2018
Samples Submitted: March 19, 2018
Laboratory Reference: 1803-167
Project: 1267-013

TOTAL MERCURY
EPA 7471B
METHOD BLANK QUALITY CONTROL

Date Extracted:	3-23-18
Date Analyzed:	3-23-18
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0323S2

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

Date of Report: March 27, 2018
Samples Submitted: March 19, 2018
Laboratory Reference: 1803-167
Project: 1267-013

TOTAL METALS
EPA 6010D
DUPLICATE QUALITY CONTROL

Date Extracted: 3-22-18
Date Analyzed: 3-22-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-167-13

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Lead	**7.35**	**8.50**	15	5.0	

Date of Report: March 27, 2018
Samples Submitted: March 19, 2018
Laboratory Reference: 1803-167
Project: 1267-013

TOTAL MERCURY
EPA 7471B
DUPLICATE QUALITY CONTROL

Date Extracted: 3-23-18
Date Analyzed: 3-23-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-198-08

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

Date of Report: March 27, 2018
Samples Submitted: March 19, 2018
Laboratory Reference: 1803-167
Project: 1267-013

TOTAL METALS
EPA 6010D
MS/MSD QUALITY CONTROL

Date Extracted: 3-22-18
Date Analyzed: 3-22-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-167-13

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**87.2**	87	**88.8**	89	2	
Lead	250	**248**	96	**241**	94	3	

Date of Report: March 27, 2018
Samples Submitted: March 19, 2018
Laboratory Reference: 1803-167
Project: 1267-013

TOTAL MERCURY
EPA 7471B
MS/MSD QUALITY CONTROL

Date Extracted: 3-23-18
Date Analyzed: 3-23-18

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 03-198-08

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.500	**0.532**	106	**0.498**	100	7	

Date of Report: March 27, 2018
Samples Submitted: March 19, 2018
Laboratory Reference: 1803-167
Project: 1267-013

% MOISTURE

Date Analyzed: 3-21-18

Client ID	Lab ID	% Moisture
PH-01-HA1-01	03-167-01	13
PH-01-HA1-02	03-167-02	12
PH-03-HA1-01	03-167-04	18
PH-03-HA1-02	03-167-05	14
PH-04-HA1-01	03-167-08	11
PH-04-HA1-02	03-167-09	18
PH-05-HA1-01	03-167-12	16
PH-05-HA1-02	03-167-13	14
PH-06-HA1-01	03-167-16	17
PH-06-HA1-02	03-167-17	14
PH-06-HA2-01	03-167-20	13
PH-06-HA2-02	03-167-21	15

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-naphthalene) 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

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

Company: SoundEarth Strategies
Project Number: 1267-013
Project Name: SCL - Phinney Former Substation
Project Manager: Rob Roberts; Clare Tochilin
Sampled by: Joe Ellingson

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: 03-167

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	Arsenic	Lead	Mercury		% Moisture
1	PH-01-HA1-01	3/16/18	0936	Soil	1																		X				10
2	PH-01-HA1-02		0946																				X				11
3	PH-01-HA1-02.75		1010																								
4	PH-03-HA1-01		1105																					X	X		6
5	PH-03-HA1-02		1110																					X	X		11
6	PH-03-HA1-03		1118																								
7	PH-03-HA1-04		1130																								
8	PH-04-HA1-01		1212																					X			10
9	PH-04-HA1-02		1220																					X			11
10	PH-04-HA1-03		1225																								

	Signature	Company	Date	Time
Relinquished	Clare Tochilin	SoundEarth	3/19/18	0815
Received	[signature]	alpha	3/19/18	1:30
Relinquished	[signature]	alpha	3/19/18	2:30
Received	[signature]	CSE	3/19/18	1430
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

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

Company: SandEarth Strategies
Project Number: 1267-013
Project Name: SCL - Phinney Former Substation
Project Manager: Rob Roberts, Clare Tochilin
Sampled by: Joe Ellingson

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: 03-167

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	Arsenic	Lead	Mercury		% Moisture
11	PH-04-HA1-03.5	3/16/18	1242	Soil	1																						
12	PH-05-HA1-01		1250																					X			10
13	PH-05-HA1-02		1305																					X			1
14	PH-05-HA1-03		1310																								
15	PH-05-HA1-04		1325																								
16	PH-06-HA1-01		1345																						X		10
17	PH-06-HA1-02		1352																						X		1
18	PH-06-HA1-03		1359																								
19	PH-06-HA1-03.5		1407																								
20	PH-06-HA2-01		1425																					X			10

	Signature	Company	Date	Time
Relinquished	Clare Tochilin	SandEarth	3/19/18	0815
Received	RZM	alpha	3/19/18	1:30
Relinquished	RZM	alpha	3/19/18	2:30
Received		ORE	3/19/18	1430
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

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

Company: SoundEarth Strategies
Project Number: 1267-013
Project Name: SCL - Phinney Former Substation
Project Manager: Ros Roberts; Clare Tourtillin
Sampled by: Joe Ellingson

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: 03-167

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	Arsenic	Lead	Mercury	% Moisture
21	PH-06-HA2-02	3/16/18	1432	soil	1																			X			20
22	PH-06-HA3-01		1450																							
23	PH-06-HA3-02		1457																							
24	PH-06-HA3-03		1507																							
25	PH-06-HA3-04		1517																							

	Signature	Company	Date	Time
Relinquished	Clare Tourtillin	SoundEarth	3/19/18	0815
Received	[illegible]	Alpha	3/19/18	1:30
Relinquished	[illegible]	Alpha	3/19/18	2:30
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Sample/Cooler Receipt and Acceptance Checklist

Client: SES

Client Project Name/Number: 1267-013

OnSite Project Number: 03-167

Initiated by: MV

Date Initiated: 3/19/18

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	N/A	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	Yes	No		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	Yes	No	Temperature: 6		
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A			
1.7 How were the samples delivered?	Client	Courier	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	Yes	No	1 2 3 4	
2.2 Was the COC legible and written in permanent ink?	Yes	No	1 2 3 4	
2.3 Have samples been relinquished and accepted by each custodian?	Yes	No	1 2 3 4	
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	No	1 2 3 4	
2.5 Were all of the samples listed on the COC submitted?	Yes	No	1 2 3 4	
2.6 Were any of the samples submitted omitted from the COC?	Yes	No	1 2 3 4	

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	No	1 2 3 4	
3.2 Were any sample labels missing or illegible?	Yes	No	1 2 3 4	
3.3 Have the correct containers been used for each analysis requested?	Yes	No	1 2 3 4	
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	N/A	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No		1 2 3 4
3.8 Was method 5035A used?	Yes	No	N/A	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		N/A	1 2 3 4

Explain any discrepancies:

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

NVL Laboratories, Inc. #1803172.00

February 22, 2018

Clare Tochilin
SoundEarth Strategies, Inc.
2811 Fairview Ave East, Suite 2000
Seattle, WA 98102

RE: Bulk Asbestos Fiber Analysis; NVL Batch # 1803172.00

Client Project: 1267-013
Location: SCL Phinney

Dear Ms. Tochilin,

Enclosed please find test results for the 3 sample(s) submitted to our laboratory for analysis on 2/16/2018.

Examination of these samples was conducted for the presence of identifiable asbestos fibers using polarized light microscopy (PLM) with dispersion staining in accordance with both **EPA 600/M4-82-020**, Interim Method for the Determination of Asbestos in Bulk Insulation Samples and **EPA 600/R-93/116** Method for the Determination of Asbestos in Bulk Building Materials.

For samples containing more than one separable layer of materials, the report will include findings for each layer (labeled Layer 1 and Layer 2, etc. for each individual layer). The asbestos concentration in the sample is determined by calibrated visual estimation.

For those samples with asbestos concentrations between 1 and 10 percent based on visual estimation, the EPA recommends a procedure known as point counting (NESHAPS, 40 CFR Part 61). Point counting is a statistically more accurate means of quantification for samples with low concentrations of asbestos.

The detection limit for the calibrated visual estimation is <1%, 400 point counts is 0.25% and 1000 point counts is 0.1%

Samples are archived for two weeks following analysis. Samples that are not retrieved by the client are discarded after two weeks.

Thank you for using our laboratory services. Please do not hesitate to call if there is anything further we can assist you with.

Sincerely,

Nick Ly, Technical Director

Enc.: Sample Results

Lab Code: 102063-0

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Bulk Asbestos Fibers Analysis

By Polarized Light Microscopy

Client: SoundEarth Strategies, Inc.
Address: 2811 Fairview Ave East, Suite 2000
Seattle, WA 98102

Attention: Ms. Clare Tochilin
Project Location: SCL Phinney

Batch #: 1803172.00
Client Project #: 1267-013
Date Received: 2/16/2018
Samples Received: 3
Samples Analyzed: 3
Method: EPA/600/R-93/116
& EPA/600/M4-82-020

Lab ID: 18015958 **Client Sample #: PH-ACM-01A**
Location: SCL Phinney

Layer 1 of 2	**Description:** Black asphaltic fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		**Asbestos Type: %**
	Asphalt/Binder, Fine particles	Cellulose 38%		**None Detected ND**
Layer 2 of 2	**Description:** Black asphaltic fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		**Asbestos Type: %**
	Asphalt/Binder, Fine particles	Cellulose 43%		**None Detected ND**

Lab ID: 18015959 **Client Sample #: PH-ACM-01B**
Location: SCL Phinney

Layer 1 of 2	**Description:** Black asphaltic fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		**Asbestos Type: %**
	Asphalt/Binder, Fine particles	Cellulose 41%		**None Detected ND**
Layer 2 of 2	**Description:** Black asphaltic fibrous material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		**Asbestos Type: %**
	Asphalt/Binder, Fine particles	Cellulose 39%		**None Detected ND**

Lab ID: 18015960 **Client Sample #: PH-ACM-01C**
Location: SCL Phinney

Layer 1 of 1	**Description:** Black asphaltic fibrous built-up material			
	Non-Fibrous Materials:	Other Fibrous Materials:%		**Asbestos Type: %**
	Asphalt/Binder, Fine particles	Cellulose 47%		**None Detected ND**

Sampled by: Client
Analyzed by: Galen Richards **Date:** 02/22/2018
Reviewed by: Nick Ly **Date:** 02/22/2018

Nick Ly, Technical Director

Note: If samples are not homogeneous, then subsamples of the components were analyzed separately. All bulk samples are analyzed using both EPA 600/R-93/116 and 600/M4-82-020 Methods with the following measurement uncertainties for the reported % Asbestos (1%=0-3%, 5%=1-9%, 10%=5-15%, 20%=10-30%, 50%=40-60%). This report relates only to the items tested. If sample was not collected by NVL personnel, then the accuracy of the results is limited by the methodology and acuity of the sample collector. This report shall not be reproduced except in full, without written approval of NVL Laboratories, Inc. It shall not be used to claim product endorsement by NVLAP or any other agency of the US Government

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ASBESTOS LABORATORY SERVICES

Company SoundEarth Strategies, Inc.
Address 2811 Fairview Ave East, Suite 2000
Seattle, WA 98102
Project Manager Ms. Clare Tochilin
Phone (206) 306-1900

NVL Batch Number **1803172.00**
TAT 5 Days **AH** No
Rush TAT
Due Date 2/23/2018 **Time** 4:45 PM
Email kbartelt@soundearth.com
Fax (206) 306-1907

Project Name/Number: 1267-013 **Project Location:** SCL Phinney

Subcategory PLM Bulk
Item Code ASB-02 EPA 600/R-93-116 Asbestos by PLM <bulk>

Total Number of Samples 3 Rush Samples

	Lab ID	Sample ID	Description	A/R
1	18015958	PH-ACM-01A		A
2	18015959	PH-ACM-01B		A
3	18015960	PH-ACM-01C		A

	Print Name	Signature	Company	Date	Time
Sampled by	Client				
Relinquished by	Client				

Office Use Only	Print Name	Signature	Company	Date	Time
Received by	Soumeya Benzina		NVL	2/16/18	1645
Analyzed by	Galen Richards		NVL	2/22/18	
Results Called by					
☐ **Faxed** ☐ **Emailed**					

Special Instructions:

Date: 2/17/2018
Time: 6:11 PM
Entered By: Soumeya Benzina

1803172

NVL
INDUSTRIAL HYGIENE SERVICES
LABORATORY • MANAGEMENT • TRAINING

ASBESTOS CHAIN OF CUSTODY

Turn Around Time
- ❑ 1 Hour
- ❑ 2 Hours
- ❑ 4 Hours
- ❑ 24 Hours
- ❑ 2 Days
- ❑ 3 Days
- ☒ 4 Days
- ❑ 10 Days

Please call for TAT less than 24 Hours

Company SoundEarth Strategies
Project Manager Clare Tochilin
Address
Cell (360) 333-2321
Email kbartelt@soundearthinc.com
Phone
Fax ( )

Project Name/Number 1267-013
Project Location SCL Phinney

- ❑ PCM Air (NIOSH 7400)
- ❑ TEM (NIOSH 7402)
- ❑ TEM (AHERA)
- ❑ TEM (EPA Level II Modified)
- ☒ PLM (EPA 600/R-93-116)
- ❑ EPA 400 Points (600/R-93-116)
- ❑ EPA 1000Points (600/R-93-116)
- ❑ PLM Gravimetry (600/R-93-116)
- ❑ Asbestos in Vermiculite (EPA 600/R-04/004)
- ❑ Asbestos in Sediment (EPA 1900 Points)
- ❑ Asbestos Friable/Non-Friable (EPA 600/R-93/116)
- ❑ Other

Reporting Instructions
❑ Call ( ) - ❑ Fax ( ) - ❑ Email

Total Number of Samples

	Sample ID	Description	A/R
1	PH-ACM-01A	Fibrous furry conduit	
2	PH-ACM-01B	"	
3	PH-ACM-01C	"	
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

	Print Name	Signature	Company	Date	Time
Sampled by	Kevin Bartelt		SoundEarth	2/13/17	1130
Relinquish by	Travis Zandi		SoundEarth	2/16/18	4:45

Office Use Only

	Print Name	Signature	Company	Date	Time
Received by			NVL	2/16/18	1645
Analyzed by					
Called by					
Faxed/Email by					

ATTACHMENT C
DATA VALIDATION REPORTS

DATA VALIDATION REPORT

Seattle City Light
Phinney Substation
March 2018

Prepared for:
Sound Earth Strategies, Inc.
2811 Fairview Ave East, Suite 2000
Seattle, Washington 98102

Prepared by:
Validata, LLC
3346 NE 178th St.
Lake Forest Park, Washington 98155

PROJECT NARRATIVE

Data Validation

This report summarizes the results of the summary level validation (Stage 2A) performed on samples for the Seattle City Light sampling project. A complete list of samples is provided in the Sample Index. Samples were analyzed by OnSite Environmental laboratory, Redmond, Washington. The analytical methods are listed below:

Sample Index

ANALYSIS	METHOD	Reviewer
Petroleum Hydrocarbons – Diesel Range Organics, Lube Oil Organics	NWTPH-Dx	C. Jensen
Organochlorine Pesticides	SW8081B	C. Jensen
Polychlorinated Biphenyls	SW8082A	
Herbicides	SW8151A	C. Jensen
Metals/Mercury	SW6010D/7471B	C. Jensen

The data were reviewed using guidance and quality control criteria documented in the analytical methods; *USEPA National Functional Guidelines for Organic Data Review* (EPA, 1999 & 2008), *USEPA National Functional Guidelines for Inorganic Data Review* (EPA, 2010 & 2014).

The goal of data validation is to assign data assessment qualifiers for assistance in data interpretation. Results assigned as estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. For results assigned an R, the data are rejected and should not be used for site evaluation purposes. Unqualified data implies the data meet the data quality objectives as stated in the documents and methods referenced above. A summary of the data qualifiers used in validation are included in Appendix A. The summary of Qualified Data are provided in Appendix B. All validation worksheets are provided in Appendix C.

