Revised Supplemental Soil Assessment and Quarterly Groundwater Monitoring

Dawson Trucking
Valley, Washington

for
Washington State Department of Ecology

August 24, 2017

GeoEngineers
Earth Science + Technology

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File No. 0504-130-00

August 24, 2017

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1.0 INTRODUCTION

This revised report describes supplemental soil and groundwater assessment activities conducted in March and May 2017 at the Dawson Trucking site located at 3366 Waitts Lake Road near Valley Washington (referred to as the "site"). The approximate site location is shown in the attached Vicinity Map, Figure 1.

Site environmental activities are managed by the Washington State Department of Ecology (Ecology); GeoEngineers' services for Ecology at the site were conducted under Contract No. C1100145 and Work Assignment C11145E1. This report describes field activities, observations and chemical analytical results associated with soil and groundwater samples collected at the site. The purpose of the described assessment activities was to define the vertical and lateral extent of remnant soil and groundwater contamination associated with former underground storage tank (UST) operations.

2.0 SITE DESCRIPTION AND BACKGROUND

The site is located about 120 feet north of Waitts Lake in Stevens County, Washington. An aluminum-sided shop building is located near the center of the site. The building is surrounded by gravel driveways and light vegetation. A trailer is parked in the northeast corner of the property. According to Ecology documentation, a drain field is located south of the trailer and a large drain field is located south of the shop. Overhead powerlines and underground utility lines are located along the south property line. The site elevation is about 15 to 20 feet higher than the nearby lake elevation. The site is bounded by Waitts Lake Road to the south, residential property to the west and east and undeveloped land to the north. The site is currently owned by Doug Dawson. Site features are depicted in Summary of Chemical Analytical Test Results Direct-Push Boring, Figure 2.

Based on information provided by Ecology, Dawson Trucking, Inc. (Dawson) removed two USTs and the associated piping and dispensers in 1995. The USTs had capacities of 8,000 and 6,000 gallons (identified as Tank 1 and Tank 2, respectively) and formerly contained No. 2 diesel fuel. During the UST removal, water was encountered in the tank excavation and a hole was observed in the bottom of Tank 2. Diesel was observed on the groundwater surface in the tank excavation. About 100 gallons of diesel reportedly were removed from the excavation using pumps and absorbent pads. Diesel also was observed in a test pit excavated about 20 feet south of the UST excavation. Evidence of petroleum contamination was not observed in two other test pits excavated southeast and southwest of the UST excavation. The contractor recommended sampling from two additional test pits and installing three monitoring wells to define the extent of soil and groundwater contamination, but documentation describing these actions was not available.

In February 2017, GeoEngineers conducted a site soil and groundwater assessment by advancing nine soil borings (B-1 through B-9) and installing monitoring wells (MW-1 to MW-3) in three of the borings. Analytical results indicated total xylenes soil concentrations in boring B-7 and diesel-range petroleum hydrocarbons (DRPH) in borings B-5 and B-7 exceeded the Washington State Model Toxics Control Act (MTCA) Method A unrestricted land use cleanup levels (CULs). Benzene and DRPH concentrations exceeded the MTCA Method A CUL for groundwater in MW-1; and DRPH concentrations also exceeded the MTCA Method A CUL from grab groundwater sample B-4.

Based on these results, additional investigation was recommended, and is addressed in this supplemental report.

3.0 SCOPE AND SERVICES

Assessment services included advancing direct-push soil borings, collecting soil samples, and collecting quarterly groundwater samples. The scope of services included the following:

Task 1. Site Assessment and Laboratory Analyses

1. Coordinated underground utility locating using the one-call system and Advanced Underground Utility Locating. Per state regulations, boring locations were marked prior to initiating the locate request.
2. Coordinated subcontractors (Environmental West Explorations [Environmental West], TestAmerica Laboratories, Inc. [TestAmerica] and waste disposal contractors).
3. Conducted field assessment activities including:
    a. Drilling 27 soil borings (DP-1 through DP-27) ranging in depth from about 4 to 24 feet below ground surface (bgs) using direct-push drilling techniques. Soil samples were collected using a continuous core sampler.
    b. Observing and documenting subsurface soil conditions. One soil sample was retained from each sampler for field screening and potential chemical analysis. Where possible, a soil sample was collected directly above the groundwater interface. Field screening consisted of visual observation, water sheen testing and headspace vapor measurements using a photoionization detector (PID).
    c. Submitting at least one soil sample for analysis from each soil boring (except borings DP-13 through DP-17 as described below). Samples were selected for analysis based on: (1) field screening indications of contamination; (2) the sample collected at the soil/groundwater interface; or (3) the deepest sample.

        Soil samples were submitted to TestAmerica for:

        i. Gasoline-range petroleum hydrocarbon (GRPH) analysis using Northwest Method NWTPH-Gx;
        ii. DRPH and oil-range petroleum hydrocarbon (ORPH) analysis using Northwest Method NWTPH-Dx; and/or
        iii. Benzene, toluene, ethylbenzene and total xylenes (BTEX) analysis using Environmental Protection Agency (EPA) Method 8260C.

    d. Measuring depth to groundwater and calculating relative groundwater elevations to estimate groundwater flow direction and gradient.
    e. Drumming and labeling investigation-derived waste (IDW). Able Cleanup Technologies (ACT) was retained to profile and transport the IDW for disposal at a permitted facility.
    f. Conducting a quarterly groundwater monitoring event on May 10, 2017. Groundwater samples were collected using low-flow sampling methods. Groundwater samples were analyzed for GRPH, DRPH, ORPH and BTEX using the methods referenced above.

Task 2. Reporting

Scope of work reporting requirements included preparing this assessment report for Ecology, and entering the analytical data obtained from this supplemental investigation into Ecology's Environmental Information Management (EIM) database.

4.0 FIELD ACTIVITIES

4.1. Subsurface Explorations

Subsurface soil field assessment activities were conducted on March 27 through 29, 2017. Site utilities, located near the boring locations, were identified and marked by Advanced Underground Utility Locating prior to drilling. Environmental West advanced 27 borings (DP-1 through DP-27) to depths ranging from 4 to 24 feet bgs using direct-push drilling methods. Boring locations are depicted in Figure 2. Boring logs associated with subsurface activities are included in Appendix A. Boring locations, petroleum field screening results and submitted sample intervals are summarized by the following:

- Boring DP-1 was advanced approximately 13 feet east of monitoring well MW-1 to about 17 feet bgs. PID readings ranged from <1.0 to 83.5 parts per million (ppm). Slight to moderate petroleum sheens were observed from the soil samples collected. Soil samples were submitted from the 2.75- to 3-foot and 16.5- to 16.75-foot intervals.
- Boring DP-2 was advanced to a depth of about 17 feet bgs. Perched groundwater was encountered at about 17 feet bgs. PID readings ranged from <1.0 to 100.3 ppm and slight to moderate petroleum sheens were observed. Soil samples were submitted from the 6- to 6.25-foot and 12- to 12.25-foot intervals.
- Boring DP-3 was advanced to about 16 feet bgs. PID readings ranged from <1 to 1,123 ppm. Slight petroleum sheens were observed from about 7 to 11 feet bgs. Soil samples were submitted from the 9- to 9.25-foot and 12- to 12.25-foot intervals.
- Boring DP-4 was advanced to about 12 feet bgs. PID readings greater than 1.0 were not measured and petroleum sheens were not observed. A soil sample was submitted from the 2- to 2.5-foot interval.
- Boring DP-5 was advanced to about 19 feet bgs. PID readings were measured up to 98.4 ppm and slight petroleum sheens were observed. Soil samples were submitted from the 7.5- to 7.75-foot, 8- to 8.75-foot, and 12.25- to 12.5-foot intervals.
- Boring DP-6 was advanced to about 10 feet bgs. PID readings ranged from <1.0 to 27.7 ppm; petroleum sheens were not observed. Soil samples were submitted from the 6.25- to 6.5-foot and 9- to 9.25-foot intervals.
- Boring DP-7 was advanced to about 8 feet bgs. The PID reading was 50.2 ppm and a moderate sheen was observed at about 6.5 feet bgs. A soil sample was submitted from the 6.25- to 6.5-foot interval.
- Boring DP-8 was advanced to a depth of about 11 feet bgs. Field screening evidence of petroleum contamination was not observed. A soil sample was submitted from the 8.75- to 9-foot interval.
- Boring DP-9 was advanced to a depth of about 8 feet bgs. PID readings ranged between <1.0 to 10.4 ppm and a slight petroleum sheen was observed. A soil sample was submitted from the 7- to 7.25-foot interval.