SAMPLE INDEX

SDG	Sample ID	Lab ID	TCLP metals	PCBs	NWTP H-Dx	Pesticides	Herbicides	Metals
1802-151B	PH-1-SS1	02-151-15	x					
	PH-3-SS2	02-151-22	x					
	PH-4-SS3	02-151-39	x					
1803-167	PH-01-HA1-01	03-167-01						x
	PH-01-HA1-02	03-167-02						x
	PH-03-HA1-01	03-167-04						x
	PH-03-HA1-02	03-167-05						x
	PH-04-HA1-01	03-167-08						x
	PH-04-HA1-02	03-167-09						x
	PH-05-HA1-01	03-167-12						x
	PH-05-HA1-02	03-167-13						x

	PH-06-HA1-01	03-167-16						x
	PH-06-HA1-02	03-167-17						x
	PH-06-HA2-01	03-167-20						x
	PH-06-HA2-02	03-167-21						x
1802-151	PH-3-SS1	02-151-21				x		
	PH-3-SS2	02-151-22				x		
	PH-6-SS2,SS1 Comp.	02-151-01,02 Comp.		x	x	x	x	x
	PH-7-SS3,SS2,SS1 Comp.	02-151-03,04,05 Comp.		x	x	x	x	x
	PH-8-SS1,SS2,SS3 Comp.	02-151-06,07,08 Comp.		x	x	x	x	x
	PH-6-SS3,SS4,SS5 Comp.	02-151-09,10,11 Comp.		x	x	x	x	x
	PH-9-SS1,SS2,SS3 Comp.	02-151-12,13,14 Comp.		x	x	x	x	x
	PH16-SS1,SS2,SS3 Comp.	02-151-15,16,17 Comp.		x	x	x	x	x
	PH-2-SS1,SS2,SS3 Comp.	02-151-18,19,20 Comp.		x	x	x	x	x
	PH-3-SS1,SS2 Comp.	02-151-21,22 Comp.		x	x	x	x	x
	PH-5-SS1,SS2,SS3,SS4, SS5 Comp.	02-151-23,24,25,26,27 Comp.		x	x	x	x	x
	PH-12-SS1,SS2 Comp.	02-151-28,29 Comp.		x	x	x	x	x
	PH-11-SS1,SS2,SS3,SS4 Comp.	02-151-30,31,32,33 Comp.		x	x	x	x	x
	PH-10-SS1,SS2,SS3 Comp.	02-151-34,35,36 Comp.		x	x	x	x	x
	PH-4-SS1,SS2,SS3 Comp.	02-151-37,38,39 Comp.		x	x	x	x	x
	PH-6-SS2	02-151-01						x
	PH-6-SS1	02-151-02						x
	PH-7-SS3	02-151-03						x
	PH-7-SS2	02-151-04						x
	PH-7-SS1	02-151-05						x
	PH-6-SS3	02-151-09						x
	PH-6-SS4	02-151-10						x
	PH-6-SS5	02-151-11						x
	PH-1-SS1	02-151-15						x
	PH-1-SS2	02-151-16						x
	PH-1-SS3	02-151-17						x
	PH-2-SS1	02-151-18						x
	PH-2-SS2	02-151-19						x
	PH-2-SS3	02-151-20						x
	PH-3-SS1	02-151-21						x
	PH-3-SS2	02-151-22						x
	PH-5-SS1	02-151-23						x
	PH-5-SS2	02-151-24						x
	PH-5-SS3	02-151-25						x
	PH-5-SS4	02-151-26						x
	PH-5-SS5	02-151-27						x
	PH-11-SS1	02-151-30						x
	PH-11-SS2	02-151-31						x
	PH-11-SS3	02-151-32						x
	PH-11-SS4	02-151-33						x
	PH-4-SS1	02-151-37						x
	PH-4-SS2	02-151-38						x
	PH-4-SS3	02-151-39						x

DATA VALIDATION REPORT
Petroleum Hydrocarbons – NWTPH-Dx – Diesel Range Organics and Lube Oil Range Organics

This report documents the review of analytical data from the analyses of samples and the associated laboratory and field quality control (QC) samples. OnSite laboratory, Redmond, Washington. Refer to the Sample Index for a complete list of samples.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
1802-151	13	STAGE 2A

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables for a Stage 2A review. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

Sample Receipt, Preservation, and Holding Times	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
Laboratory Blanks	Field Duplicates
Field Blanks	Target Analyte List
Surrogate Compounds	Reporting Limits
Laboratory Control Samples (LCS)	Reported Results

Sample Receipt, Preservation, and Holding Times

As stated in validation guidance documents, sample shipping coolers should arrive at the laboratory within the advisory temperature range of 0°C - 6°C and be extracted within 7 days for aqueous samples and 14 days for soil samples. Sample extracts must be analyzed within 40 days of extraction. All holding times were met.

Method and Field Blanks

The method blanks were all reported as undetected for target compounds. Field blanks were not submitted with this sampling event.

Surrogate Compounds

Surrogates were added to all samples. All surrogate recoveries were within the laboratory control limits.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) samples were not specifically analyzed for this dataset. The laboratory demonstrated precision and accuracy through the analysis of laboratory duplicate samples with acceptable results.

Field Duplicates

Field duplicates were not collected for this dataset. Laboratory duplicates were acceptable for this dataset, therefore precision was demonstrated by the laboratory.

Target Analyte List

A sampling plan was not available for review.

Reporting Limits

The laboratory reporting limits were sufficiently below the MTCA Method A cleanup levels.

Reported Results

Lube oil and diesel for samples PH-7-SS3,SS2,SS1 Comp., PH-8-SS1,SS2,SS3 Comp., PH-6-SS3,SS4,SS5 Comp., PH-9-SS1,SS2,SS3 Comp., PH-1-SS1,SS2,SS3 Comp., PH-3-SS1,SS2 Comp., PH-5-SS1,SS2,SS3,SS4,SS5 Comp., PH-12-SS1,SS2 Comp., PH-11-SS1,SS2,SS3,SS4Comp., PH-10-SS1,SS2,SS3 Comp., PH-4-SS1,SS2,SS3 Comp. were qualified as estimated (J) and code 14 since the laboratory indicated the hydrocarbons in the lube oil range are impacting diesel results. Therefore, both lube oil and diesel are considered estimated values for these samples.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate recovery values. All data are acceptable for use.

DATA VALIDATION REPORT
Organochlorine Pesticides - Method 8181B

This report documents the review of analytical data from the analyses of samples and the associated laboratory and field quality control (QC) samples. OnSite Environmental, Inc. laboratory, Seattle, Washington. Refer to the Sample Index for a complete list of samples.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
1802-151	2 individual, 13 composite	STAGE 2A

DATA PACKAGE COMPLETENESS

With the exception noted below, the laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

Sample Receipt, Preservation, and Holding Times	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
Laboratory Blanks	Field Duplicates
Field Blanks	Target Analyte List
Surrogate Compounds	Reporting Limits
Laboratory Control Samples (LCS)	Reported Results

Sample Receipt, Preservation, and Holding Times

As stated in validation guidance documents, sample shipping coolers should arrive at the laboratory within the advisory temperature range of 0°C - 6°C and be extracted within 7 days for aqueous samples and 14 days for soil samples. Sample extracts must be analyzed within 40 days of extraction. The holding times were met.

Method and Field Blanks

The method blanks were all reported as undetected for target compounds. Field blanks were not submitted with this sampling event.

Surrogate Compounds

Surrogates were added to all samples with acceptable recoveries.

Matrix Spike/Matrix Spike Duplicates

A Matrix spike/matrix spike duplicate (MS/MSD) sample pair was analyzed with this dataset with acceptable results.

Field Duplicates

Field duplicates were not collected for this dataset.

Target Analyte List

A sampling plan was not available for review.

Reporting Limits

The laboratory reporting limits were sufficiently below the MTCA Method A cleanup levels.

Reported Results

Results reported were deemed acceptable. The laboratory noted the difference between the two columns exceeded 40%, resulting in estimated qualification of sample PH-3-SS1,SS2 Comp. for alpha-Chlordane.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate, MS/MSD and blank spike recovery values.

DATA VALIDATION REPORT
Polychlorinated Biphenyls - Method 8082A

This report documents the review of analytical data from the analyses of samples and the associated laboratory and field quality control (QC) samples. OnSite Environmental, Inc. laboratory, Seattle, Washington. Refer to the Sample Index for a complete list of samples.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
1802-151	13 composite	STAGE 2A

DATA PACKAGE COMPLETENESS

With the exception noted below, the laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

Sample Receipt, Preservation, and Holding Times	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
Laboratory Blanks	Field Duplicates
Field Blanks	Target Analyte List
Surrogate Compounds	Reporting Limits
Laboratory Control Samples (LCS)	Reported Results

Sample Receipt, Preservation, and Holding Times

As stated in validation guidance documents, sample shipping coolers should arrive at the laboratory within the advisory temperature range of 0°C - 6°C and be extracted within 7 days for aqueous samples and 14 days for soil samples. Sample extracts must be analyzed within 40 days of extraction. The holding times were met.

Method and Field Blanks

The method blanks were all reported as undetected for target compounds. Field blanks were not submitted with this sampling event.

Surrogate Compounds

Surrogates were added to all samples with acceptable recoveries.

Matrix Spike/Matrix Spike Duplicates

A laboratory control sample was analyzed in lieu of matrix spike/matrix spike duplicate (MS/MSD) samples with acceptable results.

Field Duplicates

Field duplicates were not collected for this dataset.

Target Analyte List

A sampling plan was not available for review.

Reporting Limits

The laboratory reporting limits were sufficiently below the MTCA Method A cleanup levels.

Reported Results

Results reported were deemed acceptable.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate and blank spike recovery values.

DATA VALIDATION REPORT
Chlorinated Herbicides - Method 8151A

This report documents the review of analytical data from the analyses of samples and the associated laboratory and field quality control (QC) samples. OnSite Environmental, Inc. laboratory, Seattle, Washington. Refer to the Sample Index for a complete list of samples.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
1802-151	13	STAGE 2A

DATA PACKAGE COMPLETENESS

With the exception noted below, the laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

Sample Receipt, Preservation, and Holding Times	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)

Laboratory Blanks	Field Duplicates
Field Blanks	Target Analyte List
Surrogate Compounds	Reporting Limits
Laboratory Control Samples (LCS)	Reported Results

Sample Receipt, Preservation, and Holding Times

As stated in validation guidance documents, sample shipping coolers should arrive at the laboratory within the advisory temperature range of 0°C - 6°C and be extracted within 7 days for aqueous samples and 14 days for soil samples. Sample extracts must be analyzed within 40 days of extraction. The holding times were met.

Method and Field Blanks

The method blanks were all reported as undetected for target compounds. Field blanks were not submitted with this sampling event.

Surrogate Compounds

Surrogates were added to all samples with acceptable results.

Matrix Spike/Matrix Spike Duplicates

A laboratory control sample/laboratory control sample duplicate (LCS/LCSD) pair were analyzed in lieu of a matrix spike/matrix spike duplicate (MS/MSD). Accuracy and precision were met.

Field Duplicates

Field duplicates were not collected for this dataset.

Target Analyte List

A sampling plan was not available for review.

Reporting Limits

The laboratory reporting limits were sufficiently below the MTCA Method A cleanup levels.

Reported Results

Results reported were deemed acceptable.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD recovery values. All data are acceptable for use.

DATA VALIDATION REPORT
Metals/Mercury - Method 6010D/7471B

This report documents the review of analytical data from the analyses of samples and the associated laboratory and field quality control (QC) samples. OnSite Environmental, Inc. laboratory, Seattle, Washington. Refer to the Sample Index for a complete list of samples.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
1802-151	13 composites 28 individual	STAGE 2A
1803-167	12	STAGE 2A
1802-151B	3 TCLP	STAGE 2A

DATA PACKAGE COMPLETENESS

With the exception noted below, the laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

Sample Receipt, Preservation, and Holding Times	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
Laboratory Blanks	Field Duplicates
Field Blanks	Target Analyte List
Surrogate Compounds	Reporting Limits
Laboratory Control Samples (LCS)	Reported Results

Sample Receipt, Preservation, and Holding Times

As stated in validation guidance documents, sample shipping coolers should arrive at the laboratory within the advisory temperature range of 0°C - 6°C and metals must be analyzed within 6 months and mercury within 28 days of sample collection. The holding times were met.

Method and Field Blanks

The method blanks were all reported as undetected for target compounds. Field blanks were not submitted with this sampling event.

Surrogate Compounds

Not Applicable.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) samples were analyzed with acceptable results.

Field Duplicates

Field duplicates were not collected for this dataset. The laboratory analyzed laboratory duplicates to demonstrate precision.

Laboratory Duplicates

Laboratory duplicates were analyzed to demonstrate precision. The precision for lead in the individual sample analyses was exceeded, resulting in estimated qualification and footnote 9 for all lead results.

Target Analyte List

A sampling plan was not available for review.

Reporting Limits

The laboratory reporting limits were sufficiently below the MTCA Method A cleanup levels.

Reported Results

Results reported were deemed acceptable.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable as demonstrated by the MS/MSD recovery values. Precision was also acceptable as demonstrated by the MS/MSD and laboratory duplicate RPD values. All data, as qualified, are acceptable for use.

APPENDIX A
DATA QUALIFIER DEFINITIONS
REASON CODES

DATA VALIDATION QUALIFIER CODES
Based on National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

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

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

DATA QUALIFIER REASON CODES

Group	Code	Reason for Qualification
Sample Handling	1	Improper Sample Handling or Sample Preservation (i.e., headspace, cooler)
Instrument Performance	24	Instrument Performance (i.e., tune, resolution, retention time window, endrin breakdown, lock-mass)
Instrument Performance	5A	Initial Calibration (RF, %RSD, r2)
Instrument Performance	5B	Calibration Verification (CCV, CCAL; RF, %D, %R) Use bias flags (H,L)1 where appropriate
Instrument Performance	5C	Initial Calibration Verification (ICV %D, %R) Use bias flags (H,L)1 where appropriate
Blank Contamination	6	Field Blank Contamination (Equipment Rinsate, Trip Blank, etc.)
Blank Contamination	7	Lab Blank Contamination (i.e., method blank, instrument blank, etc.) Use low bias flag (L)1 for negative instrument blanks
Precision and Accuracy	8	Matrix Spike (MS and/or MSD) Recoveries Use bias flags (H,L)1 where appropriate
Precision and Accuracy	9	Precision (all replicates: LCS/LCSD, MS/MSD, Lab Replicate, Field Replicate)
Precision and Accuracy	10	Laboratory Control Sample Recoveries (a.k.a. Blank Spikes) Use bias flags (H,L)1 where appropriate
Precision and Accuracy	12	Reference Material Use bias flags (H,L)1 where appropriate
Precision and Accuracy	13	Surrogate Spike Recoveries (a.k.a. labeled compounds, recovery standards) Use bias flags (H,L)1 where appropriate
Interferences	16	ICP/ICP-MS Serial Dilution Percent Difference
Interferences	17	ICP/ICP-MS Interference Check Standard Recovery Use bias flags (H,L)1 where appropriate
Interferences	19	Internal Standard Performance (i.e., area, retention time, recovery)
Interferences	22	Elevated Detection Limit due to Interference (i.e., chemical and/or matrix)
Interferences	23	Bias from Matrix Interference (i.e. diphenyl ether, PCB/pesticides)
Identification and Quantitation	2	Chromatographic pattern in sample does not match pattern of calibration standard
Identification and Quantitation	3	2nd column confirmation (RPD or %D)
Identification and Quantitation	4	Tentatively Identified Compound (TIC) (associated with NJ only)
Identification and Quantitation	20	Calibration Range or Linear Range Exceeded
Identification and Quantitation	25	Compound Identification (i.e., ion ratio, retention time, relative abundance, etc.)
Miscellaneous	11	A more appropriate result is reported (multiple reported analyses i.e., dilutions, reextractions, etc. Associated with "R" and "DNR" only)
Miscellaneous	14	Other (See DV report for details)
Miscellaneous	26	Method QC information not provided

APPENDIX B
QUALIFIED DATA SUMMARY TABLE

Qualified Data Sample Summary

Sample ID	Lab ID	Compound	Concentration	units	Qualifier, Code
PH-7-SS3	02-151-03	lead	69	mg/kg	J,9
PH-7-SS2	02-151-04	lead	40	mg/kg	J,9
PH-7-SS1	02-151-05	lead	84	mg/kg	J,9
PH-6-SS3	02-151-09	lead	59	mg/kg	J,9
PH-6-SS4	02-151-10	lead	93	mg/kg	J,9
PH-6-SS5	02-151-11	lead	270	mg/kg	J,9
PH-1-SS1	02-151-15	lead	65	mg/kg	J,9
PH-1-SS2	02-151-16	lead	66	mg/kg	J,9
PH-1-SS3	02-151-17	lead	250	mg/kg	J,9
PH-2-SS1	02-151-18	lead	40	mg/kg	J,9
PH-2-SS2	02-151-19	lead	140	mg/kg	J,9
PH-2-SS3	02-151-20	lead	98	mg/kg	J,9
PH-3-SS1	02-151-21	lead	270	mg/kg	J,9
PH-3-SS2	02-151-22	lead	320	mg/kg	J,9
PH-5-SS1	02-151-23	lead	110	mg/kg	J,9
PH-5-SS2	02-151-24	lead	170	mg/kg	J,9
PH-5-SS3	02-151-25	lead	320	mg/kg	J,9
PH-5-SS4	02-151-26	lead	80	mg/kg	J,9
PH-5-SS5	02-151-27	lead	140	mg/kg	J,9
PH-11-SS1	02-151-30	lead	160	mg/kg	J,9
PH-11-SS2	02-151-31	lead	49	mg/kg	J,9
PH-11-SS3	02-151-32	lead	47	mg/kg	J,9
PH-11-SS4	02-151-33	lead	52	mg/kg	J,9
PH-4-SS1	02-151-37	lead	85	mg/kg	J,9
PH-4-SS2	02-151-38	lead	88	mg/kg	J,9
PH-4-SS3	02-151-39	lead	340	mg/kg	J,9
PH-7-SS3,SS2,SS1 Comp.	02-151-03,04,05 Comp.	DRO Lube Oil	51 140	mg/kg	J,14 J,14
PH-8-SS1,SS2,SS3 Comp.	02-151-06,07,08 Comp.	DRO Lube Oil	66 140	mg/kg	J,14 J,14
PH-6-SS3,SS4,SS5 Comp.	02-151-09,10,11 Comp.	DRO Lube Oil	87 370	mg/kg	J,14 J,14
PH-9-SS1,SS2,SS3 Comp.	02-151-12,13,14 Comp.	DRO Lube Oil	66 250	mg/kg	J,14 J,14
PH-3-SS1,SS2 Comp.	02-151-21,22 Comp.	DRO Lube Oil	95 690	mg/kg	J,14 J,14
PH-5-SS1,SS2,SS3,SS4,SS5 Comp.	02-151-23,24,25,26,27 Comp.	DRO Lube Oil	99 290	mg/kg	J,14 J,14
PH-12-SS1,SS2 Comp.	02-151-28,29 Comp.	DRO Lube Oil	49 72	mg/kg	J,14 J,14
PH-11-SS1,SS2,SS3,SS4 Comp.	02-151-30,31,32,33 Comp.	DRO Lube Oil	140 270	mg/kg	J,14 J,14
PH-10-SS1,SS2,SS3 Comp.	02-151-34,35,36 Comp.	DRO Lube Oil	160 420	mg/kg	J,14 J,14
PH-4-SS1,SS2,SS3 Comp.	02-151-37,38,39 Comp.	DRO Lube Oil	130 370	mg/kg	J,14 J,14

APPENDIX C
DATA VALIDATION CHECKLISTS

VALIDATION WORKSHEET

Method: NWTPH-Dx Diesel/Lube Oil
Date Reviewed: 3.28.18
Sample Collection Dates: 2.13.18
SDG: 1802-151
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 PH-6 SS2, SS1 Comp.	2 PH-7 SS3, SS2, SS1 Comp.	3 PH-8 SS1, SS2, SS3 Comp.	4 PH-6 SS3, SS4, SS5 Comp.	5 PH-9 SS1, SS2, SS3 Comp.	6 PH-1 SS1, SS2, SS3 Comp.	7 PH-2 SS1, SS2, SS3 Comp.	8 PH-3 SS1, SS2 Comp.	9 PH-5 SS1, SS2, SS3, SS4, SS5 Comp.	10 PH-12 SS1, SS2 Comp.	11 PH-11 SS1, SS2, SS3, SS4 Comp.	12 PH-10 SS1, SS2, SS3 Comp.	13 PH-4 SS1, SS2, SS3 Comp.	14	15	16	17	18	19	20
Sample results	A	→	→	→	→	→	→	→	→	→	→	→	→							
Holding Times	A	→	→	→	→	→	→	→	→	→	→	→	→							
Completion	A	→	→	→	→	→	→	→	→	→	→	→	→							
Method Blanks	A	→	→	→	→	→	→	→	→	→	→	→	→							
LCS																				
duplicate RPD	A	→	→	→	→	→	→	→	→	→	→	→	→							
MS/MSD:																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

1.3 °C

SPL 2.13.18
prep 2.15.18
anl 2.16.18 2.20.18

surr: ok

N1 diesel are impacting lube oil
N lube oil are impacting diesel

1, 14 both diesel + lube oil
PH-7 SS3, SS2, SS1 Comp.

U1 PQL ↑ due to interferences (no flags)

PH-8 SS1, SS2, SS3 "
PH-6 SS3 SS4 SS5 "
PH-9 SS1 SS2 SS3
PH-1 SS1 SS2 SS3
PH-3 SS1, SS2
PH-5 SS1 SS2 SS3 SS4 SS5
PH-12 SS1, SS2
PH-11 SS1 SS2 SS3 SS4

PH-10 SS1 SS2 SS3 Comp
PH-4 SS1 SS2 SS3 Comp

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-6-SS2,SS1 Comp.**					
Laboratory ID:	02-151-01,02 Comp.					
Diesel Range Organics	**110**	30	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**590**	61	NWTPH-Dx	2-15-18	2-16-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*111*	*50-150*				
Client ID:	**PH-7-SS3,SS2,SS1 Comp.**					
Laboratory ID:	02-151-03,04,05 Comp.					
Diesel Range Organics	**51** J 14	29	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**140** J 14	58	NWTPH-Dx	2-15-18	2-16-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*105*	*50-150*				
Client ID:	**PH-8-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-06,07,08 Comp.					
Diesel Range Organics	**66** J 14	28	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**140** J 14	56	NWTPH-Dx	2-15-18	2-16-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				
Client ID:	**PH-6-SS3,SS4,SS5 Comp.**					
Laboratory ID:	02-151-09,10,11 Comp.					
Diesel Range Organics	**87** J 14	32	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**370** J 14	63	NWTPH-Dx	2-15-18	2-16-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*94*	*50-150*				
Client ID:	**PH-9-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-12,13,14 Comp.					
Diesel Range Organics	**66** J 14	31	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**250** J 14	61	NWTPH-Dx	2-15-18	2-16-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				
Client ID:	**PH-1-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-15,16,17 Comp.					
Diesel Range Organics	**ND**	41	NWTPH-Dx	2-15-18	2-20-18	U1
Lube Oil	**570**	59	NWTPH-Dx	2-15-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-2-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-18,19,20 Comp.					
Diesel Range Organics	**ND**	29	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil	**210**	57	NWTPH-Dx	2-15-18	2-16-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				
Client ID:	**PH-3-SS1,SS2 Comp.**					
Laboratory ID:	02-151-21,22 Comp.					
Diesel Range Organics	**95** J 14	34	NWTPH-Dx	2-15-18	2-20-18	N
Lube Oil Range Organics	**690** J 14	69	NWTPH-Dx	2-15-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*104*	*50-150*				
Client ID:	**PH-5-SS1,SS2,SS3,SS4,SS5 Comp.**					
Laboratory ID:	02-151-23,24,25,26,27 Comp.					
Diesel Range Organics	**99** J 14	30	NWTPH-Dx	2-15-18	2-21-18	
Lube Oil Range Organics	**290** J 14	60	NWTPH-Dx	2-15-18	2-21-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*94*	*50-150*				
Client ID:	**PH-12-SS1,SS2 Comp.**					
Laboratory ID:	02-151-28,29 Comp.					
Diesel Range Organics	**49** J 14	28	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**72** J 14	56	NWTPH-Dx	2-15-18	2-16-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**PH-11-SS1,SS2,SS3,SS4 Comp.**					
Laboratory ID:	02-151-30,31,32,33 Comp.					
Diesel Range Organics	**140** J 14	29	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**270** J 14	59	NWTPH-Dx	2-15-18	2-16-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*111*	*50-150*				
Client ID:	**PH-10-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-34,35,36 Comp.					
Diesel Range Organics	**160** J 14	29	NWTPH-Dx	2-15-18	2-20-18	
Lube Oil Range Organics	**420** J 14	57	NWTPH-Dx	2-15-18	2-20-18	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*119*	*50-150*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result		PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-4-SS1,SS2,SS3 Comp.**						
Laboratory ID:	02-151-37,38,39 Comp.						
Diesel Range Organics	**130**	14	30	NWTPH-Dx	2-15-18	2-20-18	
Lube Oil Range Organics	**370**	14	60	NWTPH-Dx	2-15-18	2-20-18	N1
Surrogate:	*Percent Recovery*		*Control Limits*				
o-Terphenyl	*116*		*50-150*				

individual

VALIDATION WORKSHEET

Method: Organochlorine Pest 8081B - dieldrin

SDG: 1802-157

Date Reviewed: 3.28.18

Reviewer: C Jensen

Sample Collection Dates: 2.13.18

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 PH. 3. SS1	2 PH. 3. SS2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Sample results	A																			
Holding Times	A																			
Completion	A																			
Method Blanks	A	A																		
LCS																				
duplicate RPD																				
MS/MSD:	A	A																		

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

spl. 2.13.18
prep 2.27.18
run 3.2.18, 3.5.18

surr. ok

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-3-SS1**					
Laboratory ID:	02-151-21					
Dieldrin	**48**	13	EPA 8081B	2-27-18	3-2-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*57*	*41-106*				
DCB	*49*	*40-123*				
Client ID:	**PH-3-SS2**					
Laboratory ID:	02-151-22					
Dieldrin	**ND**	15	EPA 8081B	2-27-18	3-5-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*44*	*41-106*				
DCB	*40*	*40-123*				

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organochlorine Pest

VALIDATION WORKSHEET

Method: 8081B
Date Reviewed: 3.28.18
Sample Collection Dates: 2.13.18

SDG: 1802.151
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 PH-6-SS2, SS4 Comp.	2 PH-7-SS3, SS2, SS1 Comp.	3 PH-8-SS1, SS2, SS3 Comp.	4 PH-0-SS3, SS4, SS5 Comp.	5 PH-9-SS1, SS2, SS3 Comp.	6 PH-1-SS1, SS2, SS3 Comp.	7 PH-2-SS1, SS2, SS3 Comp.	8 PH-3-SS1, SS2 Comp.	9 PH-5-SS1, SS2, SS3, SS4, SS5 Comp.	10 PH-12-SS1, SS2 Comp.	11 PH-11-SS1, SS2, SS3, SS4 Comp.	12 PH-10-SS1, SS2, SS3 Comp.	13 PH-4-SS1, SS2, SS3 Comp.	14	15	16	17	18	19	20
Sample results	A																			
Holding Times	A																			
Completion	A																			
Method Blanks	A																			
LCS																				
duplicate RPD																				
MS/MSD:	A																			

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

spl 2.13.18
prep 2 20 18
run 2 20 18, 2.26.18, 2.21.18

P flag: PH-3-SS1, SS2 Comp. RPD 740 J 25

surr: ok.

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-6-SS2,SS1 Comp.**					
Laboratory ID:	02-151-01,02 Comp.					
alpha-BHC	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**41**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**12**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**270**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	61	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*48*	*41-106*				
DCB	*53*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-7-SS3,SS2,SS1 Comp.**					
Laboratory ID:	02-151-03,04,05 Comp.					
alpha-BHC	**ND**	5.8	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	5.8	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	5.8	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	5.8	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	5.8	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	5.8	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	5.8	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	5.8	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**57**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	58	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*56*	*41-106*				
DCB	*58*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-8-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-06,07,08 Comp.					
alpha-BHC	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	11	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**18**	11	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	56	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*49*	*41-106*				
DCB	*54*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-6-SS3,SS4,SS5 Comp.**					
Laboratory ID:	02-151-09,10,11 Comp.					
alpha-BHC	**ND**	6.3	EPA 8081B	2-20-18	2-26-18	
gamma-BHC	**ND**	6.3	EPA 8081B	2-20-18	2-26-18	
beta-BHC	**ND**	6.3	EPA 8081B	2-20-18	2-26-18	
delta-BHC	**ND**	6.3	EPA 8081B	2-20-18	2-26-18	
Heptachlor	**ND**	6.3	EPA 8081B	2-20-18	2-26-18	
Aldrin	**ND**	6.3	EPA 8081B	2-20-18	2-26-18	
Heptachlor Epoxide	**ND**	6.3	EPA 8081B	2-20-18	2-26-18	
gamma-Chlordane	**ND**	13	EPA 8081B	2-20-18	2-26-18	
alpha-Chlordane	**ND**	13	EPA 8081B	2-20-18	2-26-18	
4,4'-DDE	**ND**	13	EPA 8081B	2-20-18	2-26-18	
Endosulfan I	**ND**	6.3	EPA 8081B	2-20-18	2-26-18	
Dieldrin	**ND**	13	EPA 8081B	2-20-18	2-26-18	
Endrin	**ND**	13	EPA 8081B	2-20-18	2-26-18	
4,4'-DDD	**ND**	13	EPA 8081B	2-20-18	2-26-18	
Endosulfan II	**ND**	13	EPA 8081B	2-20-18	2-26-18	
4,4'-DDT	**48**	13	EPA 8081B	2-20-18	2-26-18	
Endrin Aldehyde	**ND**	13	EPA 8081B	2-20-18	2-26-18	
Methoxychlor	**ND**	13	EPA 8081B	2-20-18	2-26-18	
Endosulfan Sulfate	**ND**	13	EPA 8081B	2-20-18	2-26-18	
Endrin Ketone	**ND**	13	EPA 8081B	2-20-18	2-26-18	
Toxaphene	**ND**	63	EPA 8081B	2-20-18	2-26-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*44*	*41-106*				
DCB	*53*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-9-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-12,13,14 Comp.					
alpha-BHC	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	6.1	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**25**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	61	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*44*	*41-106*				
DCB	*53*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-1-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-15,16,17 Comp.					
alpha-BHC	**ND**	5.9	EPA 8081B	2-20-18	2-21-18	
gamma-BHC	**ND**	5.9	EPA 8081B	2-20-18	2-21-18	
beta-BHC	**ND**	5.9	EPA 8081B	2-20-18	2-21-18	
delta-BHC	**ND**	5.9	EPA 8081B	2-20-18	2-21-18	
Heptachlor	**ND**	5.9	EPA 8081B	2-20-18	2-21-18	
Aldrin	**ND**	5.9	EPA 8081B	2-20-18	2-21-18	
Heptachlor Epoxide	**ND**	5.9	EPA 8081B	2-20-18	2-21-18	
gamma-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-21-18	
alpha-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-21-18	
4,4'-DDE	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endosulfan I	**ND**	5.9	EPA 8081B	2-20-18	2-21-18	
Dieldrin	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endrin	**ND**	12	EPA 8081B	2-20-18	2-21-18	
4,4'-DDD	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endosulfan II	**ND**	12	EPA 8081B	2-20-18	2-21-18	
4,4'-DDT	**17**	12	EPA 8081B	2-20-18	2-21-18	
Endrin Aldehyde	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Methoxychlor	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endosulfan Sulfate	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endrin Ketone	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Toxaphene	**ND**	59	EPA 8081B	2-20-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*55*	*41-106*				
DCB	*55*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-2-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-18,19,20 Comp.					
alpha-BHC	**ND**	5.7	EPA 8081B	2-20-18	2-21-18	
gamma-BHC	**ND**	5.7	EPA 8081B	2-20-18	2-21-18	
beta-BHC	**ND**	5.7	EPA 8081B	2-20-18	2-21-18	
delta-BHC	**ND**	5.7	EPA 8081B	2-20-18	2-21-18	
Heptachlor	**ND**	5.7	EPA 8081B	2-20-18	2-21-18	
Aldrin	**ND**	5.7	EPA 8081B	2-20-18	2-21-18	
Heptachlor Epoxide	**ND**	5.7	EPA 8081B	2-20-18	2-21-18	
gamma-Chlordane	**ND**	11	EPA 8081B	2-20-18	2-21-18	
alpha-Chlordane	**ND**	11	EPA 8081B	2-20-18	2-21-18	
4,4'-DDE	**ND**	11	EPA 8081B	2-20-18	2-21-18	
Endosulfan I	**ND**	5.7	EPA 8081B	2-20-18	2-21-18	
Dieldrin	**ND**	11	EPA 8081B	2-20-18	2-21-18	
Endrin	**ND**	11	EPA 8081B	2-20-18	2-21-18	
4,4'-DDD	**ND**	11	EPA 8081B	2-20-18	2-21-18	
Endosulfan II	**ND**	11	EPA 8081B	2-20-18	2-21-18	
4,4'-DDT	**12**	11	EPA 8081B	2-20-18	2-21-18	
Endrin Aldehyde	**ND**	11	EPA 8081B	2-20-18	2-21-18	
Methoxychlor	**ND**	11	EPA 8081B	2-20-18	2-21-18	
Endosulfan Sulfate	**ND**	11	EPA 8081B	2-20-18	2-21-18	
Endrin Ketone	**ND**	11	EPA 8081B	2-20-18	2-21-18	
Toxaphene	**ND**	57	EPA 8081B	2-20-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*66*	*41-106*				
DCB	*64*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-3-SS1,SS2 Comp.**					
Laboratory ID:	02-151-21,22 Comp.					
alpha-BHC	**ND**	6.9	EPA 8081B	2-20-18	2-21-18	
gamma-BHC	**ND**	6.9	EPA 8081B	2-20-18	2-21-18	
beta-BHC	**ND**	6.9	EPA 8081B	2-20-18	2-21-18	
delta-BHC	**ND**	6.9	EPA 8081B	2-20-18	2-21-18	
Heptachlor	**ND**	6.9	EPA 8081B	2-20-18	2-21-18	
Aldrin	**ND**	6.9	EPA 8081B	2-20-18	2-21-18	
Heptachlor Epoxide	**ND**	6.9	EPA 8081B	2-20-18	2-21-18	
gamma-Chlordane	**ND**	14	EPA 8081B	2-20-18	2-21-18	
alpha-Chlordane	**41** J 25	14	EPA 8081B	2-20-18	2-21-18	P
4,4'-DDE	**ND**	14	EPA 8081B	2-20-18	2-21-18	
Endosulfan I	**ND**	6.9	EPA 8081B	2-20-18	2-21-18	
Dieldrin	**33**	14	EPA 8081B	2-20-18	2-21-18	
Endrin	**ND**	14	EPA 8081B	2-20-18	2-21-18	
4,4'-DDD	**ND**	14	EPA 8081B	2-20-18	2-21-18	
Endosulfan II	**ND**	14	EPA 8081B	2-20-18	2-21-18	
4,4'-DDT	**33**	14	EPA 8081B	2-20-18	2-21-18	
Endrin Aldehyde	**ND**	14	EPA 8081B	2-20-18	2-21-18	
Methoxychlor	**ND**	14	EPA 8081B	2-20-18	2-21-18	
Endosulfan Sulfate	**ND**	14	EPA 8081B	2-20-18	2-21-18	
Endrin Ketone	**ND**	14	EPA 8081B	2-20-18	2-21-18	
Toxaphene	**ND**	69	EPA 8081B	2-20-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*60*	*41-106*				
DCB	*57*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-5-SS1,SS2,SS3,SS4,SS5 Comp.**					
Laboratory ID:	02-151-23,24,25,26,27 Comp.					
alpha-BHC	**ND**	6.0	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	6.0	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	6.0	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	6.0	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	6.0	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	6.0	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	6.0	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	6.0	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**22**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	60	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*55*	*41-106*				
DCB	*58*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-12-SS1,SS2 Comp.**					
Laboratory ID:	02-151-28,29 Comp.					
alpha-BHC	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	11	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	5.6	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	56	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*59*	*41-106*				
DCB	*65*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-11-SS1,SS2,SS3,SS4 Comp.**					
Laboratory ID:	02-151-30,31,32,33 Comp.					
alpha-BHC	**ND**	5.9	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	5.9	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	5.9	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	5.9	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	5.9	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	5.9	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	5.9	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	5.9	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	12	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**12**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	12	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	59	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*54*	*41-106*				
DCB	*58*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-10-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-34,35,36 Comp.					
alpha-BHC	**ND**	5.7	EPA 8081B	2-20-18	2-20-18	
gamma-BHC	**ND**	5.7	EPA 8081B	2-20-18	2-20-18	
beta-BHC	**ND**	5.7	EPA 8081B	2-20-18	2-20-18	
delta-BHC	**ND**	5.7	EPA 8081B	2-20-18	2-20-18	
Heptachlor	**ND**	5.7	EPA 8081B	2-20-18	2-20-18	
Aldrin	**ND**	5.7	EPA 8081B	2-20-18	2-20-18	
Heptachlor Epoxide	**ND**	5.7	EPA 8081B	2-20-18	2-20-18	
gamma-Chlordane	**ND**	11	EPA 8081B	2-20-18	2-20-18	
alpha-Chlordane	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDE	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan I	**ND**	5.7	EPA 8081B	2-20-18	2-20-18	
Dieldrin	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endrin	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDD	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan II	**ND**	11	EPA 8081B	2-20-18	2-20-18	
4,4'-DDT	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endrin Aldehyde	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Methoxychlor	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endosulfan Sulfate	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Endrin Ketone	**ND**	11	EPA 8081B	2-20-18	2-20-18	
Toxaphene	**ND**	57	EPA 8081B	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*48*	*41-106*				
DCB	*54*	*40-123*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