- Boring DP-10 was advanced on the shop driveway to about 12 feet bgs. A petroleum odor was observed at 9 feet bgs corresponding to PID readings of about 1 ppm; no petroleum sheen was observed. A soil sample was submitted from the 9.75- to 10-foot interval.
- Boring DP-11 was advanced near the shop driveway's south side to about 8 feet bgs. PID readings ranged from <1 to 254.3 ppm and slight to moderate petroleum sheens were observed. Soil samples were submitted from the 1.75- to 2-foot and 4.75- to 5-foot intervals.
- Boring DP-12 was advanced to about 12 feet bgs. PID readings between 14.7 to 67.2 ppm were measured and a slight petroleum sheen was observed between 7 to 12 feet bgs. A soil sample was submitted from the 9.5- to 9.75-foot interval.
- Boring DP-13 was located 10 feet north of boring B-7and advanced to about 8 feet bgs. Field screening evidence of petroleum was not observed. A sample was not submitted from this boring.
- Boring DP-14 was located 5 feet north of boring B-7and advanced to about 4 feet bgs. Field screening evidence of petroleum was not observed. A sample was not submitted from this boring.
- Boring DP-15 was located near boring B-7 and advanced to a depth of 10 feet bgs. Field screening evidence of petroleum was not observed. A sample was not submitted from this boring.
- Boring DP-16 was located about 2 feet east of boring B-7 and advanced to about 12 feet bgs. Field screening evidence of petroleum was not observed. A sample was not submitted from this boring.
- Boring DP-17 was located at about the same location as boring B-7. The boring was advanced to about 4 feet bgs, when an underground pipe was penetrated. Water issued from the hole. The boring was abandoned and a sample was not submitted.
- Boring DP-18 was advanced to about 19 feet bgs. Petroleum odors were noted. PID readings ranged from <10 to 141.2 ppm and slight petroleum sheens were observed. Soil samples were submitted from the 2- to 2.25-foot and 12.5- to 12.75-foot intervals.
- Boring DP-19 was advanced to about 24 feet bgs PID readings ranged from <1.0 and 107.9 ppm and slight to moderate petroleum sheens were observed. Soil samples were submitted from the 16- to 16.25-foot and 20- to 20.25-foot intervals.
- Boring DP-20 was advanced to about 12 feet bgs. Field screening evidence of petroleum contamination was not observed. A soil sample was submitted from the 6- to 6.25-foot interval.
- Boring DP-21 was advanced to a depth of about 17 feet bgs PID reading ranged between <1.0 to 207.9 ppm and slight to moderate petroleum sheens were observed. Soil samples were submitted from the 9.75- to 10-foot, 15.75- to 16-foot, and 16.5- to 16.75-foot intervals.
- Boring DP-22 was advanced to about 16 feet bgs. PID readings were measured at <10 ppm and petroleum sheens were not observed. A soil sample was submitted from the 12.75- to 13-foot interval.
- Boring DP-23 was advanced to about 16 feet bgs. Petroleum field screening evidence was noted between 4 and 8 feet bgs. PID readings ranged between 2.1 to 29.3 ppm; petroleum sheens were not observed. A soil sample was submitted from the 5- to 5.25-foot interval.
- Boring DP-24 was advanced to about 13 feet bgs. Petroleum field screening evidence was noted in the 4.5- to 5-foot interval; with a PID reading of 20.7 ppm and a slight petroleum sheen. Soil samples were submitted from the 4.5- to 4.75-foot and 10- to 10.25-foot intervals.

- Boring DP-25 was advanced to about 20 feet bgs. Petroleum field screening evidence was observed between 5.5 and 10 feet bgs; with PID readings ranging between 67.5 to 73.1 ppm and a moderate petroleum sheen. Soil samples were submitted from the 8.75- to 9-foot and 12.75- to 13-foot intervals.
- Boring DP-26 was advanced to about 13 feet bgs. Petroleum field screening evidence was noted between 3 and 7 feet bgs. PID reading ranged between 10.6 and 65.2 ppm and slight to moderate petroleum sheens were observed. Soil samples were submitted from the 6- to 6.25-foot and 10- to 10.25-foot intervals.
- Boring DP-27 was advanced to about 11 feet bgs. Petroleum field screening evidence was noted at 4.5 feet bgs; with the PID reading at 134 ppm; petroleum sheens were not observed. Soil samples were submitted from the 4.75- to 5-foot and 8- to 8.25-foot intervals.

Borings were backfilled with bentonite. Soil cuttings were placed in 55-gallon steel drums, labeled, and stored on the northeast and southeast side of the garage with permission from the owner. ACT disposed the IDW in June 2017. Boring logs and field screening procedures are included in Appendix A.

4.2. Subsurface Conditions

According to the 1961, Geologic Map of Washington: Washington Division of Mines and Geology, scale 1:500,000 (Huntting, M. T., et al.) and confirmed by observation, soil conditions generally consisted of a brown sandy silt from ground surface to about 9 feet bgs underlain with a brown silty gravel at depths ranging between 9 and 23 feet bgs. Silt lenses were also observed. The silty gravel unit was underlain by a brown outwash sand with varying silt content.

Groundwater was encountered during drilling operations in borings DP-2, DP-15, DP-16, DP-17, DP-21, DP-22 and DP-26 at depths ranging from 7 to 16 feet bgs. The silty gravel unit is likely a glacial till that constitutes a confining layer for the groundwater which was generally encountered in the outwash sand unit.

4.3. Groundwater Sampling

Groundwater samples were collected from monitoring wells MW-1 through MW-3 on May 10, 2017. Depth to groundwater, relative to the top of the temporary well casing or drill casing, was measured to the nearest 0.01 foot using an electronic water level indicator. Depth to groundwater are reported in Table 1 below. Artesian conditions were observed in monitoring well MW-1 and therefore a depth to water could not be measured. Based on only two data points, from monitoring wells MW-2 and MW-3, hydraulic gradient and flow direction could not be determined. Based on previous sampling events and the topography of the site, groundwater likely flows to the south, toward the lake.

During the sampling event, air trapped within monitoring well MW-1 was under pressure upon opening the well. After the well cap was removed, the water level rose above the top of the PVC well casing and began filling the well monument. An iridescent sheen was noted on the water filling the well monument. Attempts to collect a downhole groundwater sample were unsuccessful; however, a groundwater sample was collected from the upwelling water filling the well monument. After discussions with Ecology, the water sample collected from the MW-1 monument was not analyzed because it was not considered representative of groundwater conditions.

TABLE 1. GROUNDWATER ELEVATIONS AND HEADSPACE PID READINGS (MAY 10, 2017)

Well Number	Top of Casing Elevation[1] (feet)	Depth to Water[2] (feet)	Groundwater Elevation[3] (feet)	PID[4] (ppm)
MW-1	1,969.23	Flowing	Not calculated	256.9
MW-2	1,962.32	3.23	1,959.09	2.5
MW-3	1,964.77	6.46	1,958.31	5.7

Notes:

[1] Elevations relative to North American Vertical Datum of 1988, as surveyed by Coffman Engineers.

[2]Depths measured relative to the north side of the top of the PVC well casing

[3]Groundwater elevations calculated using the formula: Groundwater Elevation = Top of Casing Elevation - Depth to Water

[4]Headspace vapor measurements collected upon opening the well casing using a PID.

Monitoring wells MW-2 and MW-3 were purged and sampled using low-flow sampling techniques. A peristaltic pump equipped with disposable tubing was used to purge and sample each well. The tubing intake was set about halfway between the top of ground water and the bottom of the screen. The tubing intake was set at 15 feet bgs in both wells. Groundwater samples were purged from each well for about 30 minutes before collecting the sample. Water quality parameters (pH, temperature, oxidation-reduction potential [ORP], turbidity, dissolved oxygen [DO] and conductivity) were measured at 3-minute intervals and documented while purging each well. A duplicate groundwater sample was collected from well MW-2. Groundwater quality parameters are summarized in Table 2. Field methods are described in Appendix A.

Groundwater samples were submitted to TestAmerica for chemical analysis using the methods described in “Section 3.0” and chemical analytical results are discussed in “Section 5.0.”

TABLE 2. GROUNDWATER QUALITY PARAMETERS

Monitoring Well	Field Measured Natural Attenuation Parameters at Time of Sampling					
	pH	Specific Conductivity (µS/cm)	ORP (mV)	Dissolved Oxygen (mg/L)	Turbidity[1] (NTU)	Temperature (°C)
MW-1	NM	NM	NM	NM	NM	NM
MW-2	7.42	628	-42.7	1.92	48.1	10.3
MW-3	7.40	621	72.0	3.01	8.5	9.9

Notes:

[1]Turbidity is not a natural attenuation parameter but was measured in the field to evaluate groundwater stabilization.

µS/cm – microSiemens per centimeter; mV – millivolts; mg/L – milligrams per liter; NTU – Nephelometric Turbidity Unit;

°C – Degrees Celsius; NM – Not measured.

Groundwater sampling purge water was drummed and stored onsite.

4.3.1. Data Quality Management and Exceptions

A field transport (trip) blank accompanied the groundwater samples to TestAmerica. This blank was prepared by TestAmerica with carbon-free water. The trip blank sample was analyzed for volatile organic compounds (VOCs). VOCs were not detected in the trip blank. The water quality meter was calibrated and the equipment was operating within normal parameters during the groundwater monitoring event. Groundwater pumping rates (about 250 milliliters per minute) were within the established range for low-

flow sampling. Turbidity in monitoring well MW-2 did not reach stabilization criteria within the 30-minute purge time established in the work plan; and the well was pumped an additional 10 minutes to attempt to reduce turbidity. Turbidity did not meet the stabilization criteria in MW-2 despite the additional low-flow purging time.