ORGANOCHLORINE PESTICIDES EPA 8081B

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-4-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-37,38,39 Comp.					
alpha-BHC	**ND**	6.0	EPA 8081B	2-20-18	2-21-18	
gamma-BHC	**ND**	6.0	EPA 8081B	2-20-18	2-21-18	
beta-BHC	**ND**	6.0	EPA 8081B	2-20-18	2-21-18	
delta-BHC	**ND**	6.0	EPA 8081B	2-20-18	2-21-18	
Heptachlor	**ND**	6.0	EPA 8081B	2-20-18	2-21-18	
Aldrin	**ND**	6.0	EPA 8081B	2-20-18	2-21-18	
Heptachlor Epoxide	**ND**	6.0	EPA 8081B	2-20-18	2-21-18	
gamma-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-21-18	
alpha-Chlordane	**ND**	12	EPA 8081B	2-20-18	2-21-18	
4,4'-DDE	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endosulfan I	**ND**	6.0	EPA 8081B	2-20-18	2-21-18	
Dieldrin	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endrin	**ND**	12	EPA 8081B	2-20-18	2-21-18	
4,4'-DDD	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endosulfan II	**ND**	12	EPA 8081B	2-20-18	2-21-18	
4,4'-DDT	**52**	12	EPA 8081B	2-20-18	2-21-18	
Endrin Aldehyde	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Methoxychlor	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endosulfan Sulfate	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Endrin Ketone	**ND**	12	EPA 8081B	2-20-18	2-21-18	
Toxaphene	**ND**	60	EPA 8081B	2-20-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
TCMX	*63*	*41-106*				
DCB	*65*	*40-123*				

VALIDATION WORKSHEET

Method: PCBs 8082A
Date Reviewed: 3.28.18
Sample Collection Dates: 2.13.18
SDG: 1802.151
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 PH-6-SS2, SS Comp.	2 PH-7-SS3, SS2, SS1 Comp.	3 PH-8-SS1, SS2, SS3 Comp.	4 PH-10-SS3, SS4, SS5 Comp.	5 PH-9-SS1, SS2, SS3 Comp.	6 PH-1-SS1, SS2, SS3 Comp.	7 PH-2-SS1, SS2, SS3 Comp.	8 PH-3-SS1, SS2 Comp.	9 PH-5-SS1, SS2, SS3, SS4, SS5 Comp.	10 PH-12-SS1, SS2 Comp.	11 PH-11-SS1, SS2, SS3, SS4 Comp.	12 PH-10-SS1, SS2, SS3 Comp.	13 PH-4-SS1, SS2, SS3 Comp.	14	15	16	17	18	19	20
Sample results	A	→	→	→	→	→	→	→	→	→	→	→	→							
Holding Times	A	→	→	→	→	→	→	→	→	→	→	→	→							
Completion	A	→	→	→	→	→	→	→	→	→	→	→	→							
Method Blanks	A	→	→	→	→	→	→	→	→	→	→	→	→							
LCS	A	→	→	→	→	→	→	→	→	→	→	→	→							
duplicate RPD																				
MS/MSD:																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

spl 2.13.18
prep 2.20.18
run 2.20.18

surr: ok

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-6-SS2,SS1 Comp.**					
Laboratory ID:	02-151-01,02 Comp.					
Aroclor 1016	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*65*	*40-134*				
Client ID:	**PH-7-SS3,SS2,SS1 Comp.**					
Laboratory ID:	02-151-03,04,05 Comp.					
Aroclor 1016	**ND**	0.058	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.058	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.058	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.058	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.058	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.058	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.058	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*71*	*40-134*				
Client ID:	**PH-8-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-06,07,08 Comp.					
Aroclor 1016	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*74*	*40-134*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-6-SS3,SS4,SS5 Comp.**					
Laboratory ID:	02-151-09,10,11 Comp.					
Aroclor 1016	**ND**	0.063	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.063	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.063	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.063	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.063	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.063	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.063	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*78*	*40-134*				
Client ID:	**PH-9-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-12,13,14 Comp.					
Aroclor 1016	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.061	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*69*	*40-134*				
Client ID:	**PH-1-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-15,16,17 Comp.					
Aroclor 1016	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*82*	*40-134*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-2-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-18,19,20 Comp.					
Aroclor 1016	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*88*	*40-134*				
Client ID:	**PH-3-SS1,SS2 Comp.**					
Laboratory ID:	02-151-21,22 Comp.					
Aroclor 1016	**ND**	0.069	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.069	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.069	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.069	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.069	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.069	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.069	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*73*	*40-134*				
Client ID:	**PH-5-SS1,SS2,SS3,SS4,SS5 Comp.**					
Laboratory ID:	02-151-23,24,25,26,27 Comp.					
Aroclor 1016	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*76*	*40-134*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-12-SS1,SS2 Comp.**					
Laboratory ID:	02-151-28,29 Comp.					
Aroclor 1016	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.056	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*84*	*40-134*				
Client ID:	**PH-11-SS1,SS2,SS3,SS4 Comp.**					
Laboratory ID:	02-151-30,31,32,33 Comp.					
Aroclor 1016	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.059	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*70*	*40-134*				
Client ID:	**PH-10-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-34,35,36 Comp.					
Aroclor 1016	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.057	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*82*	*40-134*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-4-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-37,38,39 Comp.					
Aroclor 1016	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.060	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*82*	*40-134*				

VALIDATION WORKSHEET

Method: Herbicides 8151A
Date Reviewed: 3.28.18
Sample Collection Dates: 2.13.18

SDG: 1802.151
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 PH-6-SS2, SS1 Comp.	2 PH-7-SS3, SS2, SS1 Comp.	3 PH-8-SS1, SS2, SS3 Comp.	4 PH-6-SS3, SS4, SS5 Comp.	5 PH-9-SS1, SS2, SS3 Comp.	6 PH-1-SS1, SS2, SS3 Comp.	7 PH-2-SS1, SS2, SS3 Comp.	8 PH-3-SS1, SS2 Comp.	9 PH-5-SS1, SS2, SS3, SS4, SS5 Comp.	10 PH-12-SS1, SS2 Comp.	11 PH-11-SS1, SS2, SS3, SS4 Comp.	12 PH-10-SS1, SS2, SS3 Comp.	13 PH-4-SS1, SS2, SS3 Comp.	14	15	16	17	18	19	20
Sample results	A	→	→	→	→	→	→	→	→	→	→	→	→							
Holding Times	A	→	→	→	→	→	→	→	→	→	→	→	→							
Completion	A	→	→	→	→	→	→	→	→	→	→	→	→							
Method Blanks	A	→	→	→	→	→	→	→	→	→	→	→	→							
LCS/LCSD	A	→	→	→	→	→	→	→	→	→	→	→	→							
duplicate RPD																				
MS/MSD:																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

spl 2.13.18
prep 2.16.18
run 2.21.18 2.16.18 2.20.18 2.17.18

surrogates: ok

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

CHLORINATED ACID HERBICIDES EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-6-SS2,SS1 Comp.**					
Laboratory ID:	02-151-01,02 Comp.					
Dalapon	**ND**	280	EPA 8151A	2-16-18	2-21-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-21-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
Dichlorprop	**ND**	86	EPA 8151A	2-16-18	2-21-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Pentachlorophenol	**6.4**	5.8	EPA 8151A	2-16-18	2-21-18	
2,4,5-TP (Silvex)	**ND**	12	EPA 8151A	2-16-18	2-21-18	
2,4,5-T	**ND**	12	EPA 8151A	2-16-18	2-21-18	
2,4-DB	**ND**	12	EPA 8151A	2-16-18	2-21-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*57*	*10-126*				
Client ID:	**PH-7-SS3,SS2,SS1 Comp.**					
Laboratory ID:	02-151-03,04,05 Comp.					
Dalapon	**ND**	260	EPA 8151A	2-16-18	2-21-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-21-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
Dichlorprop	**ND**	82	EPA 8151A	2-16-18	2-21-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Pentachlorophenol	**ND**	5.5	EPA 8151A	2-16-18	2-21-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*47*	*10-126*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

CHLORINATED ACID HERBICIDES EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-8-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-06,07,08 Comp.					
Dalapon	**ND**	260	EPA 8151A	2-16-18	2-21-18	
Dicamba	**ND**	10	EPA 8151A	2-16-18	2-21-18	
MCPP	**ND**	1000	EPA 8151A	2-16-18	2-21-18	
MCPA	**ND**	1000	EPA 8151A	2-16-18	2-21-18	
Dichlorprop	**ND**	79	EPA 8151A	2-16-18	2-21-18	
2,4-D	**ND**	10	EPA 8151A	2-16-18	2-21-18	
Pentachlorophenol	**ND**	5.3	EPA 8151A	2-16-18	2-21-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*53*	*10-126*				
Client ID:	**PH-6-SS3,SS4,SS5 Comp.**					
Laboratory ID:	02-151-09,10,11 Comp.					
Dalapon	**ND**	290	EPA 8151A	2-16-18	2-16-18	
Dicamba	**ND**	12	EPA 8151A	2-16-18	2-16-18	
MCPP	**ND**	1200	EPA 8151A	2-16-18	2-16-18	
MCPA	**ND**	1200	EPA 8151A	2-16-18	2-16-18	
Dichlorprop	**ND**	89	EPA 8151A	2-16-18	2-16-18	
2,4-D	**ND**	12	EPA 8151A	2-16-18	2-16-18	
Pentachlorophenol	**ND**	6.0	EPA 8151A	2-16-18	2-16-18	
2,4,5-TP (Silvex)	**ND**	12	EPA 8151A	2-16-18	2-16-18	
2,4,5-T	**ND**	12	EPA 8151A	2-16-18	2-16-18	
2,4-DB	**ND**	12	EPA 8151A	2-16-18	2-16-18	
Dinoseb	**ND**	12	EPA 8151A	2-16-18	2-16-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*35*	*10-126*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

CHLORINATED ACID HERBICIDES EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-9-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-12,13,14 Comp.					
Dalapon	**ND**	280	EPA 8151A	2-16-18	2-20-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-20-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-20-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-20-18	
Dichlorprop	**ND**	86	EPA 8151A	2-16-18	2-20-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-20-18	
Pentachlorophenol	**ND**	5.8	EPA 8151A	2-16-18	2-20-18	
2,4,5-TP (Silvex)	**ND**	12	EPA 8151A	2-16-18	2-20-18	
2,4,5-T	**ND**	12	EPA 8151A	2-16-18	2-20-18	
2,4-DB	**ND**	12	EPA 8151A	2-16-18	2-20-18	
Dinoseb	**ND**	12	EPA 8151A	2-16-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*72*	*10-126*				
Client ID:	**PH-1-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-15,16,17 Comp.					
Dalapon	**ND**	270	EPA 8151A	2-16-18	2-21-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-21-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
Dichlorprop	**ND**	84	EPA 8151A	2-16-18	2-21-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Pentachlorophenol	**ND**	5.6	EPA 8151A	2-16-18	2-21-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*56*	*10-126*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

CHLORINATED ACID HERBICIDES EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-2-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-18,19,20 Comp.					
Dalapon	**ND**	260	EPA 8151A	2-16-18	2-21-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-21-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
Dichlorprop	**ND**	81	EPA 8151A	2-16-18	2-21-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Pentachlorophenol	**ND**	5.5	EPA 8151A	2-16-18	2-21-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*56*	*10-126*				
Client ID:	**PH-3-SS1,SS2 Comp.**					
Laboratory ID:	02-151-21,22 Comp.					
Dalapon	**ND**	310	EPA 8151A	2-16-18	2-17-18	
Dicamba	**ND**	13	EPA 8151A	2-16-18	2-17-18	
MCPP	**ND**	1300	EPA 8151A	2-16-18	2-17-18	
MCPA	**ND**	1300	EPA 8151A	2-16-18	2-17-18	
Dichlorprop	**ND**	97	EPA 8151A	2-16-18	2-17-18	
2,4-D	**ND**	13	EPA 8151A	2-16-18	2-17-18	
Pentachlorophenol	**ND**	6.5	EPA 8151A	2-16-18	2-17-18	
2,4,5-TP (Silvex)	**ND**	13	EPA 8151A	2-16-18	2-17-18	
2,4,5-T	**ND**	13	EPA 8151A	2-16-18	2-17-18	
2,4-DB	**ND**	13	EPA 8151A	2-16-18	2-17-18	
Dinoseb	**ND**	13	EPA 8151A	2-16-18	2-17-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*45*	*10-126*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