5.0 CHEMICAL ANALYTICAL RESULTS

5.1. Soil Chemical Analytical Results

Soil samples were submitted to TestAmerica for the chemical analyses described in "Section 3.3(c)." TestAmerica's laboratory reports are included in Appendix B; chemical analytical results are summarized and compared to the MTCA Method A CULs in Tables 3 and 4, attached. Detected analytes are summarized below:

- Benzene concentrations were detected in samples collected from borings DP-2, DP-5, DP-7, and DP-21, that exceeded the MTCA Method A CUL.
- Toluene concentrations were detected in samples collected from borings DP-5 and DP-21 that did not exceed the MTCA Method A CUL.
- Ethylbenzene was detected in samples collected from borings DP-2, DP-3, DP-5, DP-6, DP-7, DP-11, DP-18, DP-19 and DP-21 at concentrations less than the MTCA Method A cleanup level.
- Total xylenes were detected in samples collected from boring DP-21 at concentrations exceeding the MTCA Method A CUL. Total xylenes were also detected in samples collected from borings DP-2, DP-3, DP-5, DP-6, DP-7 and DP-11 at concentrations less than the MTCA Method A cleanup level.
- GRPH was detected in samples collected from borings DP-1, DP-2, DP-3, DP-5, DP-11, DP-19 and DP-21, at concentrations that exceeded the MTCA Method A CUL.
- DRPH was detected in samples collected from borings DP-1, DP-2, DP-6, DP-7, DP-11, DP-18, DP-21, DP-25, DP-26 and DP-27 at concentrations greater than the MTCA Method A cleanup level. DRPH was also detected in samples collected from borings DP-3, DP-5, DP-9, DP-12, DP-19, DP-23 and DP-24 at concentrations less than the MTCA Method A CUL.
- ORPH was detected in samples collected from boring DP-1, DP-2, DP-7, DP-11, DP-21, DP-25 and DP-27 at concentrations less than the MTCA Method A cleanup level.

5.2. Groundwater Chemical Analytical Results

Groundwater samples collected from wells MW-2 and MW-3 were submitted to TestAmerica for the chemical analyses described in "Section 3.3(c)." A representative groundwater sample could not be collected from well MW-1 during the May 2017 sampling event. TestAmerica's laboratory report is included in Appendix B; chemical analytical results for both the February and May sampling events are summarized and compared to MTCA Method A cleanup levels for unrestricted land use in Tables 5 and 6. Analytes were not detected in the groundwater samples collected in May 2017 greater than the laboratory method detection limit.

TABLE 5. CHEMICAL ANALYTICAL RESULTS – GROUNDWATER (BTEX)[1]

Sample Identification	Date Sampled	Units	Benzene[2]	Toluene[2]	Ethylbenzene[2]	m,p-Xylene[2]	o-Xylene[2]	Total Xylenes[2]
MW-1:020817	02/08/17	µg/L	**6.3**	**1.4**	**38**	**30**	**29**	**59**
MW-1:051017	05/10/17	µg/L	NA[3]	NA	NA	NA	NA	NA
MW-2:020817	02/08/17	µg/L	<0.20	<1.0	<1.0	<2.0	<1.0	<3.0
MW-2:051017	05/10/17	µg/L	<0.40	<1.0	<1.0	<2.0	<1.0	<3.0
MW-3:020817	02/08/17	µg/L	<0.20	<1.0	<1.0	<2.0	<1.0	<3.0
MW-3:051017	05/10/17	µg/L	<0.40	<1.0	<1.0	<2.0	<1.0	<3.0
Dup:020817 (MW-1)	02/08/17	µg/L	**6.4**	**1.3**	**38**	**30**	**29**	**59**
MTCA Method A CUL[4]		µg/L	5	1,000	700	1,000[5]		

Notes:

[1]Chemical analyses completed by TestAmerica Laboratories, Inc. located in Spokane Valley, Washington.

[2]BTEX analyzed using EPA Method 8260C.

[3]NA – Not analyzed because conditions were artesian. A petroleum sheen was observed on the water flowing from the well.

[4]MTCA Method A CUL - Washington State Model Toxics Control Act Method A unrestricted land use cleanup level.

[5]Cleanup level for total xylenes (o-xylene and m,p-xylene). Concentrations were summed to determine compliance.

µg/L = micrograms per liter.

Bold = Analyte concentrations are greater than the laboratory method reporting limit.

Red border indicates contaminant concentration greater than the MTCA Method A Cleanup Level.

TABLE 6. CHEMICAL ANALYTICAL RESULTS – GROUNDWATER (TPH)[1]

Sample Identification	Date Sampled	GRPH (µg/L)	DRPH[2] (µg/L)	ORPH[2] (µg/L)
MW-1:020817	02/08/17	NA	**2,600**	<210
MW-1:051017	05/10/17	NA[3]	NA	NA
MW-2:020817	02/08/17	NA	<120	<200
MW-2:051017	05/10/17	<150	<260	<440
MW-3:020817	02/08/17	NA	<120	<210
MW-3:051017	05/10/17	<150	<250	<420
Dup:020817 (MW-1)	02/08/17	NA	**2,500**	<210
MTCA Method A CUL[4]		1,000/800*	500	500

Notes:

[1]Chemical analyses completed by TestAmerica Laboratories, Inc. located in Spokane Valley, Washington.

[2]DRPH and ORPH analyzed using Northwest Method NWTPH-Dx.

[3]NA – Not analyzed because conditions were artesian. A petroleum sheen was observed on the water flowing from the well.

[4]MTCA Method A CUL - Washington State Model Toxics Control Act Method A unrestricted land use cleanup level.

*Cleanup level for gasoline-range petroleum hydrocarbons is 1,000 µg/L if benzene is not detected and the total concentrations of ethylbenzene, toluene, and xylenes are less than 1 percent of the gasoline mixture; otherwise the cleanup level is 800 µg/L.

Bold = Analyte concentrations are greater than the laboratory method reporting limit.

Red border indicates contaminant concentration greater than the MTCA Method A Cleanup Level.

6.0 DRAIN PIPE ASSESSMENT

During the initial investigation in February 2017, a poly ethylene drain pipe near boring B-7 was accidentally hit and water and fuel product began flowing to the ground surface. A test pit was excavated on May 19, 2017 by Able Cleanup Technologies, to expose and repair the drain pipe; and attempt to identify the fuel source area. During excavation, water mixed with residual fuel product from the former UST drain line was encountered upon exposing the pipe. A trace amount of soil with a slight sheen and a PID reading of 30.2 ppm was observed directly under the exposed broken portion of the drain pipe. Fuel product and impacted soil did not extend beyond the base of the broken drain pipe. Based on conversations with Ecology and the site owner, the drain pipe is no longer used and the test pit was backfilled without repairing the pipe.

7.0 SUMMARY

Supplemental soil assessment and quarterly groundwater monitoring activities were conducted on March 27 through 29, 2017, and May 10, 2017, at the Dawson Trucking site located at 3366 Waitts Lake Road in Valley Washington. Twenty-seven direct-push borings (DP-1 through DP-27) were advanced to depths ranging between 4 and 24 feet bgs. Observed soil conditions generally consisted of a very dense brown silty gravel (glacial till) with occasional silt lenses underlain by brown outwash sand with variable silt.

Soil samples were submitted for BTEX, GRPH, DRPH and ORPH analysis. Benzene concentrations exceeded the MTCA Method A CUL in multiple samples at depths ranging between 6 and 16 feet bgs. Total xylene concentrations exceeded the MTCA Method A CUL in one sample at a depth of about 10 feet bgs. GRPH and DRPH concentrations were greater than the MTCA Method A cleanup level in multiple samples from 2 to 16 feet bgs.

Two groundwater samples were collected from monitoring wells MW-2 and MW-3; and submitted for BTEX, GRPH, DRPH and ORPH analysis. Groundwater analyte concentrations were not reported greater than the laboratory method detection limits. MW-1 was not sampled during the May 2017 event because groundwater was flowing from the well under artesian conditions. However, a slight petroleum sheen was observed on the water flowing from the well.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the chemical analytical results, the soil and groundwater at the site are impacted with petroleum-related contaminants. Based on the soil samples analyzed, petroleum-contaminated soil is defined by the following:

- From near the north property line, near the location of the former USTs extending to the south property line.
- To the east the extent of contaminated soil appears to be bounded by DP-8, DP-22, DP-23 and B-2.
- To the west, the petroleum contaminated soil appears to be bounded by DP-4, DP-20, B-1, DP-12, MW-2/B-3, and the building.
- The vertical extent of contaminated soil is not defined in borings DP-2, DP-5, DP-7, DP-11 and DP-26. Contaminant concentrations in the deepest soil samples collected from these borings (the soil samples

were obtained at depths between 6 to 12 feet bgs) exceeded the MTCA Method A cleanup levels. The contaminant concentrations from the deepest samples from the remaining explorations were either not detected or detected at concentrations less than the MTCA Method A cleanup levels.

Groundwater sampling results from the February 2017 and the observed sheen on the groundwater flowing from monitoring well MW-1 indicate that groundwater is impacted with petroleum-related contaminants. However, the extent of contaminants in groundwater is not defined.

We recommend installing additional monitoring wells near MW-1 to define the extent of groundwater contamination. Additionally, we recommend conducting additional soil sampling near the north and south property boundaries to define the extent of the petroleum-impacted soil.

9.0 LIMITATIONS

We have prepared this revised report for the exclusive use of Ecology and their authorized agents.

Within the limitations of scope, schedule and budget, our services have been executed in accordance with generally accepted environmental science practices in this area at the time this report was prepared. The conclusions and opinions presented in this report are based on our professional knowledge, judgment and experience. No warranty or other conditions, express or implied, should be understood.

Any electronic form, facsimile or hard copy of the original document (email, text, table and/or figure), if provided, and any attachments should be considered a copy of the original document. The original document is stored by GeoEngineers, Inc. and will serve as the official document of record.

Please refer to "Report Limitations and Guidelines for Use," Appendix C, for additional information pertaining to use of this report.

10.0 REFERENCES

Huntting, M. T., et al. 1961. Geologic Map of Washington: Washington Division of Mines and Geology, scale 1:500,000.

Puls, R.W. and M.J. Barcelona. 1996. Low-flow (minimal drawdown) ground-water sampling procedures: EPA Ground Water Issue, April. p.1-9.

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TABLES

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Table 3

Chemical Analytical Results – Soil (BTEX)[1]

Dawson Trucking - 3366 Waitts Road

Valley, Washington

Sample Identification (Depth Interval)	Date Sampled	Units	Benzene[2]	Toluene[2]	Ethylbenzene[2]	m,p-Xylene[2]	o-Xylene[2]	Total Xylenes[2]
DP-1 (2.75-3)	3/27/2017	mg/kg	<0.32	<1.6	<1.6	<6.4	<3.2	<9.5
DP-1 (16.5-16.75)	3/27/2017	mg/kg	<0.26	<1.3	<1.3	<5.1	<2.6	<7.7
DP-2 (6-6.25)	3/27/2017	mg/kg	**0.073**	<0.10	**2.2**	**1.2**	<0.21	**1.3**
DP-2 (12-12.25)	3/27/2017	mg/kg	**0.024**	<0.094	**0.1**	<0.38	<0.19	<0.57
DP-3 (9-9.25)	3/27/2017	mg/kg	<0.017	<0.087	**0.29**	<0.35	**0.65**	**0.76**
DP-3 (12-12.25)	3/27/2017	mg/kg	<0.026	<0.13	<0.13	<0.51	<0.26	<0.77
DP-4 (2-2.5)	3/27/2017	mg/kg	<0.027	<0.13	<0.13	<0.54	<0.27	<0.80
DP-5 (7.5-7.75)	3/27/2017	mg/kg	**0.024**	<0.11	**0.68**	**0.51**	<0.21	**0.68**
DP-5 (8-8.75)	3/27/2017	mg/kg	**0.032**	**0.26**	**0.67**	**2**	**1.1**	**3.1**
DP-5 (12.25-12.5)	3/27/2017	mg/kg	**0.055**	<0.13	<0.13	<0.50	<0.25	<0.75
DP-6 (6.25-6.5)	3/27/2017	mg/kg	<0.022	<0.11	**0.59**	**2.9**	<0.22	**2.9**
DP-6 (9-9.25)	3/27/2017	mg/kg	<0.024	<0.12	<0.12	<0.48	<0.24	<0.72
DP-7 (6.25-6.5)	3/28/2017	mg/kg	**0.22**	<0.092	**1.7**	**1.3**	<0.18	**1.3**
DP-8 (8.75-9)	3/28/2017	mg/kg	<0.024	<0.12	<0.12	<0.48	<0.24	<0.72
DP-9 (7-7.25)	3/28/2017	mg/kg	<0.020	<0.10	<0.10	<0.41	<0.20	<0.61
DP-10 (9.75-10)	3/28/2017	mg/kg	<0.029	<0.15	<0.15	<0.59	<0.29	<0.88
DP-11 (1.75-2)	3/28/2017	mg/kg	<0.028	<0.14	**0.19**	<0.56	<0.28	<0.85
DP-11 (4.75-5)	3/28/2017	mg/kg	<0.021	<0.10	**0.5**	**2.6**	<0.21	**2.6**
DP-12 (9.5-9.75)	3/28/2017	mg/kg	<0.031	<0.16	<0.16	<0.63	<0.31	<0.94
DP-18 (2-2.25)	3/28/2017	mg/kg	<0.027	<0.13	**0.21**	<0.54	<0.27	<0.81
DP-18 (12.5-12.75)	3/28/2017	mg/kg	<0.025	<0.12	<0.12	<0.50	<0.25	<0.75
DP-19 (11.75-12)	3/28/2017	mg/kg	<0.20	<1.0	**1.5**	<4.0	<2.0	<6.0
DP-19 (20-20.25)	3/28/2017	mg/kg	<0.023	<0.12	<0.12	<0.46	<0.23	<0.69
DP-20 (6-6.25)	3/29/2017	mg/kg	<0.020	<0.10	<0.10	<0.40	<0.20	<0.60
DP-21 (9.75-10)	3/29/2017	mg/kg	**0.49**	**1.6**	**5.6**	**16**	**6.3**	**22**
DP-21 (15.75-16)	3/29/2017	mg/kg	**0.044**	<0.21	**3**	**3.4**	<0.42	**3.7**

Sample Identification (Depth Interval)	Date Sampled	Units	Benzene[2]	Toluene[2]	Ethylbenzene[2]	m,p-Xylene[2]	o-Xylene[2]	Total Xylenes[2]
DP-21 (16.5-16.75)	3/29/2017	mg/kg	<0.018	<0.091	**0.11**	<0.36	<0.19	<0.54
DP-22 (12.75-13)	3/29/2017	mg/kg	<0.020	<0.10	<0.10	<0.40	<0.20	<0.60
DP-23 (5-5.25)	3/29/2017	mg/kg	<0.020	<0.099	<0.099	<0.40	<0.20	<0.60
DP-23 (8-8.25)	3/29/2017	mg/kg	<0.022	<0.11	<0.11	<0.44	<0.22	<0.66
DP-24 (4.5-4.75)	3/29/2017	mg/kg	<0.023	<0.12	<0.12	<0.46	<0.23	<0.69
DP-24 (10-10.25)	3/29/2017	mg/kg	<0.026	<0.13	<0.13	<0.52	<0.26	<0.79
DP-25 (8.75-9)	3/29/2017	mg/kg	<0.022	<0.11	<0.11	<0.43	<0.22	<0.65
DP-25 (12.75-13)	3/29/2017	mg/kg	<0.022	<0.11	<0.11	<0.43	<0.22	<0.65
DP-26 (6-6.25)	3/29/2017	mg/kg	<0.042	<0.21	<0.21	<0.85	<0.42	<1.3
DP-26 (10-10.25)	3/29/2017	mg/kg	<0.031	<0.16	<0.16	<0.62	<0.31	<0.94
DP-27 (4.75-5)	3/29/2017	mg/kg	<0.024	<0.12	<0.12	<0.49	<0.24	<0.73
DP-27 (8-8.25)	3/29/2017	mg/kg	<0.038	<0.19	<0.19	<0.76	<0.38	<1.1
MTCA Method A CUL4		mg/kg	0.03	7	6	94		

Notes:

[1]Chemical analyses completed by TestAmerica Laboratories, Inc. located in Spokane Valley, Washington.

[2]BTEX analyzed using EPA Method 8260C.

[3]NA – Not analyzed because conditions were artesian. A petroleum sheen was observed on the water flowing from the well.

[4]MTCA Method A CUL - Washington State Model Toxics Control Act Method A unrestricted land use cleanup level.

[5]Cleanup level for total xylenes (o-xylene and m,p-xylene). Concentrations were summed to determine compliance.

mg/kg = miligrams per kilogram

Bold = Analyte concentrations are greater than the laboratory method reporting limit.

Red border indicates contaminant concentration greater than the MTCA Method A Cleanup Level.

Table 4

Chemical Analytical Results – Soil (TPH)[1]

Dawson Trucking - 3366 Waitts Road

Valley, Washington

Sample Identification (Depth Interval)	Date Sampled	GRPH[2] (mg/kg)	DRPH[3] (mg/kg)	ORPH[3] (mg/kg)
DP-1 (2.75-3)	3/27/2017	**430**	**2,800**	**97**
DP-1 (16.5-16.75)	3/27/2017	NA	**330**	<27
DP-2 (6-6.25)	3/27/2017	NA	**1,700**	**28**
DP-2 (12-12.25)	3/27/2017	**33**	**3,500**	<270
DP-3 (9-9.25)	3/27/2017	**250**	**1,300**	<27
DP-3 (12-12.25)	3/27/2017	NA	<10	<26
DP-4 (2-2.5)	3/27/2017	NA	<11	<28
DP-5 (7.5-7.75)	3/27/2017	**250**	**900**	<26
DP-5 (8-8.75)	3/27/2017	NA	<10	<26
DP-5 (12.25-12.5)	3/27/2017	NA	**1,200**	<25
DP-6 (6.25-6.5)	3/27/2017	NA	**4,600**	<280
DP-6 (9-9.25)	3/27/2017	NA	<11	<28
DP-7 (6.25-6.5)	3/28/2017	NA	**3,400**	**56**
DP-8 (8.75-9)	3/28/2017	NA	<11	<27
DP-9 (7-7.25)	3/28/2017	NA	**310**	<28
DP-10 (9.75-10)	3/28/2017	NA	<11	<27
DP-11 (1.75-2)	3/28/2017	NA	**3,200**	**66**
DP-11 (4.75-5)	3/28/2017	**840**	**5,600**	<270
DP-12 (9.5-9.75)	3/28/2017	NA	**22**	<31
DP-18 (2-2.25)	3/28/2017	**420**	**6,000**	<310
DP-18 (12.5-12.75)	3/28/2017	NA	**360**	<26
DP-19 (11.75-12)	3/28/2017	**800**	**1,400**	<27
DP-19 (20-20.25)	3/28/2017	NA	**18**	<27
DP-20 (6-6.25)	3/29/2017	NA	<11	<28
DP-21 (9.75-10)	3/29/2017	**1,100**	**3,500**	**54**
DP-21 (15.75-16)	3/29/2017	NA	**10,000**	<280
DP-21 (16.5-16.75)	3/29/2017	NA	**1,300**	<26
DP-22 (12.75-13)	3/29/2017	NA	<11	<26
DP-23 (5-5.25)	3/29/2017	NA	**620**	<28
DP-23 (8-8.25)	3/29/2017	NA	<11	<27
DP-24 (4.5-4.75)	3/29/2017	NA	**660**	<29
DP-24 (10-10.25)	3/29/2017	NA	<11	<26
DP-25 (8.75-9)	3/29/2017	NA	**2,100**	**34**
DP-25 (12.75-13)	3/29/2017	NA	<11	<26