CHLORINATED ACID HERBICIDES EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-5-SS1,SS2,SS3,SS4,SS5 Comp.**					
Laboratory ID:	02-151-23,24,25,26,27 Comp.					
Dalapon	**ND**	280	EPA 8151A	2-16-18	2-17-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-17-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-17-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-17-18	
Dichlorprop	**ND**	86	EPA 8151A	2-16-18	2-17-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Pentachlorophenol	**ND**	5.7	EPA 8151A	2-16-18	2-17-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-17-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-17-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*37*	*10-126*				
Client ID:	**PH-12-SS1,SS2 Comp.**					
Laboratory ID:	02-151-28,29 Comp.					
Dalapon	**ND**	260	EPA 8151A	2-16-18	2-21-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-21-18	
MCPP	**ND**	1000	EPA 8151A	2-16-18	2-21-18	
MCPA	**ND**	1000	EPA 8151A	2-16-18	2-21-18	
Dichlorprop	**ND**	79	EPA 8151A	2-16-18	2-21-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Pentachlorophenol	**ND**	5.3	EPA 8151A	2-16-18	2-21-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*59*	*10-126*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

CHLORINATED ACID HERBICIDES EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-11-SS1,SS2,SS3,SS4 Comp.**					
Laboratory ID:	02-151-30,31,32,33 Comp.					
Dalapon	**ND**	270	EPA 8151A	2-16-18	2-21-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-21-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-21-18	
Dichlorprop	**ND**	83	EPA 8151A	2-16-18	2-21-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Pentachlorophenol	**ND**	5.6	EPA 8151A	2-16-18	2-21-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-21-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-21-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*61*	*10-126*				
Client ID:	**PH-10-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-34,35,36 Comp.					
Dalapon	**ND**	260	EPA 8151A	2-16-18	2-17-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-17-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-17-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-17-18	
Dichlorprop	**ND**	81	EPA 8151A	2-16-18	2-17-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Pentachlorophenol	**ND**	5.4	EPA 8151A	2-16-18	2-17-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-17-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-17-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*52*	*10-126*				

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

CHLORINATED ACID HERBICIDES EPA 8151A

Matrix: Soil
Units: ug/Kg (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-4-SS1,SS2,SS3 Comp.**					
Laboratory ID:	02-151-37,38,39 Comp.					
Dalapon	**ND**	280	EPA 8151A	2-16-18	2-17-18	
Dicamba	**ND**	11	EPA 8151A	2-16-18	2-17-18	
MCPP	**ND**	1100	EPA 8151A	2-16-18	2-17-18	
MCPA	**ND**	1100	EPA 8151A	2-16-18	2-17-18	
Dichlorprop	**ND**	85	EPA 8151A	2-16-18	2-17-18	
2,4-D	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Pentachlorophenol	**ND**	5.7	EPA 8151A	2-16-18	2-17-18	
2,4,5-TP (Silvex)	**ND**	11	EPA 8151A	2-16-18	2-17-18	
2,4,5-T	**ND**	11	EPA 8151A	2-16-18	2-17-18	
2,4-DB	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Dinoseb	**ND**	11	EPA 8151A	2-16-18	2-17-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCAA	*47*	*10-126*				

6010D 7471B 6010D

VALIDATION WORKSHEET

Method: Metals As Hg, Pb

Date Reviewed: 3.20.18

Sample Collection Dates: 3.16.18

SDG: 1803-167

Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 PH-01-HA1-01	2 PH-01-HA1-02	3 PH-02-HA1-01	4 PH-02-HA1-02	5 PH-04-HA1-01	6 PH-04-HA1-02	7 PH-05-HA1-01	8 PH-05-HA1-02	9 PH-06-HA1-01	10 PH-06-HA1-02	11 PH-06-HA2-01	12 PH-06-HA2-02	13	14	15	16	17	18	19	20
Sample results	A	→	→	→	→	→	→	→	→	→	→	→								
Holding Times	A	→	→	→	→	→	→	→	→	→	→	→								
Completion	A	→	→	→	→	→	→	→	→	→	→	→								
Method Blanks	A	→	→	→	→	→	→	→	→	→	→	→								
LCS																				
duplicate RPD	A	→	→	→	→	→	→	→	→	→	→	→								
MS/MSD:	A	→	→	→	→	→	→	→	→	→	→	→								

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

	Metals	Hg	
SPL	3/16/18	3/16/18	6°C
prep	3/22/18	3/23/18	
run	3/22/18	3/23/18	

no flags.

Date of Report: March 27, 2018
Samples Submitted: March 19, 2018
Laboratory Reference: 1803-167
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-167-01					
Client ID:	**PH-01-HA1-01**					
Arsenic	**ND**	12	6010D	3-22-18	3-22-18	
Lab ID:	03-167-02					
Client ID:	**PH-01-HA1-02**					
Arsenic	**ND**	11	6010D	3-22-18	3-22-18	
Lab ID:	03-167-04					
Client ID:	**PH-03-HA1-01**					
Lead	**42**	6.1	6010D	3-22-18	3-22-18	
Mercury	**ND**	0.31	7471B	3-23-18	3-23-18	
Lab ID:	03-167-05					
Client ID:	**PH-03-HA1-02**					
Lead	**14**	5.8	6010D	3-22-18	3-22-18	
Mercury	**0.92**	0.29	7471B	3-23-18	3-23-18	
Lab ID:	03-167-08					
Client ID:	**PH-04-HA1-01**					
Lead	**15**	5.6	6010D	3-22-18	3-22-18	

Date of Report: March 27, 2018
Samples Submitted: March 19, 2018
Laboratory Reference: 1803-167
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-167-09					
Client ID:	**PH-04-HA1-02**					
Lead	**ND**	6.1	6010D	3-22-18	3-22-18	
Lab ID:	03-167-12					
Client ID:	**PH-05-HA1-01**					
Lead	**170**	6.0	6010D	3-22-18	3-22-18	
Lab ID:	03-167-13					
Client ID:	**PH-05-HA1-02**					
Lead	**8.6**	5.8	6010D	3-22-18	3-22-18	
Lab ID:	03-167-16					
Client ID:	**PH-06-HA1-01**					
Mercury	**0.94**	0.30	7471B	3-22-18	3-22-18	
Lab ID:	03-167-17					
Client ID:	**PH-06-HA1-02**					
Mercury	**0.48**	0.29	7471B	3-22-18	3-22-18	

Date of Report: March 27, 2018
Samples Submitted: March 19, 2018
Laboratory Reference: 1803-167
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	03-167-20					
Client ID:	**PH-06-HA2-01**					
Lead	**190**	5.8	6010D	3-22-18	3-22-18	
Lab ID:	03-167-21					
Client ID:	**PH-06-HA2-02**					
Lead	**21**	5.9	6010D	3-22-18	3-22-18	

Chain of Custody

Page 1 of 2

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

Company:

Project Number:

Project Name:

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:

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NW/TPH-HCID	NW/TPH-Gx/BTEX	NW/TPH-Gx	NW/TPH-Dx (__ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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																										
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										

	Signature	Company	Date	Time
Relinquished				
Received				
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

Page 2 of 3

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

Company:
Project Number:
Project Name:
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:

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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																										
2																										10
3																										7
4																										
5																										
6																										10
7																										9
8																										
9																										
10																										15

	Signature	Company	Date	Time
Relinquished				
Received		Alpha	3/19/18	1530
Relinquished		Alpha	3/19/18	2330
Received		ORE	3/19/18	1430
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

Page 2 of 3

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

Company:

Project Number:

Project Name:

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:

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
21					
22					
23					
24					
25					

NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (... Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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

	Signature	Company	Date	Time
Relinquished				
Received				
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

49

6010D 7471B

VALIDATION WORKSHEET

Method: Metals Mercury

Date Reviewed: 3.28.18

Sample Collection Dates: 2.13.18

SDG: 1802.151

Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	PH-6-SS2, SS1 Comp.	PH-7-SS3, SS2, SS1 Comp.	PH-8-SS1, SS2, SS3 Comp.	PH-6-SS3, SS4, SS5 Comp	PH-9-SS1, SS2, SS3 Comp.	PH-1-SS1, SS2, SS3 Comp.	PH-2-SS1, SS2, SS3 Comp	PH-3-SS1, SS2 Comp.	PH-5-SS1, SS2, SS3, SS4, SS5 Comp	PH-12-SS1, SS2 Comp.	PH-11-SS1, SS2, SS3, SS4 Comp	PH-10-SS1, SS2, SS3 Comp	PH-4-SS1, SS2, SS3 Comp							
Sample results	A →	→	→	→	→	→	→	→	→	→	→	→	→							
Holding Times	A →	→	→	→	→	→	→	→	→	→	→	→	→							
Completion	A →	→	→	→	→	→	→	→	→	→	→	→	→							
Method Blanks	A →	→	→	→	→	→	→	→	→	→	→	→	→							
LCS																				
duplicate RPD (1)	A →	→	→	→	→	→	→	→	→	→	→	→	→							
MS/MSD:	A →	→	→	→	→	→	→	→	→	→	→	→	→							

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

	metals	Hg
spl	2.13.18	2 13 18
prep	2 20 18	2 21 18
run	2 20 18 2 21 18	2 21 18

no flags.

(1) dup Pb out, re-ex + re-run w similar result in narrative incorrect: dup is in for Pb. See next checklist. indiv. spls.

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-01,02 Comp.					
Client ID:	**PH-6-SS2,SS1 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**59**	3.0	6010D	2-21-18	2-21-18	
Cadmium	**0.61**	0.61	6010D	2-20-18	2-20-18	
Chromium	**17**	0.61	6010D	2-20-18	2-20-18	
Lead	**120**	6.1	6010D	2-20-18	2-20-18	
Mercury	**1.0**	0.30	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	
Lab ID:	02-151-03,04,05 Comp.					
Client ID:	**PH-7-SS3,SS2,SS1 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**45**	2.9	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.58	6010D	2-20-18	2-20-18	
Chromium	**24**	0.58	6010D	2-20-18	2-20-18	
Lead	**100**	5.8	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.29	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-06,07,08 Comp.					
Client ID:	**PH-8-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	11	6010D	2-20-18	2-20-18	
Barium	**28**	2.8	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.56	6010D	2-20-18	2-20-18	
Chromium	**15**	0.56	6010D	2-20-18	2-20-18	
Lead	**61**	5.6	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.28	7471B	2-21-18	2-21-18	
Selenium	**ND**	11	6010D	2-20-18	2-20-18	
Silver	**ND**	1.1	6010D	2-20-18	2-20-18	
Lab ID:	02-151-09,10,11 Comp.					
Client ID:	**PH-6-SS3,SS4,SS5 Comp.**					
Arsenic	**ND**	13	6010D	2-20-18	2-20-18	
Barium	**130**	3.2	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.63	6010D	2-20-18	2-20-18	
Chromium	**27**	0.63	6010D	2-20-18	2-20-18	
Lead	**160**	6.3	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.32	7471B	2-21-18	2-21-18	
Selenium	**ND**	13	6010D	2-20-18	2-20-18	
Silver	**ND**	1.3	6010D	2-20-18	2-20-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-12,13,14 Comp.					
Client ID:	**PH-9-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**53**	3.1	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.61	6010D	2-20-18	2-20-18	
Chromium	**15**	0.61	6010D	2-20-18	2-20-18	
Lead	**81**	6.1	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.31	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	
Lab ID:	02-151-15,16,17 Comp.					
Client ID:	**PH-1-SS1,SS2,SS3 Comp.**					
Arsenic	**76**	12	6010D	2-20-18	2-20-18	
Barium	**110**	3.0	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.59	6010D	2-20-18	2-20-18	
Chromium	**29**	0.59	6010D	2-20-18	2-20-18	
Lead	**87**	5.9	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.30	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-18,19,20 Comp.					
Client ID:	**PH-2-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	11	6010D	2-20-18	2-20-18	
Barium	**46**	2.9	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.57	6010D	2-20-18	2-20-18	
Chromium	**16**	0.57	6010D	2-20-18	2-20-18	
Lead	**100**	5.7	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.29	7471B	2-21-18	2-21-18	
Selenium	**ND**	11	6010D	2-20-18	2-20-18	
Silver	**ND**	1.1	6010D	2-20-18	2-20-18	
Lab ID:	02-151-21,22 Comp.					
Client ID:	**PH-3-SS1,SS2 Comp.**					
Arsenic	**ND**	14	6010D	2-20-18	2-20-18	
Barium	**92**	3.4	6010D	2-21-18	2-21-18	
Cadmium	**0.79**	0.69	6010D	2-20-18	2-20-18	
Chromium	**32**	0.69	6010D	2-20-18	2-20-18	
Lead	**300**	6.9	6010D	2-20-18	2-20-18	
Mercury	**1.6**	0.69	7471B	2-21-18	2-21-18	
Selenium	**ND**	14	6010D	2-20-18	2-20-18	
Silver	**ND**	1.4	6010D	2-20-18	2-20-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Fla
Lab ID:	02-151-23,24,25,26,27 Comp.					
Client ID:	**PH-5-SS1,SS2,SS3,SS4,SS5 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**99**	3.0	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.60	6010D	2-20-18	2-20-18	
Chromium	**22**	0.60	6010D	2-20-18	2-20-18	
Lead	**140**	6.0	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.30	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	
Lab ID:	02-151-28,29 Comp.					
Client ID:	**PH-12-SS1,SS2 Comp.**					
Arsenic	**ND**	11	6010D	2-20-18	2-20-18	
Barium	**31**	2.8	6010D	2-21-18	2-21-18	
Cadmium	**0.59**	0.56	6010D	2-20-18	2-20-18	
Chromium	**15**	0.56	6010D	2-20-18	2-20-18	
Lead	**72**	5.6	6010D	2-20-18	2-20-18	
Mercury	**0.36**	0.28	7471B	2-21-18	2-21-18	
Selenium	**ND**	11	6010D	2-20-18	2-20-18	
Silver	**ND**	1.1	6010D	2-20-18	2-20-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-30,31,32,33 Comp.					
Client ID:	**PH-11-SS1,SS2,SS3,SS4 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**46**	2.9	6010D	2-21-18	2-21-18	
Cadmium	**0.64**	0.59	6010D	2-20-18	2-20-18	
Chromium	**15**	0.59	6010D	2-20-18	2-20-18	
Lead	**74**	5.9	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.29	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	
Lab ID:	02-151-34,35,36 Comp.					
Client ID:	**PH-10-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	11	6010D	2-20-18	2-20-18	
Barium	**54**	2.9	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.57	6010D	2-20-18	2-20-18	
Chromium	**15**	0.57	6010D	2-20-18	2-20-18	
Lead	**80**	5.7	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.29	7471B	2-21-18	2-21-18	
Selenium	**ND**	11	6010D	2-20-18	2-20-18	
Silver	**ND**	1.1	6010D	2-20-18	2-20-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-37,38,39 Comp.					
Client ID:	**PH-4-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**62**	3.0	6010D	2-21-18	2-21-18	
Cadmium	**0.75**	0.60	6010D	2-20-18	2-20-18	
Chromium	**27**	0.60	6010D	2-20-18	2-20-18	
Lead	**190**	6.0	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.30	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	

individual subs Ca

VALIDATION WORKSHEET

Method: Hg 7471B Pb or +/As Cadmium

SDG: 1802-157

Date Reviewed: 3.28.18

Reviewer: C Jensen

Sample Collection Dates: 2.13.18

The following data validation areas were reviewed:

Sample Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Validation Criteria	PH-6-SS2	PH-6-SS1	PH-7-SS3	PH-7-SS2	PH-7-SS1	PH-6-SS2	PH-6-SS4	PH-6-SS5	PH-1-SS1	PH-1-SS2	PH-1-SS3	PH-2-SS1	PH-2-SS2	PH-2-SS3	PH-3-SS1	PH-3-SS2	PH-5-SS1	PH-5-SS2	PH-5-SS3	PH-5-SS4
Sample results	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Holding Times	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Completion	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Method Blanks	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
LCS																				
duplicate RPD (1)	A	→	X	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
MS/MSD:	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

	metals	Hg
SPL	2.13.18	2.13.18
prep	3.2.18	2.27.18
run	3.2.18	2.27.18

Pb high Dup RPD 30 3/2/18 → all Pb J, J

IC

C

VALIDATION WORKSHEET

Method: Mediv. Spls. Pb/Asorbtg

Date Reviewed:

Sample Collection Dates:

SDG: 180Z-157

Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 PH-5-555	2 PH-11-551	3 PH-11-552	4 PH-11-553	5 PH-11-554	6 PH-4-551	7 PH-4-552	8 PH-4-553	9	10	11	12	13	14	15	16	17	18	19	20
Sample results	A							→												
Holding Times	A							→												
Completion	A							→												
Method Blanks	A							→												
LCS																				
duplicate RPD	X							→												
MS/MSD:	A							→												