Sample Identification (Depth Interval)	Date Sampled	GRPH[2] (mg/kg)	DRPH[3] (mg/kg)	ORPH[3] (mg/kg)
DP-26 (6-6.25)	3/29/2017	NA	<11	<27
DP-26 (10-10.25)	3/29/2017	NA	**5,800**	<310
DP-27 (4.75-5)	3/29/2017	NA	**2,700**	**55**
DP-27 (8-8.25)	3/29/2017	NA	**350**	<30
MTCA Method A CUL[4]		30/100*	2,000	2,000

Notes:

[1]Chemical analyses completed by TestAmerica Laboratories, Inc. located in Spokane Valley, Washington.

[2]GRPH analyzed using Northwest Method NWTPH-Gx.

[3]DRPH and ORPH analyzed using Northwest Method NWTPH-Dx.

[4]MTCA Method A CUL - Washington State Model Toxics Control Act Method A unrestricted land use cleanup level.

*Cleanup level for gasoline-range petroleum hydrocarbons is 100 mg/kg if benzene is not detected and the total concentrations of ethylbenzene, toluene, and xylenes are less than 1 percent of the gasoline mixture; otherwise the cleanup level is 30 mg/kg.

TPH = total petroleum hydrocarbons; mg/kg =- miligrams per kilogram

Bold = Analyte concentrations are greater than the laboratory method reporting limit.

Red border indicates contaminant concentrations greater than the MTCA Method A Cleanup Level.

FIGURES

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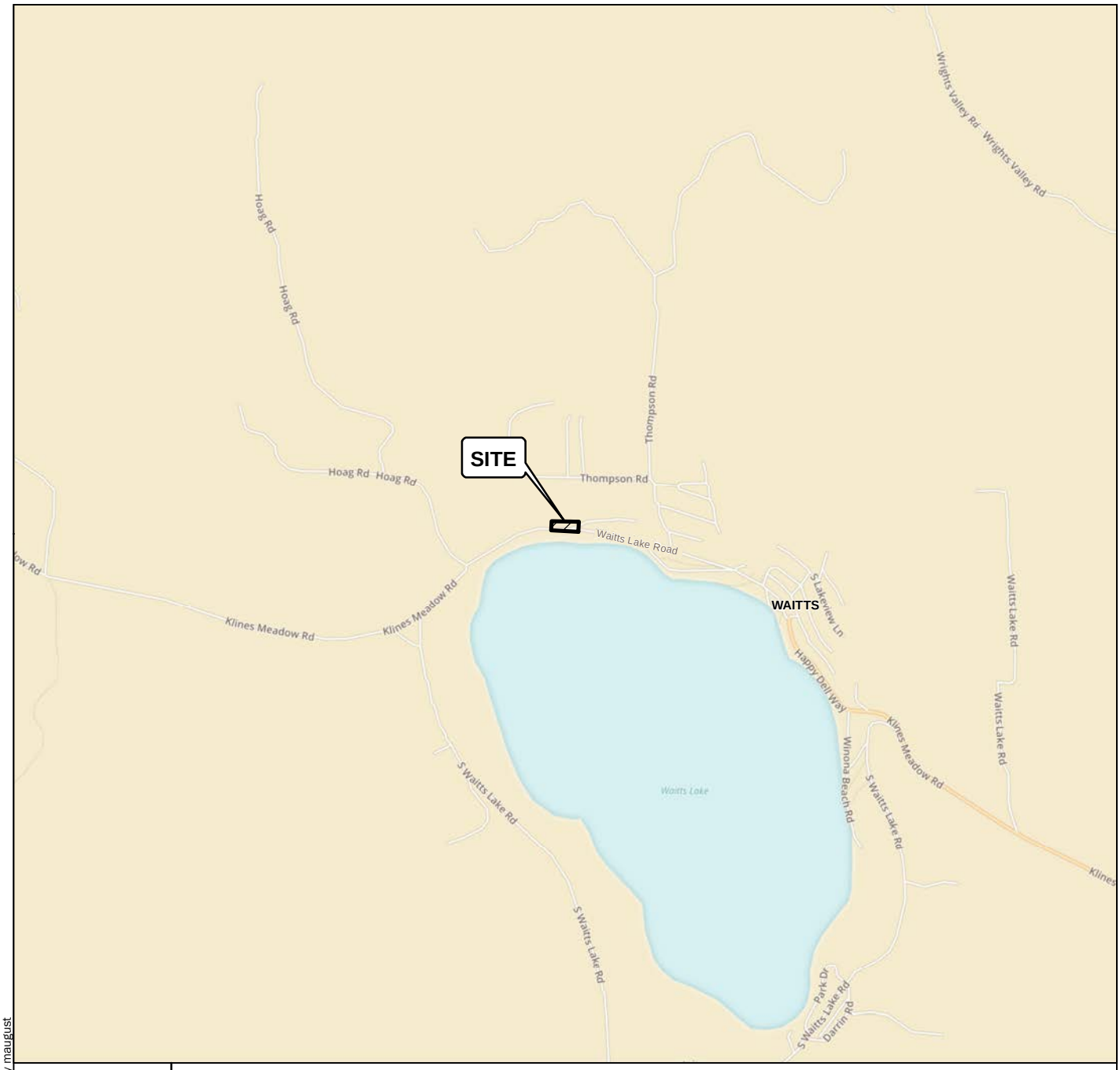

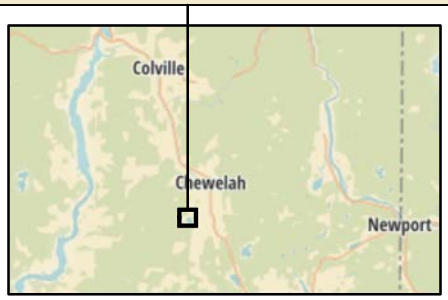

N
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2,000 0 2,000

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Mapbox Open Street Map, 2016

Projection: NAD 1983 UTM Zone 11N

Vicinity Map

Dawson Trucking
Valley, Washington

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Figure 1

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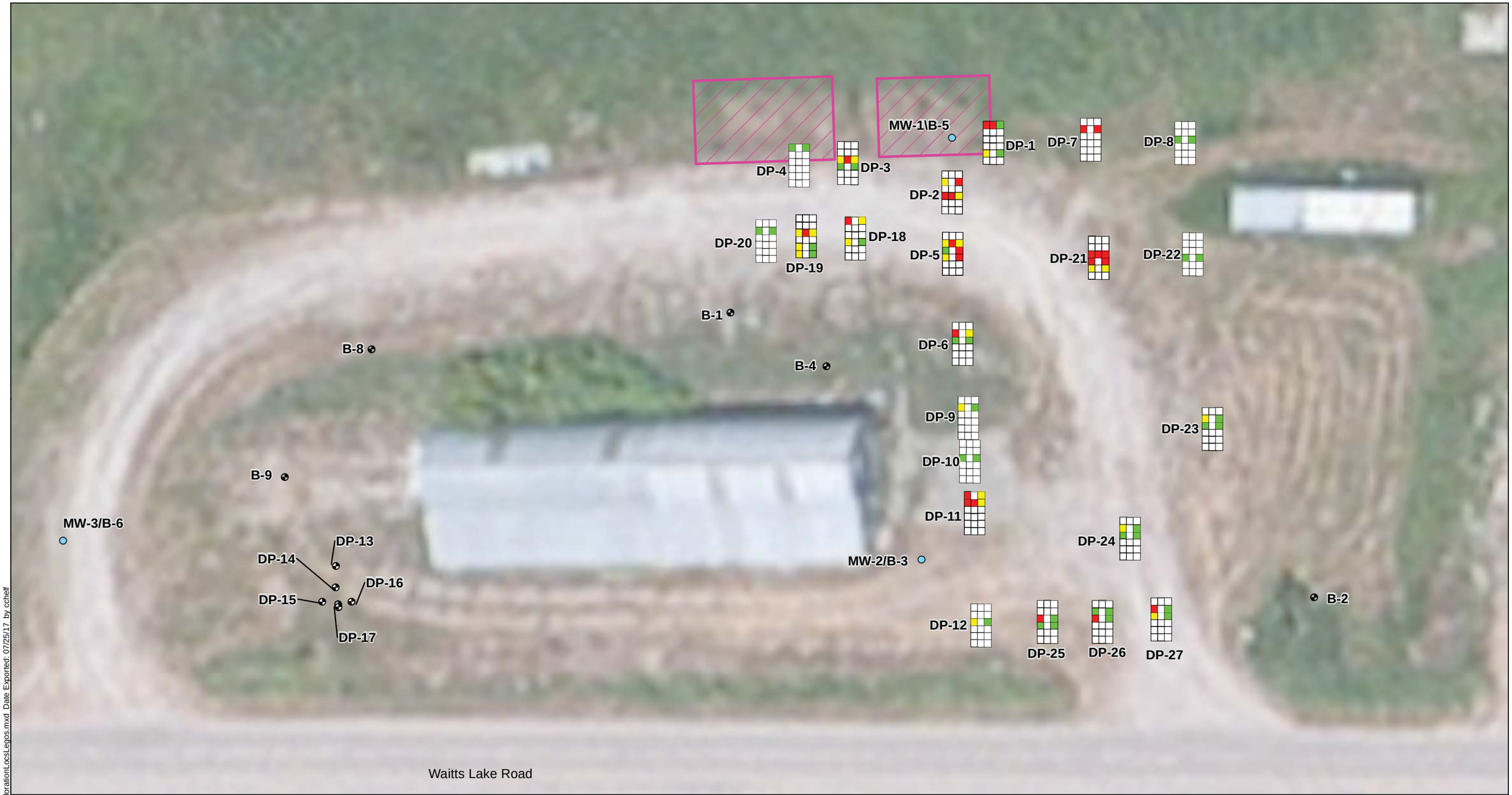

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: ArcGIS Online.

Projection: NAD 1983 HARN StatePlane Washington North FIPS 4601 Feet

Legend

- DP-1 — Direct Push Boring Location
- B-1 — Soil Boring
- MW-1 — Monitoring Well
- Former UST Approximate Location

Depth of Sample

Diesel	Gasoline	BTEX	
			0-4
			4-8
			8-12
			12-16
			16-20
			20-24

Colors

- Not Sampled
- Not Detected
- Detected at Concentration Less than MTCA Method A
- Exceed MTCA Method A Cleanup Levels

N W E S

20 0 20

Feet

Summary of Chemical Analytical Test Results Direct-Push Boring

Dawson Trucking
Valley, Washington

GeoEngineers

Figure 2

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APPENDICES

GeoEngineers

APPENDIX A
Field Procedures and Boring Logs

APPENDIX A
FIELD PROCEDURES AND BORING LOGS

General

Subsurface conditions at the Dawson Trucking site were explored on March 27 through 29, 2017, by advancing 27 borings using direct-push drilling techniques. Boring depths ranged between 4 and 24 feet bgs. Boring locations were established in the field using a site plan and measurements from onsite structures. Consequently, exploration locations should be considered accurate to the degree implied by the method used.

Field methods generally were performed in compliance with the project Work Plan assessment procedures.

Soil Sample Collection

Soil samples were obtained from a 4-foot long continuous soil sampler. Soil samples were removed from the acrylic sleeve sampler using clean nitrile gloves, and transferred into a laboratory prepared container, labeled with a waterproof pen, and placed on wet ice in a clean plastic-lined cooler.

Drilling operations were observed by GeoEngineers staff who examined and classified the soil encountered, obtained soil samples, and maintained a continuous exploration log. Soil encountered in the borings was classified in general accordance with ASTM International (ASTM) D 2488 and the classification chart listed in Key to Exploration Logs, Figure A-1. Boring logs are presented in Figures A-2 through A-28. The logs are based on field data interpretation and indicate the approximate depth at which subsurface materials or their characteristics change, although these changes might actually be gradual.

Field Screening of Soil Samples

A GeoEngineers field representative performed field screening tests on soil samples and recorded observations on the field boring log and in the field notebook. Field screening results aided in the selection of soil samples for chemical analysis. The sample from each boring showing the highest likelihood of petroleum contamination based on field screening was selected for laboratory analysis. The remaining samples were submitted to the laboratory and held pending the results of the samples submitted for analysis.

Screening methods included: (1) visual examination; (2) water sheen screening; and (3) headspace vapor screening using a PID. Visual screening consisted of inspecting the soil for discoloration indicative of the presence of petroleum-contaminated material in the sample.

Water-sheen screening involved placing soil in a pan of water and observing the water surface for signs of sheen. Sheen screening detects both volatile and nonvolatile petroleum hydrocarbons. Sheens observed are classified as follows:

No Sheen (NS)	No visible sheen on the water surface.
Slight Sheen (SS)	Light, colorless, dull sheen; spread is irregular, not rapid; sheen dissipates rapidly. Natural organic matter in the soil may produce a slight sheen.
Moderate Sheen (MS)	Light to heavy sheen; may have some color/iridescence; spread is irregular to flowing, may be rapid; few remaining areas of no sheen on the water surface.
Heavy Sheen (HS)	Heavy sheen with color/iridescence; spread is rapid; entire water surface may be covered with sheen.

Water sheen testing equipment was either disposed or decontaminated before field screening each sample using a Liquinox® soap solution with a water rinse.

Headspace vapor screening involved inserting a soil sample into a sealed plastic bag and measuring the airspace VOC vapor concentrations in ppm with a PID. When a soil sample was placed in a sealed plastic bag with air space, the bag was warmed and shaken to expose the soil to the air trapped in the bag. The probe of the PID, calibrated to isobutylene following the manufacturer's instructions, was inserted into a small opening in the bag seal and the measurement was collected. The PID typically is designed to quantify VOC vapor concentrations in the range between 0.1 ppm and 1,999 ppm with an accuracy of 10 percent of the reading and between 2,000 ppm and 10,000 ppm with an accuracy of 20 percent of the reading.

Field screening results are site-specific. The results vary with temperature, soil type, type of contaminant, and soil moisture content.

Groundwater Sampling Procedures

Groundwater samples from monitoring wells MW-2 and MW-3 were collected on May 10, 2017. A groundwater sample from MW-1 was not collected because of artesian conditions at this location.

Groundwater Depths

Depths to groundwater were measured relative to the north side of the monitoring well casing rims or drill casing using an electric water-level indicator. The probe of the water-level indicator was decontaminated between wells with a detergent wash, followed by two distilled water rinses.

Groundwater Sampling

Groundwater samples were collected using either a bladder pump or a peristaltic pump with the tubing inserted into the PVC well casing. Each grab sample was purged about 30 minutes before sampling and the groundwater parameters listed below were measured during the purge. After 30 minutes of purging, the pump's discharge tubing was disconnected from the flow-through cell and groundwater samples were collected for analysis. Each sample was pumped directly into sample containers supplied by the laboratory.

Low-Flow Sampling Procedures

Groundwater sampling was performed consistent with the EPA's low-flow groundwater sampling procedure, as described by EPA (2010) and Puls and Barcelona (1996). The tubing intake was set about halfway between the depth to water and the bottom of the screen. Monitoring wells were purged using a peristaltic pump equipped with disposable tubing. During purging activities, water quality parameters, including pH, conductivity, temperature, turbidity, ORP and DO, were measured using a YSI Pro multi-parameter meter

equipped with a flow-through cell; measurements were recorded approximately every 3 minutes. The meter calibration was verified at the beginning of each work day consistent with manufacturer recommendations prior to purging and sampling activities.

Groundwater samples were collected after: (1) water quality parameters had stabilized; or (2) a maximum purge time of at least 30 minutes was achieved. During purging and sampling, the purge rate was not allowed to exceed 500 milliliters per minute. Water quality parameter stabilization criteria include the following:

- Turbidity: ±10 percent for values greater than 5 Nephelometric Turbidity Units (NTUs);
- DO: ±10 percent for values greater than 0.5 milligrams per liter;
- Conductivity: ±3 percent;
- pH: ±0.1 unit;
- Temperature: ±3 percent; and
- ORP: ±10 millivolts.

After groundwater quality stabilization criteria were reached, the pump's discharge tubing was disconnected from the flow-through cell and groundwater samples were collected for analysis. Each sample was pumped directly into sample containers supplied by the laboratory. Groundwater samples collected for chemical analysis were kept cool during on-site storage and transport to the laboratory. Chain-of-custody procedures were observed during transport and delivery of the groundwater samples.

SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS	GRAVEL AND GRAVELLY SOILS	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL - SAND MIXTURES
				GP	POORLY-GRADED GRAVELS, GRAVEL - SAND MIXTURES
	MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL - SAND - CLAY MIXTURES
MORE THAN 50% RETAINED ON NO. 200 SIEVE	SAND AND SANDY SOILS	CLEAN SANDS (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS
				SP	POORLY-GRADED SANDS, GRAVELLY SAND
	MORE THAN 50% OF COARSE FRACTION PASSING ON NO. 4 SIEVE	SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND - SILT MIXTURES
				SC	CLAYEY SANDS, SAND - CLAY MIXTURES
FINE GRAINED SOILS	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS, ROCK FLOUR, CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
MORE THAN 50% PASSING NO. 200 SIEVE	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY
				OH	ORGANIC CLAYS AND SILTS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

NOTE: Multiple symbols are used to indicate borderline or dual soil classifications

ADDITIONAL MATERIAL SYMBOLS

SYMBOLS GRAPH	SYMBOLS LETTER	TYPICAL DESCRIPTIONS
	AC	Asphalt Concrete
	CC	Cement Concrete
	CR	Crushed Rock/ Quarry Spalls
	SOD	Sod/Forest Duff
	TS	Topsoil

Groundwater Contact

Measured groundwater level in exploration, well, or piezometer

Measured free product in well or piezometer

Graphic Log Contact

Distinct contact between soil strata

Approximate contact between soil strata

Material Description Contact

Contact between geologic units

Contact between soil of the same geologic unit

Sampler Symbol Descriptions

2.4-inch I.D. split barrel

Standard Penetration Test (SPT)

Shelby tube

Piston

Direct-Push

Bulk or grab

Continuous Coring

Blowcount is recorded for driven samplers as the number of blows required to advance sampler 12 inches (or distance noted). See exploration log for hammer weight and drop.