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-01					
Client ID:	**PH-6-SS2**					
Mercury	**2.6**	1.6	7471B	2-27-18	2-27-18	
Lab ID:	02-151-02					
Client ID:	**PH-6-SS1**					
Mercury	**ND**	0.32	7471B	2-27-18	2-27-18	
Lab ID:	02-151-03					
Client ID:	**PH-7-SS3**					
Lead	**69** J9	5.9	6010D	3-2-18	3-2-18	
Lab ID:	02-151-04					
Client ID:	**PH-7-SS2**					
Lead	**40** J9	5.7	6010D	3-2-18	3-2-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-05					
Client ID:	**PH-7-SS1**					
Lead	**84** J 9	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-09					
Client ID:	**PH-6-SS3**					
Lead	**59** J 9	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-10					
Client ID:	**PH-6-SS4**					
Lead	**93** J 9	6.6	6010D	3-2-18	3-2-18	
Lab ID:	02-151-11					
Client ID:	**PH-6-SS5**					
Lead	**270** J 9	7.6	6010D	3-2-18	3-2-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-15					
Client ID:	**PH-1-SS1**					
Arsenic	**110**	11	6010D	3-2-18	3-2-18	
Lead	**65** J 9	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-16					
Client ID:	**PH-1-SS2**					
Arsenic	**70**	12	6010D	3-2-18	3-2-18	
Lead	**66** J 9	5.8	6010D	3-2-18	3-2-18	
Lab ID:	02-151-17					
Client ID:	**PH-1-SS3**					
Arsenic	**ND**	14	6010D	3-2-18	3-2-18	
Lead	**250** J 9	6.8	6010D	3-2-18	3-2-18	
Lab ID:	02-151-18					
Client ID:	**PH-2-SS1**					
Lead	**40** J 9	5.8	6010D	3-2-18	3-2-18	

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6010D 7471B

VALIDATION WORKSHEET

Method: Metals Mercury

Date Reviewed: 3.28.18

Sample Collection Dates: 2.13.18

SDG: 1802.151

Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	PH-6-SS2, SS1 Comp.	PH-7-SS3, SS2, SS1 Comp.	PH-8-SS1, SS2, SS3 Comp.	PH-6-SS3, SS4, SS5 Comp.	PH-9-SS1, SS2, SS3 Comp.	PH-1-SS1, SS2, SS3 Comp.	PH-2-SS1, SS2, SS3 Comp.	PH-3-SS1, SS2 Comp.	PH-5-SS1, SS2, SS3, SS4, SS5 Comp.	PH-12-SS1, SS2 Comp.	PH-11-SS1, SS2, SS3, SS4 Comp.	PH-10-SS1, SS2, SS3 Comp.	PH-4-SS1, SS2, SS3 Comp.							
Sample results	A →												→							
Holding Times	A →												→							
Completion	A →												→							
Method Blanks	A →												→							
LCS																				
duplicate RPD (1)	A →												→							
MS/MSD:	A →												→							

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

	metals	Hg
spl	2.13.18	2 13 18
prep	2 20 18	2 21 18
run	2 20 18 2 21 18	2 21 18

no flags.

(1) dup Pb out, re-ex + re-run w similar result in narrative. incorrect: dup is in for Pb. See next checklist. indiv. spls.

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-01,02 Comp.					
Client ID:	**PH-6-SS2,SS1 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**59**	3.0	6010D	2-21-18	2-21-18	
Cadmium	**0.61**	0.61	6010D	2-20-18	2-20-18	
Chromium	**17**	0.61	6010D	2-20-18	2-20-18	
Lead	**120**	6.1	6010D	2-20-18	2-20-18	
Mercury	**1.0**	0.30	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	
Lab ID:	02-151-03,04,05 Comp.					
Client ID:	**PH-7-SS3,SS2,SS1 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**45**	2.9	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.58	6010D	2-20-18	2-20-18	
Chromium	**24**	0.58	6010D	2-20-18	2-20-18	
Lead	**100**	5.8	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.29	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-06,07,08 Comp.					
Client ID:	**PH-8-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	11	6010D	2-20-18	2-20-18	
Barium	**28**	2.8	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.56	6010D	2-20-18	2-20-18	
Chromium	**15**	0.56	6010D	2-20-18	2-20-18	
Lead	**61**	5.6	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.28	7471B	2-21-18	2-21-18	
Selenium	**ND**	11	6010D	2-20-18	2-20-18	
Silver	**ND**	1.1	6010D	2-20-18	2-20-18	
Lab ID:	02-151-09,10,11 Comp.					
Client ID:	**PH-6-SS3,SS4,SS5 Comp.**					
Arsenic	**ND**	13	6010D	2-20-18	2-20-18	
Barium	**130**	3.2	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.63	6010D	2-20-18	2-20-18	
Chromium	**27**	0.63	6010D	2-20-18	2-20-18	
Lead	**160**	6.3	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.32	7471B	2-21-18	2-21-18	
Selenium	**ND**	13	6010D	2-20-18	2-20-18	
Silver	**ND**	1.3	6010D	2-20-18	2-20-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-12,13,14 Comp.					
Client ID:	**PH-9-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**53**	3.1	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.61	6010D	2-20-18	2-20-18	
Chromium	**15**	0.61	6010D	2-20-18	2-20-18	
Lead	**81**	6.1	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.31	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	
Lab ID:	02-151-15,16,17 Comp.					
Client ID:	**PH-1-SS1,SS2,SS3 Comp.**					
Arsenic	**76**	12	6010D	2-20-18	2-20-18	
Barium	**110**	3.0	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.59	6010D	2-20-18	2-20-18	
Chromium	**29**	0.59	6010D	2-20-18	2-20-18	
Lead	**87**	5.9	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.30	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-18,19,20 Comp.					
Client ID:	**PH-2-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	11	6010D	2-20-18	2-20-18	
Barium	**46**	2.9	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.57	6010D	2-20-18	2-20-18	
Chromium	**16**	0.57	6010D	2-20-18	2-20-18	
Lead	**100**	5.7	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.29	7471B	2-21-18	2-21-18	
Selenium	**ND**	11	6010D	2-20-18	2-20-18	
Silver	**ND**	1.1	6010D	2-20-18	2-20-18	
Lab ID:	02-151-21,22 Comp.					
Client ID:	**PH-3-SS1,SS2 Comp.**					
Arsenic	**ND**	14	6010D	2-20-18	2-20-18	
Barium	**92**	3.4	6010D	2-21-18	2-21-18	
Cadmium	**0.79**	0.69	6010D	2-20-18	2-20-18	
Chromium	**32**	0.69	6010D	2-20-18	2-20-18	
Lead	**300**	6.9	6010D	2-20-18	2-20-18	
Mercury	**1.6**	0.69	7471B	2-21-18	2-21-18	
Selenium	**ND**	14	6010D	2-20-18	2-20-18	
Silver	**ND**	1.4	6010D	2-20-18	2-20-18	

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Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Fla
Lab ID:	02-151-23,24,25,26,27 Comp.					
Client ID:	**PH-5-SS1,SS2,SS3,SS4,SS5 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**99**	3.0	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.60	6010D	2-20-18	2-20-18	
Chromium	**22**	0.60	6010D	2-20-18	2-20-18	
Lead	**140**	6.0	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.30	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	
Lab ID:	02-151-28,29 Comp.					
Client ID:	**PH-12-SS1,SS2 Comp.**					
Arsenic	**ND**	11	6010D	2-20-18	2-20-18	
Barium	**31**	2.8	6010D	2-21-18	2-21-18	
Cadmium	**0.59**	0.56	6010D	2-20-18	2-20-18	
Chromium	**15**	0.56	6010D	2-20-18	2-20-18	
Lead	**72**	5.6	6010D	2-20-18	2-20-18	
Mercury	**0.36**	0.28	7471B	2-21-18	2-21-18	
Selenium	**ND**	11	6010D	2-20-18	2-20-18	
Silver	**ND**	1.1	6010D	2-20-18	2-20-18	

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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-30,31,32,33 Comp.					
Client ID:	**PH-11-SS1,SS2,SS3,SS4 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**46**	2.9	6010D	2-21-18	2-21-18	
Cadmium	**0.64**	0.59	6010D	2-20-18	2-20-18	
Chromium	**15**	0.59	6010D	2-20-18	2-20-18	
Lead	**74**	5.9	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.29	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	
Lab ID:	02-151-34,35,36 Comp.					
Client ID:	**PH-10-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	11	6010D	2-20-18	2-20-18	
Barium	**54**	2.9	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.57	6010D	2-20-18	2-20-18	
Chromium	**15**	0.57	6010D	2-20-18	2-20-18	
Lead	**80**	5.7	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.29	7471B	2-21-18	2-21-18	
Selenium	**ND**	11	6010D	2-20-18	2-20-18	
Silver	**ND**	1.1	6010D	2-20-18	2-20-18	

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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-37,38,39 Comp.					
Client ID:	**PH-4-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**62**	3.0	6010D	2-21-18	2-21-18	
Cadmium	**0.75**	0.60	6010D	2-20-18	2-20-18	
Chromium	**27**	0.60	6010D	2-20-18	2-20-18	
Lead	**190**	6.0	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.30	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	

individual subs Ca

VALIDATION WORKSHEET

Method: Hg 7471B Pb or +/As Cadmium

SDG: 1802-157

Date Reviewed: 3.28.18

Reviewer: C Jensen

Sample Collection Dates: 2.13.18

The following data validation areas were reviewed:

Sample Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Validation Criteria	PH-6-SS2	PH-6-SS1	PH-7-SS3	PH-7-SS2	PH-7-SS1	PH-6-SS2	PH-6-SS4	PH-6-SS5	PH-1-SS1	PH-1-SS2	PH-1-SS3	PH-2-SS1	PH-2-SS2	PH-2-SS3	PH-3-SS1	PH-3-SS2	PH-5-SS1	PH-5-SS2	PH-5-SS3	PH-5-SS4
Sample results	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Holding Times	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Completion	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Method Blanks	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
LCS																				
duplicate RPD (1)	A	→	X	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
MS/MSD:	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

	metals	Hg
SPL	2.13.18	2.13.18
prep	3.2.18	2.27.18
run	3.2.18	2.27.18

Pb high Dup RPD 30 3/2/18 → all Pb J, J

IC

C

VALIDATION WORKSHEET

Method: Mediv. Spls. Pb/Asorbtg

Date Reviewed:

Sample Collection Dates:

SDG: 180Z-157

Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 PH-5-555	2 PH-11-551	3 PH-11-552	4 PH-11-553	5 PH-11-554	6 PH-4-551	7 PH-4-552	8 PH-4-553	9	10	11	12	13	14	15	16	17	18	19	20
Sample results	A							→												
Holding Times	A							→												
Completion	A							→												
Method Blanks	A							→												
LCS																				
duplicate RPD	X							→												
MS/MSD:	A							→												

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-01					
Client ID:	**PH-6-SS2**					
Mercury	**2.6**	1.6	7471B	2-27-18	2-27-18	
Lab ID:	02-151-02					
Client ID:	**PH-6-SS1**					
Mercury	**ND**	0.32	7471B	2-27-18	2-27-18	
Lab ID:	02-151-03					
Client ID:	**PH-7-SS3**					
Lead	**69** J9	5.9	6010D	3-2-18	3-2-18	
Lab ID:	02-151-04					
Client ID:	**PH-7-SS2**					
Lead	**40** J9	5.7	6010D	3-2-18	3-2-18	

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TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-05					
Client ID:	**PH-7-SS1**					
Lead	**84** J 9	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-09					
Client ID:	**PH-6-SS3**					
Lead	**59** J 9	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-10					
Client ID:	**PH-6-SS4**					
Lead	**93** J 9	6.6	6010D	3-2-18	3-2-18	
Lab ID:	02-151-11					
Client ID:	**PH-6-SS5**					
Lead	**270** J 9	7.6	6010D	3-2-18	3-2-18	

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TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-15					
Client ID:	**PH-1-SS1**					
Arsenic	**110**	11	6010D	3-2-18	3-2-18	
Lead	**65** J 9	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-16					
Client ID:	**PH-1-SS2**					
Arsenic	**70**	12	6010D	3-2-18	3-2-18	
Lead	**66** J 9	5.8	6010D	3-2-18	3-2-18	
Lab ID:	02-151-17					
Client ID:	**PH-1-SS3**					
Arsenic	**ND**	14	6010D	3-2-18	3-2-18	
Lead	**250** J 9	6.8	6010D	3-2-18	3-2-18	
Lab ID:	02-151-18					
Client ID:	**PH-2-SS1**					
Lead	**40** J 9	5.8	6010D	3-2-18	3-2-18	

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Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-19					
Client ID:	**PH-2-SS2**					
Lead	**140** J 9	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-20					
Client ID:	**PH-2-SS3**					
Lead	**98** J 9	5.8	6010D	3-2-18	3-2-18	
Lab ID:	02-151-21					
Client ID:	**PH-3-SS1**					
Lead	**270** J 9	6.3	6010D	3-2-18	3-2-18	
Mercury	**1.6**	0.63	7471B	2-27-18	2-27-18	

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Samples Submitted: February 14, 2018
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Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-01,02 Comp.					
Client ID:	**PH-6-SS2,SS1 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**59**	3.0	6010D	2-21-18	2-21-18	
Cadmium	**0.61**	0.61	6010D	2-20-18	2-20-18	
Chromium	**17**	0.61	6010D	2-20-18	2-20-18	
Lead	**120**	6.1	6010D	2-20-18	2-20-18	
Mercury	**1.0**	0.30	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	
Lab ID:	02-151-03,04,05 Comp.					
Client ID:	**PH-7-SS3,SS2,SS1 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**45**	2.9	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.58	6010D	2-20-18	2-20-18	
Chromium	**24**	0.58	6010D	2-20-18	2-20-18	
Lead	**100**	5.8	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.29	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	

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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-06,07,08 Comp.					
Client ID:	**PH-8-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	11	6010D	2-20-18	2-20-18	
Barium	**28**	2.8	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.56	6010D	2-20-18	2-20-18	
Chromium	**15**	0.56	6010D	2-20-18	2-20-18	
Lead	**61**	5.6	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.28	7471B	2-21-18	2-21-18	
Selenium	**ND**	11	6010D	2-20-18	2-20-18	
Silver	**ND**	1.1	6010D	2-20-18	2-20-18	
Lab ID:	02-151-09,10,11 Comp.					
Client ID:	**PH-6-SS3,SS4,SS5 Comp.**					
Arsenic	**ND**	13	6010D	2-20-18	2-20-18	
Barium	**130**	3.2	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.63	6010D	2-20-18	2-20-18	
Chromium	**27**	0.63	6010D	2-20-18	2-20-18	
Lead	**160**	6.3	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.32	7471B	2-21-18	2-21-18	
Selenium	**ND**	13	6010D	2-20-18	2-20-18	
Silver	**ND**	1.3	6010D	2-20-18	2-20-18	

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Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-12,13,14 Comp.					
Client ID:	**PH-9-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**53**	3.1	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.61	6010D	2-20-18	2-20-18	
Chromium	**15**	0.61	6010D	2-20-18	2-20-18	
Lead	**81**	6.1	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.31	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	
Lab ID:	02-151-15,16,17 Comp.					
Client ID:	**PH-1-SS1,SS2,SS3 Comp.**					
Arsenic	**76**	12	6010D	2-20-18	2-20-18	
Barium	**110**	3.0	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.59	6010D	2-20-18	2-20-18	
Chromium	**29**	0.59	6010D	2-20-18	2-20-18	
Lead	**87**	5.9	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.30	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	

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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-18,19,20 Comp.					
Client ID:	**PH-2-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	11	6010D	2-20-18	2-20-18	
Barium	**46**	2.9	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.57	6010D	2-20-18	2-20-18	
Chromium	**16**	0.57	6010D	2-20-18	2-20-18	
Lead	**100**	5.7	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.29	7471B	2-21-18	2-21-18	
Selenium	**ND**	11	6010D	2-20-18	2-20-18	
Silver	**ND**	1.1	6010D	2-20-18	2-20-18	
Lab ID:	02-151-21,22 Comp.					
Client ID:	**PH-3-SS1,SS2 Comp.**					
Arsenic	**ND**	14	6010D	2-20-18	2-20-18	
Barium	**92**	3.4	6010D	2-21-18	2-21-18	
Cadmium	**0.79**	0.69	6010D	2-20-18	2-20-18	
Chromium	**32**	0.69	6010D	2-20-18	2-20-18	
Lead	**300**	6.9	6010D	2-20-18	2-20-18	
Mercury	**1.6**	0.69	7471B	2-21-18	2-21-18	
Selenium	**ND**	14	6010D	2-20-18	2-20-18	
Silver	**ND**	1.4	6010D	2-20-18	2-20-18	