"P" indicates sampler pushed using the weight of the drill rig.

"WOH" indicates sampler pushed using the weight of the hammer.

Laboratory / Field Tests

%F	Percent fines
%G	Percent gravel
AL	Atterberg limits
CA	Chemical analysis
CP	Laboratory compaction test
CS	Consolidation test
DD	Dry density
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
Mohs	Mohs hardness scale
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity index
PP	Pocket penetrometer
SA	Sieve analysis
TX	Triaxial compression
UC	Unconfined compression
VS	Vane shear

Sheen Classification

NS	No Visible Sheen
SS	Slight Sheen
MS	Moderate Sheen
HS	Heavy Sheen

NOTE: The reader must refer to the discussion in the report text and the logs of explorations for a proper understanding of subsurface conditions. Descriptions on the logs apply only at the specific exploration locations and at the time the explorations were made; they are not warranted to be representative of subsurface conditions at other locations or times.

Key to Exploration Logs

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Figure A-1

Drilled Start 3/27/2017 End 3/27/2017	Total Depth (ft) 17	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1990 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381137.36 Northing (Y) 449600.8		System Datum WA State Plane North NAD83		Perched water observed at 12 feet at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		36					SP-SM	Brown fine to coarse sand with silt and gravel (medium dense, moist)	NS	<1	
								ML	Brown silt with gravel and sand (medium stiff, moist) Grades to blue-gray			
1985	5		40			DP-1 (2.75-3) CA				MS	83.5	
						DP-1 (6-6.25)				MS	30.4	
										MS	8.4	
1980	10		15			DP-1 (8-8.25)		GM	Brown-gray silty fine to coarse gravel with sand (medium dense, moist)	SS	7.8	
										NS	<1	
			24			DP-1 (12.5-12.75)		GM	Brown silty fine to coarse gravel with sand (medium dense, wet)	SS	40.3	
										SS	17.8	
1975	15		9			DP-1 (16.5-16.75) CA				MS	14.9	
									Boring terminated at approximately 17 feet below ground surface due to refusal			

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-1

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Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-2
Sheet 1 of 1

Drilled Start 3/27/2017 End 3/27/2017	Total Depth (ft) 17	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1990 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381128.68 Northing (Y) 449590.45		System Datum WA State Plane North NAD83		Groundwater observed at 16 feet at time of exploration	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		25		DP-2 (1.75-2)		SP-SM	Brown fine to coarse sand with silt and gravel (medium dense, moist)	NS	<1	
									NS	1	
									NS	1	
1985	5		36		DP-2 (6-6.5) CA		ML	Brown silt with gravel and grace sand (medium stiff, moist) Grades to blue-gray silt with gravel and trace sand (medium stiff, moist)	SS	<1	
									MS	27.3	
1980	10						GM	Gray-brown silty fine to coarse gravel with sand (dense, wet)	MS	16.8	Sleeve was torn and could not be recovered
			6		DP-2 (12-12.25) CA				MS	1003	
1975	15		0								

Boring terminated at approximately 17 feet below ground surface due to refusal

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-2

GeoEngineers

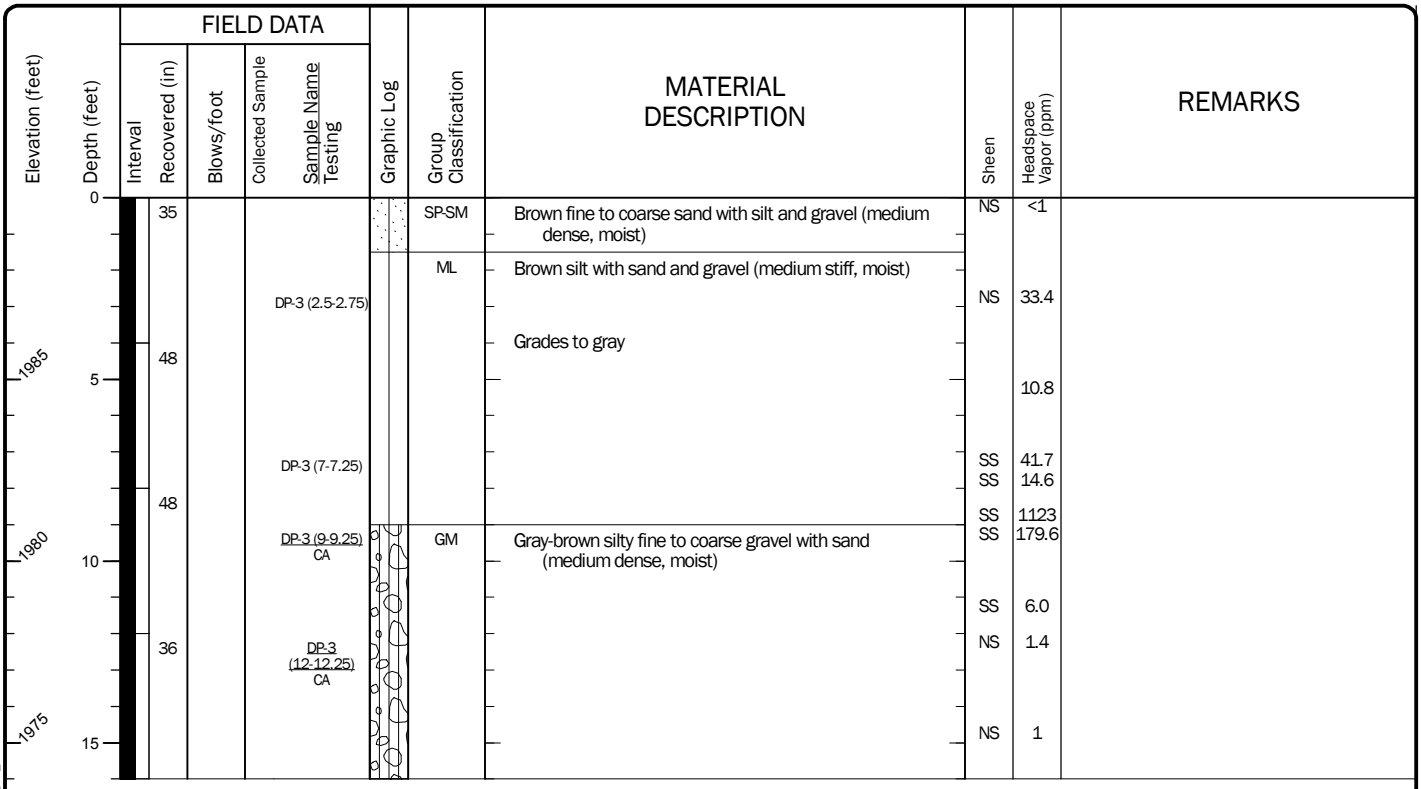
Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-3
Sheet 1 of 1

Drilled	Start 3/27/2017	End 3/27/2017	Total Depth (ft)	16	Logged By	CMD	Driller	Environmental West Exploration, Inc.	Drilling Method	Direct-Push
					Checked By	SHL				

Surface Elevation (ft) Vertical Datum	1990 NAVD88	Hammer Data		Drilling Equipment	Geoprobe 5400
Easting (X) Northing (Y)	2381106.83 449596.58	System Datum	WA State Plane North NAD83	Groundwater not observed at time of exploration	