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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Fla
Lab ID:	02-151-23,24,25,26,27 Comp.					
Client ID:	**PH-5-SS1,SS2,SS3,SS4,SS5 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**99**	3.0	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.60	6010D	2-20-18	2-20-18	
Chromium	**22**	0.60	6010D	2-20-18	2-20-18	
Lead	**140**	6.0	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.30	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	
Lab ID:	02-151-28,29 Comp.					
Client ID:	**PH-12-SS1,SS2 Comp.**					
Arsenic	**ND**	11	6010D	2-20-18	2-20-18	
Barium	**31**	2.8	6010D	2-21-18	2-21-18	
Cadmium	**0.59**	0.56	6010D	2-20-18	2-20-18	
Chromium	**15**	0.56	6010D	2-20-18	2-20-18	
Lead	**72**	5.6	6010D	2-20-18	2-20-18	
Mercury	**0.36**	0.28	7471B	2-21-18	2-21-18	
Selenium	**ND**	11	6010D	2-20-18	2-20-18	
Silver	**ND**	1.1	6010D	2-20-18	2-20-18	

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TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-30,31,32,33 Comp.					
Client ID:	**PH-11-SS1,SS2,SS3,SS4 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**46**	2.9	6010D	2-21-18	2-21-18	
Cadmium	**0.64**	0.59	6010D	2-20-18	2-20-18	
Chromium	**15**	0.59	6010D	2-20-18	2-20-18	
Lead	**74**	5.9	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.29	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	
Lab ID:	02-151-34,35,36 Comp.					
Client ID:	**PH-10-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	11	6010D	2-20-18	2-20-18	
Barium	**54**	2.9	6010D	2-21-18	2-21-18	
Cadmium	**ND**	0.57	6010D	2-20-18	2-20-18	
Chromium	**15**	0.57	6010D	2-20-18	2-20-18	
Lead	**80**	5.7	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.29	7471B	2-21-18	2-21-18	
Selenium	**ND**	11	6010D	2-20-18	2-20-18	
Silver	**ND**	1.1	6010D	2-20-18	2-20-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-37,38,39 Comp.					
Client ID:	**PH-4-SS1,SS2,SS3 Comp.**					
Arsenic	**ND**	12	6010D	2-20-18	2-20-18	
Barium	**62**	3.0	6010D	2-21-18	2-21-18	
Cadmium	**0.75**	0.60	6010D	2-20-18	2-20-18	
Chromium	**27**	0.60	6010D	2-20-18	2-20-18	
Lead	**190**	6.0	6010D	2-20-18	2-20-18	
Mercury	**ND**	0.30	7471B	2-21-18	2-21-18	
Selenium	**ND**	12	6010D	2-20-18	2-20-18	
Silver	**ND**	1.2	6010D	2-20-18	2-20-18	

individual subs Ca

VALIDATION WORKSHEET

Method: Hg 7471B Pb or +/As Cadmium

SDG: 1802-157

Date Reviewed: 3.28.18

Reviewer: C Jensen

Sample Collection Dates: 2.13.18

The following data validation areas were reviewed:

Sample Identification	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Validation Criteria	PH-6-SS2	PH-6-SS1	PH-7-SS3	PH-7-SS2	PH-7-SS1	PH-6-SS2	PH-6-SS4	PH-6-SS5	PH-1-SS1	PH-1-SS2	PH-1-SS3	PH-2-SS1	PH-2-SS2	PH-2-SS3	PH-3-SS1	PH-3-SS2	PH-5-SS1	PH-5-SS2	PH-5-SS3	PH-5-SS4
Sample results	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Holding Times	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Completion	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Method Blanks	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
LCS																				
duplicate RPD (1)	A	→	X	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
MS/MSD:	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

	metals	Hg
SPL	2.13.18	2.13.18
prep	3.2.18	2.27.18
run	3.2.18	2.27.18

Pb high Dup RPD 30 3/2/18 → all Pb J, J

IC

C

VALIDATION WORKSHEET

Method: Mediv. Spls. Pb/Asorbtg

Date Reviewed:

Sample Collection Dates:

SDG: 180Z-157

Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 PH-5-555	2 PH-11-551	3 PH-11-552	4 PH-11-553	5 PH-11-554	6 PH-4-551	7 PH-4-552	8 PH-4-553	9	10	11	12	13	14	15	16	17	18	19	20
Sample results	A							→												
Holding Times	A							→												
Completion	A							→												
Method Blanks	A							→												
LCS																				
duplicate RPD	X							→												
MS/MSD:	A							→												

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-01					
Client ID:	**PH-6-SS2**					
Mercury	**2.6**	1.6	7471B	2-27-18	2-27-18	
Lab ID:	02-151-02					
Client ID:	**PH-6-SS1**					
Mercury	**ND**	0.32	7471B	2-27-18	2-27-18	
Lab ID:	02-151-03					
Client ID:	**PH-7-SS3**					
Lead	**69** J9	5.9	6010D	3-2-18	3-2-18	
Lab ID:	02-151-04					
Client ID:	**PH-7-SS2**					
Lead	**40** J9	5.7	6010D	3-2-18	3-2-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-05					
Client ID:	**PH-7-SS1**					
Lead	**84** J 9	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-09					
Client ID:	**PH-6-SS3**					
Lead	**59** J 9	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-10					
Client ID:	**PH-6-SS4**					
Lead	**93** J 9	6.6	6010D	3-2-18	3-2-18	
Lab ID:	02-151-11					
Client ID:	**PH-6-SS5**					
Lead	**270** J 9	7.6	6010D	3-2-18	3-2-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-15					
Client ID:	**PH-1-SS1**					
Arsenic	**110**	11	6010D	3-2-18	3-2-18	
Lead	**65** J 9	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-16					
Client ID:	**PH-1-SS2**					
Arsenic	**70**	12	6010D	3-2-18	3-2-18	
Lead	**66** J 9	5.8	6010D	3-2-18	3-2-18	
Lab ID:	02-151-17					
Client ID:	**PH-1-SS3**					
Arsenic	**ND**	14	6010D	3-2-18	3-2-18	
Lead	**250** J 9	6.8	6010D	3-2-18	3-2-18	
Lab ID:	02-151-18					
Client ID:	**PH-2-SS1**					
Lead	**40** J 9	5.8	6010D	3-2-18	3-2-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-19					
Client ID:	**PH-2-SS2**					
Lead	**140** J 9	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-20					
Client ID:	**PH-2-SS3**					
Lead	**98** J 9	5.8	6010D	3-2-18	3-2-18	
Lab ID:	02-151-21					
Client ID:	**PH-3-SS1**					
Lead	**270** J 9	6.3	6010D	3-2-18	3-2-18	
Mercury	**1.6**	0.63	7471B	2-27-18	2-27-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-22					
Client ID:	**PH-3-SS2**					
Lead	**320** J 9	7.4	6010D	3-2-18	3-2-18	
Mercury	**2.4**	1.9	7471B	2-27-18	2-27-18	
Lab ID:	02-151-23					
Client ID:	**PH-5-SS1**					
Lead	**110** J 9	5.8	6010D	3-2-18	3-2-18	
Lab ID:	02-151-24					
Client ID:	**PH-5-SS2**					
Lead	**170** J 9	6.6	6010D	3-2-18	3-2-18	
Lab ID:	02-151-25					
Client ID:	**PH-5-SS3**					
Lead	**320** J 9	6.3	6010D	3-2-18	3-2-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-26					
Client ID:	**PH-5-SS4**					
Lead	**80** J9	5.9	6010D	3-2-18	3-2-18	
Lab ID:	02-151-27					
Client ID:	**PH-5-SS5**					
Lead	**140** J9	6.1	6010D	3-2-18	3-2-18	
Lab ID:	02-151-30					
Client ID:	**PH-11-SS1**					
Cadmium	**1.7**	0.57	6010D	3-2-18	3-2-18	
Lead	**160** J9	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-31					
Client ID:	**PH-11-SS2**					
Cadmium	**ND**	0.64	6010D	3-2-18	3-2-18	
Lead	**49** J9	6.4	6010D	3-2-18	3-2-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-32					
Client ID:	**PH-11-SS3**					
Cadmium	**ND**	0.56	6010D	3-2-18	3-2-18	
Lead	**47** J9	5.6	6010D	3-2-18	3-2-18	
Lab ID:	02-151-33					
Client ID:	**PH-11-SS4**					
Cadmium	**ND**	0.57	6010D	3-2-18	3-2-18	
Lead	**52** J9	5.7	6010D	3-2-18	3-2-18	
Lab ID:	02-151-37					
Client ID:	**PH-4-SS1**					
Cadmium	**ND**	0.60	6010D	3-2-18	3-2-18	
Lead	**85** J9	6.0	6010D	3-2-18	3-2-18	
Lab ID:	02-151-38					
Client ID:	**PH-4-SS2**					
Cadmium	**ND**	0.62	6010D	3-2-18	3-2-18	
Lead	**88** J9	6.2	6010D	3-2-18	3-2-18	

Date of Report: March 5, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151
Project: 1267-013

TOTAL METALS
EPA 6010D

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-39					
Client ID:	**PH-4-SS3**					
Cadmium	**1.3**	0.59	6010D	3-2-18	3-2-18	
Lead	**340** J 9	5.9	6010D	3-2-18	3-2-18	

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VALIDATION WORKSHEET

Method: TCLP metals (As, Pb)
Date Reviewed: 3.28.18
Sample Collection Dates: 3.16.18
SDG: 1802-151B
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	PH-1.551	PH-3.552	PH-4.553																	
Sample results	A →																			
Holding Times	A →																			
Completion	A →																			
Method Blanks	A →																			
LCS																				
~~duplicate~~ RPD	A →																			
MS/MSD:	A →																			

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

1.3°C

SPL 3.16.18
prep 3.14.18
run 3.14.18

Date of Report: March 14, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-151B
Project: 1267-013

TCLP METALS
EPA 1311/6010D

Matrix: TCLP Extract
Units: mg/L (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-151-15					
Client ID:	**PH-1-SS1**					
Arsenic	**ND**	0.40	6010D	3-14-18	3-14-18	
Lab ID:	02-151-22					
Client ID:	**PH-3-SS2**					
Lead	**ND**	0.20	6010D	3-14-18	3-14-18	
Lab ID:	02-151-39					
Client ID:	**PH-4-SS3**					
Lead	**ND**	0.20	6010D	3-14-18	3-14-18	

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Chain of Custody

Company: [illegible]
Project Number: [illegible]
Project Name: [illegible]
Project Manager: [illegible]
Sampled by: [illegible]

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:

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	TOTAL LEAD	TOTAL MERCURY			% Moisture
1	PM-6-SS2	[illegible]	[illegible]	Soil	[illegible]				X						X	X		X	X					O			X O
2	PM-6-SS1	[illegible]	[illegible]	[illegible]	[illegible]				X						X	X		X	X					O			X O
3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				X						X	X		X	X				O				X O
4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				X						X	X		X	X				O				X O
5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				X						X	X		X	X				O				X O
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				X						X	X		X	X								X
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				X						X	X		X	X								X
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				X						X	X		X	X								X

	Signature	Company	Date	Time
Relinquished	[illegible]	[illegible]	[illegible]	[illegible]
Received	[illegible]	[illegible]	2-14-18	[illegible]
Relinquished	[signature]	" "	"	1804
Received	[signature]	[illegible]	2/14/18	1804
Relinquished				
Received				—
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

O-Added 2/26/18 . DB (STA 5 DAY)

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

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Company:
Project Number:
Project Name:
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:

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid ☐ SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	TOTAL ARSENIC	TOTAL LEAD	TOTAL MERCURY	% Moisture
9																										
10																										
11																										
12																										
13																										
14																										
15																										
16																										
17																										

	Signature	Company	Date	Time
Relinquished				
Received				
Relinquished				1804
Received			2/14/18	1804
Relinquished				
Received				

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Reviewed/Date

Reviewed/Date

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Chain of Custody

Company:
Project Number:
Project Name:
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:

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (□ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 5011 (Waters Only)	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		Dieldrin 8081B	TOTAL LEAD	Total Mercury	% Moisture
18																											
19																											
20																											
21																											
22																											
23																											
24																											
25																											
26																											
27																											

	Signature	Company	Date	Time
Relinquished				
Received				
Relinquished				1804
Received			2/14/18	1804
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

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Company:

Project Number:

Project Name:

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:

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (with / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	TOTAL CADMIUM	TOTAL LEAD			% Moisture
28																											
29																											
30																											
31																											
32																											
33																											
34																											
35																											
36																											

	Signature	Company	Date	Time
Relinquished				
Received				
Relinquished		" "	"	1804
Received			2/14/18	1804
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

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Chain of Custody

Company: [illegible]

Project Number: [illegible]

Project Name: [illegible]

Project Manager: [illegible]

Sampled by: [illegible]

Turnaround Request (in working days)

(Check One)

- [ ] Same Day
- [ ] 1 Day
- [ ] 2 Days
- [ ] 3 Days
- [x] Standard (7 Days) (TPH analysis 5 Days)
- [ ] ________ (other)

Laboratory Number:

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
37	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
38	[illegible]	[illegible]	1600	[illegible]	[illegible]
39	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Lab ID	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	TOTAL CADMIUM	TOTAL LEAD			% Moisture
37																		O	O			O
38																		O	O			O
39																		O	O			O

	Signature	Company	Date	Time
Relinquished	[illegible]	[illegible]	[illegible]	[illegible]
Received	[illegible]	Speedy [illegible]	2-14-18	[illegible]
Relinquished	[illegible]	" "	"	1804
Received	[illegible]	OSE	2/14/18	1804
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard [ ] Level III [ ] Level IV [ ]

Chromatograms with final report [ ] Electronic Data Deliverables (EDDs) [ ]

Sample/Cooler Receipt and Acceptance Checklist

Client: SES

Client Project Name/Number: 1267-013

OnSite Project Number: _____

Initiated by: AMY

Date Initiated: 2/14/18

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	(No)	N/A	1 2 3 4
1.2 Were the custody seals intact?	Yes	No	(N/A)	1 2 3 4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	(N/A)	1 2 3 4
1.4 Were the samples delivered on ice or blue ice?	(Yes)	No		1 2 3 4
1.5 Were samples received between 0-6 degrees Celsius?	(Yes)	No	Temperature: 1.3	
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	(N/A)		
1.7 How were the samples delivered?	Client	(Courier)	UPS/FedEx	OSE Pickup Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	(Yes)	No	1 2 3 4
2.2 Was the COC legible and written in permanent ink?	(Yes)	No	1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	(Yes)	No	1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	(Yes)	No	1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	(Yes)	No	1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	(No)	1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	(No)		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	(No)		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	(Yes)	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	(N/A)	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	(N/A)	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	(Yes)	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	(No)		1 2 3 4
3.8 Was method 5035A used?	Yes	No	(N/A)	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		(N/A)	1 2 3 4

Explain any discrepancies:

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

DATA VALIDATION REPORT

Seattle City Light
Phinney Substation
March 2018

Prepared for:
Sound Earth Strategies, Inc.
2811 Fairview Ave East, Suite 2000
Seattle, Washington 98102

Prepared by:
Validata, LLC
3346 NE 178th St.
Lake Forest Park, Washington 98155

PROJECT NARRATIVE

Data Validation

This report summarizes the results of the summary level validation (Stage 2A) performed on water samples for the Seattle City Light sampling project. A complete list of samples is provided in the Sample Index. Samples were analyzed by OnSite Environmental laboratory, Redmond, Washington. The analytical methods are listed below:

Analysis	Method	Reviewer
Petroleum Hydrocarbons – Diesel Range Organics, Lube Oil Organics	NWTPH-Dx	C. Jensen
Polychlorinated Hydrocarbons	8082A	C. Jensen
Total Metals/Mercury	6010D/7471B	C. Jensen

The data were reviewed using guidance and quality control criteria documented in the analytical methods; *USEPA National Functional Guidelines for Organic Data Review* (EPA, 1999 & 2008) and *USEPA National Functional Guidelines for Inorganic Data Review* (EPA, 2010 & 2014).

The goal of data validation is to assign data assessment qualifiers for assistance in data interpretation. Results assigned as estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. For results assigned an R, the data are rejected and should not be used for site evaluation purposes. Unqualified data implies the data meet the data quality objectives as stated in the documents and methods referenced above. A summary of the data qualifiers used in validation are included in Appendix A. The summary of Qualified Data are provided in Appendix B. All validation worksheets are provided in Appendix C.

SAMPLE INDEX

SDG	Sample ID	Lab ID	NWTPH-Dx	PCBs	Total Metals/ Mercury
1802-150	PH-CON2-01,03,02 Comp.	02-150-01,02,03 Comp	x	x	x
1802-150	PH-CON1-01,03,02 Comp.	02-150-04,05,06 Comp	x	x	x

DATA VALIDATION REPORT
Petroleum Hydrocarbons – NWTPH-Dx – Diesel Range Organics and Lube Oil Range Organics

This report documents the review of analytical data from the analyses of samples and the associated laboratory and field quality control (QC) samples. OnSite laboratory, Redmond, Washington. Refer to the Sample Index for a complete list of samples.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
1802-150	2	STAGE 2A

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables for a Stage 2A review. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

Sample Receipt, Preservation, and Holding Times	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
Laboratory Blanks	Field Duplicates
Field Blanks	Target Analyte List
Surrogate Compounds	Reporting Limits
Laboratory Control Samples (LCS)	Reported Results

Sample Receipt, Preservation, and Holding Times

As stated in validation guidance documents, sample shipping coolers should arrive at the laboratory within the advisory temperature range of 2°C - 6°C and be extracted within 7 days for aqueous samples and 14 days for soil samples. Sample extracts must be analyzed within 40 days of extraction. The following exceptions were noted during validation.

SDG 1802-150: The cooler temperatures were within the temperature range of 2-6 °C, at 3°C.

Method and Field Blanks

The method blanks were all reported as undetected for target compounds. Field blanks were not submitted with this sampling event.

Surrogate Compounds

Surrogates were added to all samples. All surrogate recoveries were within the laboratory control limits.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) samples were not specifically analyzed for this dataset. The laboratory demonstrated precision through the analysis of laboratory duplicate samples with acceptable results.

Field Duplicates

Field duplicate samples were not collected for this dataset.

Laboratory Duplicates

Laboratory duplicates were analyzed at the required frequency to demonstrate precision. Results were acceptable.

Target Analyte List

A sampling plan was not available for review.

Reporting Limits

The laboratory reporting limits were sufficiently below the MTCA Method A cleanup levels.

Reported Results

No problems were noted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate recovery values and precision by the laboratory duplicate precision. All data are acceptable for use.

DATA VALIDATION REPORT
Metals/Mercury - Method 6010D/7471B

This report documents the review of analytical data from the analyses of samples and the associated laboratory and field quality control (QC) samples. OnSite Environmental, Inc. laboratory, Seattle, Washington. Refer to the Sample Index for a complete list of samples.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
1802-150	2	STAGE 2A

DATA PACKAGE COMPLETENESS

With the exception noted below, the laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

Sample Receipt, Preservation, and Holding Times	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
Laboratory Blanks	Field Duplicates
Field Blanks	Target Analyte List
Surrogate Compounds	Reporting Limits
Laboratory Control Samples (LCS)	Reported Results

Sample Receipt, Preservation, and Holding Times

As stated in validation guidance documents, sample shipping coolers should arrive at the laboratory within the advisory temperature range of 2°C - 6°C and metals must be analyzed

within 6 months and mercury within 28 days of sample collection. The following exceptions were noted during validation:

SDG 1802-150: The cooler temperatures were within the temperature range of 2-6 °C, at 3°C.

Method and Field Blanks

The method blanks were all reported as undetected for target compounds. Field blanks were not submitted with this sampling event.

Surrogate Compounds

Not Applicable.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) samples were analyzed with acceptable results.

Field Duplicates

Field duplicate samples were not collected for this dataset.

Laboratory Duplicates

Laboratory duplicates were analyzed with acceptable results.

Target Analyte List

A sampling plan was not available for review.

Reporting Limits

The laboratory reporting limits were sufficiently below the MTCA Method A cleanup levels.

Reported Results

Results reported were deemed acceptable.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the MS/MSD recovery values. Precision was also acceptable as demonstrated by the MS/MSD duplicate RPD values. All data are acceptable for use.

Target Analyte List

A sampling plan was not available for review.

Reporting Limits

The laboratory reporting limits were sufficiently below the MTCA Method A cleanup levels.

Reported Results

No problems were noted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate recovery values and precision by the laboratory duplicate precision. All data are acceptable for use.

DATA VALIDATION REPORT
Metals/Mercury - Method 6010D/7471B

This report documents the review of analytical data from the analyses of samples and the associated laboratory and field quality control (QC) samples. OnSite Environmental, Inc. laboratory, Seattle, Washington. Refer to the Sample Index for a complete list of samples.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
1802-150	2	STAGE 2A

DATA PACKAGE COMPLETENESS

With the exception noted below, the laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

Sample Receipt, Preservation, and Holding Times	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
Laboratory Blanks	Field Duplicates
Field Blanks	Target Analyte List
Surrogate Compounds	Reporting Limits
Laboratory Control Samples (LCS)	Reported Results

Sample Receipt, Preservation, and Holding Times

As stated in validation guidance documents, sample shipping coolers should arrive at the laboratory within the advisory temperature range of 2°C - 6°C and metals must be analyzed

within 6 months and mercury within 28 days of sample collection. The following exceptions were noted during validation:

SDG 1802-150: The cooler temperatures were within the temperature range of 2-6 °C, at 3°C.

Method and Field Blanks

The method blanks were all reported as undetected for target compounds. Field blanks were not submitted with this sampling event.

Surrogate Compounds

Not Applicable.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) samples were analyzed with acceptable results.

Field Duplicates

Field duplicate samples were not collected for this dataset.

Laboratory Duplicates

Laboratory duplicates were analyzed with acceptable results.

Target Analyte List

A sampling plan was not available for review.

Reporting Limits

The laboratory reporting limits were sufficiently below the MTCA Method A cleanup levels.

Reported Results

Results reported were deemed acceptable.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the MS/MSD recovery values. Precision was also acceptable as demonstrated by the MS/MSD duplicate RPD values. All data are acceptable for use.

DATA VALIDATION REPORT
Polychlorinated Hydrocarbons – 8082A

This report documents the review of analytical data from the analyses of samples and the associated laboratory and field quality control (QC) samples. OnSite laboratory, Redmond, Washington. Refer to the Sample Index for a complete list of samples.

SDG	NUMBER OF SAMPLES	VALIDATION LEVEL
1802-150	2	STAGE 2A

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables for a Stage 2A review. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

Sample Receipt, Preservation, and Holding Times	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
Laboratory Blanks	Field Duplicates
Field Blanks	Target Analyte List
Surrogate Compounds	Reporting Limits
Laboratory Control Samples (LCS)	Reported Results

Sample Receipt, Preservation, and Holding Times

As stated in validation guidance documents, sample shipping coolers should arrive at the laboratory within the advisory temperature range of 2°C - 6°C and be extracted within 7 days for aqueous samples and 14 days for soil samples. Sample extracts must be analyzed within 40 days of extraction. The following exceptions were noted during validation.

SDG 1802-150: The cooler temperatures were within the temperature range of 2-6 °C, at 3°C. Sample holding times were met.

Method and Field Blanks

The method blanks were all reported as undetected for target compounds. Field blanks were not submitted with this sampling event.

Surrogate Compounds

Surrogates were added to all samples. All surrogate recoveries were within the laboratory control limits.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate (MS/MSD) samples were not specifically analyzed for this dataset. The laboratory demonstrated precision through the analysis of laboratory duplicate samples with acceptable results.

Field Duplicates

Field duplicate samples were not collected for this dataset.

Laboratory Duplicates

Laboratory duplicates were not analyzed, the laboratory demonstrated precision with acceptable laboratory control and control duplicate sample analysis.

Target Analyte List

A sampling plan was not available for review.

Reporting Limits

The laboratory reporting limits were sufficiently below the MTCA Method A cleanup levels.

Reported Results

No problems were noted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate recovery values and precision by the laboratory control sample and control sample duplicate precision. All data are acceptable for use.

APPENDIX A
DATA QUALIFIER DEFINITIONS
REASON CODES

DATA VALIDATION QUALIFIER CODES
Based on National Functional Guidelines

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

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

J - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents the approximate concentration.

UJ - The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

DATA QUALIFIER REASON CODES

Group	Code	Reason for Qualification
Sample Handling	1	Improper Sample Handling or Sample Preservation (i.e., headspace, cooler)
Instrument Performance	24	Instrument Performance (i.e., tune, resolution, retention time window, endrin breakdown, lock-mass)
Instrument Performance	5A	Initial Calibration (RF, %RSD, r2)
Instrument Performance	5B	Calibration Verification (CCV, CCAL; RF, %D, %R) Use bias flags (H,L)1 where appropriate
Instrument Performance	5C	Initial Calibration Verification (ICV %D, %R) Use bias flags (H,L)1 where appropriate
Blank Contamination	6	Field Blank Contamination (Equipment Rinsate, Trip Blank, etc.)
Blank Contamination	7	Lab Blank Contamination (i.e., method blank, instrument blank, etc.) Use low bias flag (L)1 for negative instrument blanks
Precision and Accuracy	8	Matrix Spike (MS and/or MSD) Recoveries Use bias flags (H,L)1 where appropriate
Precision and Accuracy	9	Precision (all replicates: LCS/LCSD, MS/MSD, Lab Replicate, Field Replicate)
Precision and Accuracy	10	Laboratory Control Sample Recoveries (a.k.a. Blank Spikes) Use bias flags (H,L)1 where appropriate
Precision and Accuracy	12	Reference Material Use bias flags (H,L)1 where appropriate
Precision and Accuracy	13	Surrogate Spike Recoveries (a.k.a. labeled compounds, recovery standards) Use bias flags (H,L)1 where appropriate
Interferences	16	ICP/ICP-MS Serial Dilution Percent Difference
Interferences	17	ICP/ICP-MS Interference Check Standard Recovery Use bias flags (H,L)1 where appropriate
Interferences	19	Internal Standard Performance (i.e., area, retention time, recovery)
Interferences	22	Elevated Detection Limit due to Interference (i.e., chemical and/or matrix)
Interferences	23	Bias from Matrix Interference (i.e. diphenyl ether, PCB/pesticides)
Identification and Quantitation	2	Chromatographic pattern in sample does not match pattern of calibration standard
Identification and Quantitation	3	2nd column confirmation (RPD or %D)
Identification and Quantitation	4	Tentatively Identified Compound (TIC) (associated with NJ only)
Identification and Quantitation	20	Calibration Range or Linear Range Exceeded
Identification and Quantitation	25	Compound Identification (i.e., ion ratio, retention time, relative abundance, etc.)
Miscellaneous	11	A more appropriate result is reported (multiple reported analyses i.e., dilutions, reextractions, etc. Associated with "R" and "DNR" only)
Miscellaneous	14	Other (See DV report for details)
Miscellaneous	26	Method QC information not provided

APPENDIX B
QUALIFIED DATA SUMMARY TABLE

Qualified Data Sample Summary

Sample ID	Lab ID	Compound	Concentration	units	Qualifier, Code
	No Data were qualified				

APPENDIX C
DATA VALIDATION CHECKLISTS

VALIDATION WORKSHEET

Method: NWTPH-Dx DRO, Whe oil
Date Reviewed: 2.28.18
Sample Collection Dates: 2.13.18

SDG: 1802-150
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 PH-CONT-01,02 Cont	2 PH-CONT-01,02 Cont	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Sample results	A	A																		
Holding Times	A	A																		
Completion	A	A																		
Method Blanks	A	A																		
LCS																				
duplicate RPD	A	A																		
MS/MSD:																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments: surrogates - ok

SPL 2.13.18
prep 2.15.18
anl 2.16.18

3°C

Date of Report: February 27, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-150
Project: 1267-013

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-CON2-01,03,02 Comp.**					
Laboratory ID:	02-150-01,02,03 Comp.					
Diesel Range Organics	**ND**	26	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**ND**	52	NWTPH-Dx	2-15-18	2-16-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				
Client ID:	**PH-CON1-01,03,02 Comp.**					
Laboratory ID:	02-150-04,05,06 Comp.					
Diesel Range Organics	**ND**	26	NWTPH-Dx	2-15-18	2-16-18	
Lube Oil Range Organics	**ND**	52	NWTPH-Dx	2-15-18	2-16-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*78*	*50-150*				

60100 / 74713

VALIDATION WORKSHEET

Method: Metals/Hg
Date Reviewed: 3.1.18
Sample Collection Dates: 2.13.18

SDG: 1802-150
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification	1 PH-COM2-01,03,02 Comp.	2 PH-COM-01,03,02 Comp.	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Validation Criteria																				
Sample results	A	A																		
Holding Times	A	A																		
Completion	A	A																		
Method Blanks	A	A																		
LCS																				
duplicate RPD	A	A																		
MS/MSD:	A	A																		

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

	Metals	Hg
spl	2.13.18	2.13.18
prep	2.23.18	2.21.18
run	2.26.18	2.21.18

Date of Report: February 27, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-150
Project: 1267-013

TOTAL METALS
EPA 6010D/7471B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	02-150-01,02,03 Comp.					
Client ID:	**PH-CON2-01,03,02 Comp.**					
Arsenic	**26**	10	6010D	2-23-18	2-26-18	
Barium	**87**	5.2	6010D	2-23-18	2-26-18	
Cadmium	**ND**	0.52	6010D	2-23-18	2-26-18	
Chromium	**20**	0.52	6010D	2-23-18	2-26-18	
Lead	**5.9**	5.2	6010D	2-23-18	2-26-18	
Mercury	**ND**	0.26	7471B	2-21-18	2-21-18	
Selenium	**ND**	10	6010D	2-23-18	2-26-18	
Silver	**ND**	1.0	6010D	2-23-18	2-26-18	
Lab ID:	02-150-04,05,06 Comp.					
Client ID:	**PH-CON1-01,03,02 Comp.**					
Arsenic	**23**	10	6010D	2-23-18	2-26-18	
Barium	**83**	2.6	6010D	2-23-18	2-26-18	
Cadmium	**ND**	0.52	6010D	2-23-18	2-26-18	
Chromium	**19**	0.52	6010D	2-23-18	2-26-18	
Lead	**ND**	5.2	6010D	2-23-18	2-26-18	
Mercury	**ND**	0.26	7471B	2-21-18	2-21-18	
Selenium	**ND**	10	6010D	2-23-18	2-26-18	
Silver	**ND**	1.0	6010D	2-23-18	2-26-18	

VALIDATION WORKSHEET

Method: PCBs 8082A
Date Reviewed: 3.1.18
Sample Collection Dates: 2.13.18

SDG: 1802-150
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 PH-CONV2-01_03_02 Comp	2 PH-CONV-01_03_02 Comp.	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Sample results	A	A																		
Holding Times	A	A																		
Completion	A	A																		
Method Blanks	A	A																		
LCS/LCSD	A	A																		
duplicate RPD																				
MS/MSD:																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

SM 2.13.18
prep 2.20.18
WR 2.20.18

Surrogates - ok

Date of Report: February 27, 2018
Samples Submitted: February 14, 2018
Laboratory Reference: 1802-150
Project: 1267-013

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**PH-CON2-01,03,02 Comp.**					
Laboratory ID:	02-150-01,02,03 Comp.					
Aroclor 1016	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*86*	*40-134*				
Client ID:	**PH-CON1-01,03,02 Comp.**					
Laboratory ID:	02-150-04,05,06 Comp.					
Aroclor 1016	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1221	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1232	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1242	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1248	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1254	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Aroclor 1260	**ND**	0.052	EPA 8082A	2-20-18	2-20-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*89*	*40-134*				

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:

Company: [illegible]

Project Number: [illegible]-0[illegible]

Project Name: [illegible]

Project Manager: [illegible]

Sampled by: Sarah [illegible] / [illegible] Bartlett

Turnaround Request (in working days)

(Check One)

- [ ] Same Day
- [ ] 1 Day
- [ ] 2 Days
- [ ] 3 Days
- [x] 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 (Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	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	PH-[illegible]-01	[illegible]	1014	[illegible]	[illegible]				X						X				X								X
2	PH-[illegible]-03		[illegible]						X						X				X								X
3	PH-[illegible]-02		[illegible]						X						X				X								X
4	PH-[illegible]-01		[illegible]						X						X				X								X
5	PH-[illegible]-03		[illegible]						X						X				X								X
6	PH-[illegible]-02		[illegible]						X						X				X								X

	Signature	Company	Date	Time
Relinquished	[illegible]	[illegible]	2/14/18	[illegible]
Received	[illegible]	Speedy [illegible]	2-14-18	[illegible]
Relinquished	[illegible]	" "	"	1804
Received	[illegible]	OSE	2/14/18	1804
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard [ ] Level III [ ] Level IV [ ]

Chromatograms with final report [ ] Electronic Data Deliverables (EDDs) [ ]