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

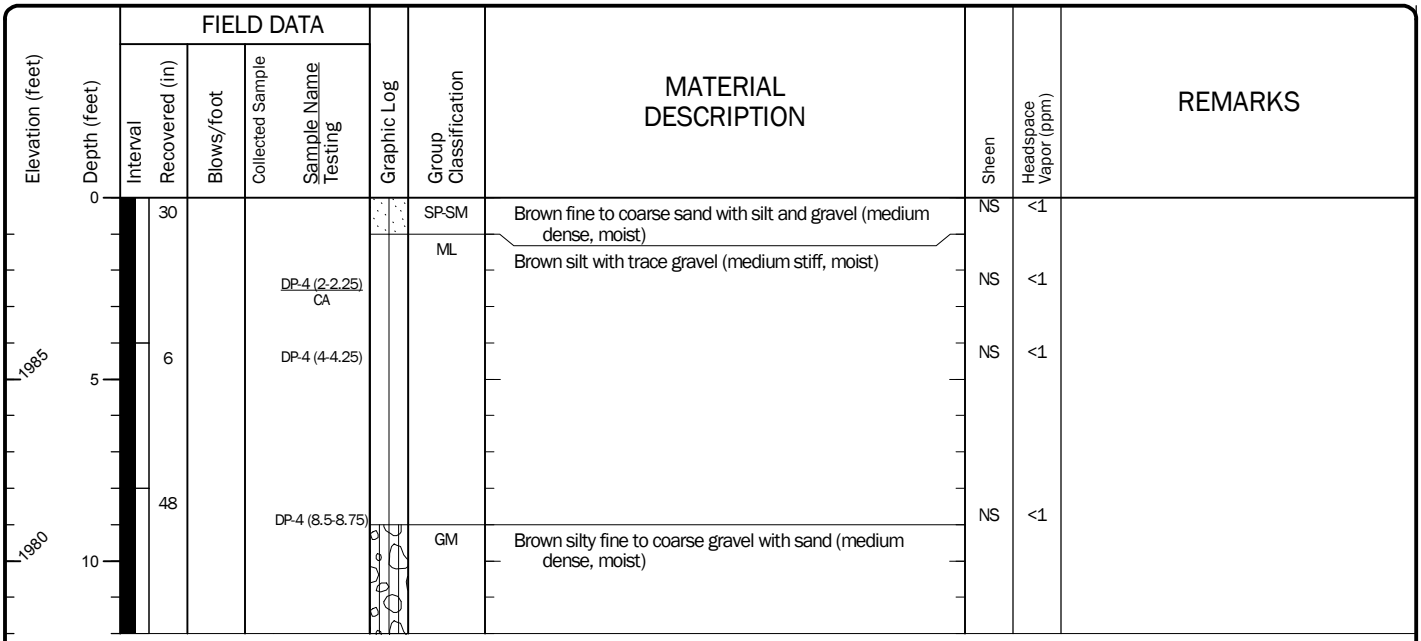
Log of Direct-Push Boring DP-3

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-4
Sheet 1 of 1

Drilled Start 3/27/2017 End 3/27/2017	Total Depth (ft) 12	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1990 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381096.62 Northing (Y) 449596.09		System Datum WA State Plane North NAD83		Groundwater not observed at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-4

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-5
Sheet 1 of 1

Drilled	Start 3/27/2017	End 3/27/2017	Total Depth (ft)	19	Logged By	CMD	Driller	Environmental West Exploration, Inc.	Drilling Method	Direct-Push
					Checked By	SHL				

Surface Elevation (ft) Vertical Datum	1990 NAVD88	Hammer Data		Drilling Equipment	Geoprobe 5400
Easting (X) Northing (Y)	2381128.86 449577.57	System Datum	WA State Plane North NAD83	Groundwater not observed at time of exploration	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		6			DP-5 (0.25-0.5)		SP-SM	Brown fine to corse sand with silt and gravel (medium dense, moist)	NS	<1	
								ML	Brown silt with sand and gravel (medium stiff, moist)	SS	30.4	
1985	5		46							SS	66.3	
										SS	41.2	
						DP-5 (7.5-7.75) CA				SS	98.4	
			16			DP-5 (8.5-8.75) CA				NS	3.5	
1980	10							GM	Brown-gray silty fine to coarse gravel with sand (medium dense, moist)			
			6			DP-5 (12.25-12.5) CA				NS	76.4	
1975	15		0									

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

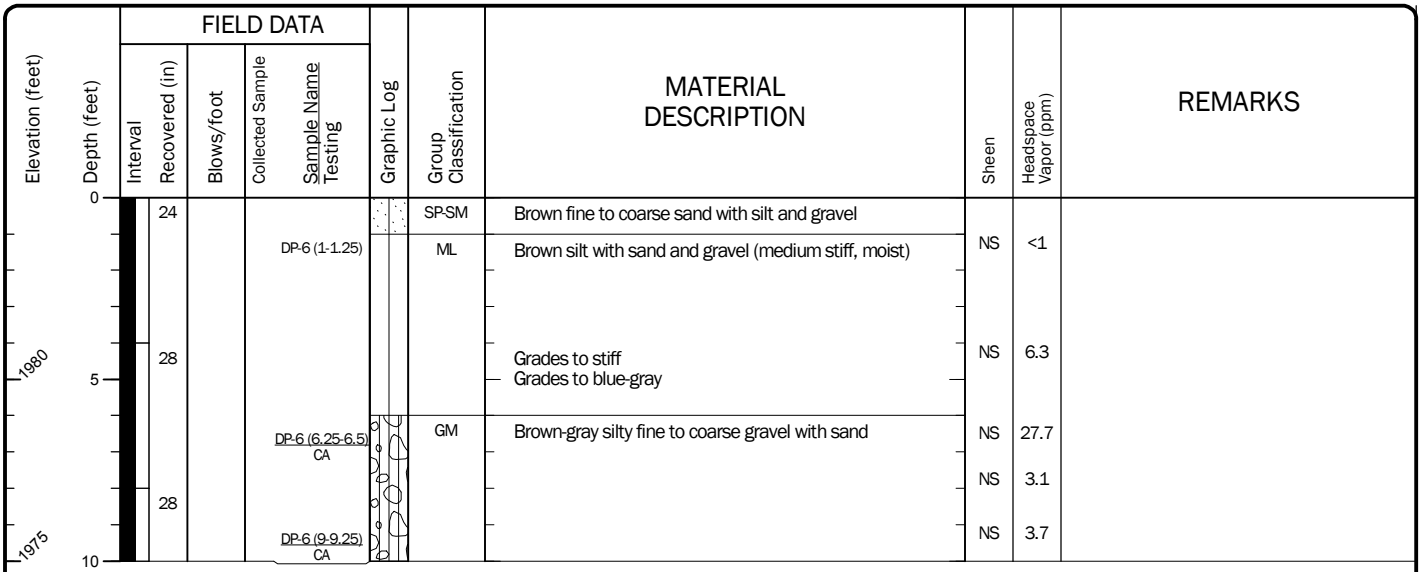
Log of Direct-Push Boring DP-5

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-6
Sheet 1 of 1

Drilled Start 3/27/2017 End 3/27/2017	Total Depth (ft) 10	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1985 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381130.91 Northing (Y) 449558.7		System Datum WA State Plane North NAD83		Groundwater not observed at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-6

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-7
Sheet 1 of 1

Drilled Start 3/28/2017 End 3/28/2017	Total Depth (ft) 8	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1990 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381157.79 Northing (Y) 449601.53		System Datum WA State Plane North NAD83		Groundwater not observed at time of exploration	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		28					SP-SM	Brown fine to coarse sand with silt (medium dense, moist)			
						DP-7 (1.5-1.75)		ML	Brown silt with sand and occasional gravel (medium stiff, moist)	NS	<1	
1985			30							NS	7.8	
	5								Grades to blue-gray			
						DP-7 (6.25-6.5) CA				MS	50.2	

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-7

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-8
Sheet 1 of 1

Drilled Start 3/28/2017 End 3/28/2017	Total Depth (ft) 11	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1990 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381177.56 Northing (Y) 449600.76		System Datum WA State Plane North NAD83		Groundwater not observed at time of exploration	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		12		DP-8 (0.75-1)		ML	Dark brown silt with sand and occasional gravel (medium stiff, moist)	NS	<1	
1985	5		12		DP-8 (4.75-5)			Grades to light brown	NS	<1	
1980	10		12		DP-8 (8.75-9) CA			Grades to blue-gray	NS	<1	Faint petroleum-like odor
								Boring terminated at approximately 11 feet below ground surface due to refusal			

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-8

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-9
Sheet 1 of 1

Drilled Start 3/28/2017 End 3/28/2017	Total Depth (ft) 8	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1985 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381132.1 Northing (Y) 449543.17		System Datum WA State Plane North NAD83		Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		20			DP-9 (1-1.25)		ML	Brown silt with trace sand (medium stiff, moist)	NS	<1	
1980	5		42						Grades to gray-blue silt with sand and gravel (medium stiff, moist)		8.4	
											5.4	
						DP-9 (7-7.25) CA			Grades to brown	SS	10.4	

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-9

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-10
Sheet 1 of 1

Drilled Start 3/28/2017 End 3/28/2017	Total Depth (ft) 12	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1981 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381132.46 Northing (Y) 449534.02		System Datum WA State Plane North NAD83		Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
1980	0		12			DP-10 (0.75-1)		AC	Approximately 1-inch of asphalt concrete pavement			
								ML	Brown silt with sand and occasional gravel (medium stiff, moist)	NS	<1	
1975	5		0									
			30						Grades to blue-gray	NS	1	
1970	10					DP-10 (9.75-10) CA				NS	1.1	

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-10

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-11
Sheet 1 of 1

Drilled Start 3/28/2017 End 3/28/2017	Total Depth (ft) 8	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1981 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381133.46 Northing (Y) 449523.18		System Datum WA State Plane North NAD83		Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval Recovered (in)	Blows/foot	Collected Sample / Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
1980	0	24				AC	Approximately 1-inch of asphalt concrete pavement	NS	<1	
						ML	Dark brown silt with sand (stiff, moist)			
				DP-11 (1.75-2) CA				SS	427	
							Grades to blue-gray			
1975	5	12		DP-11 (4.75-5) CA		GM	Blue-gray silty fine to coarse gravel with sand (dense, moist)	MS	254.3	

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-11

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-12
Sheet 1 of 1

Drilled	Start 3/28/2017	End 3/28/2017	Total Depth (ft)	12	Logged By	CMD	Driller	Environmental West Exploration, Inc.	Drilling Method	Direct-Push
					Checked By	SHL				

Surface Elevation (ft) Vertical Datum	1976 NAVD88	Hammer Data		Drilling Equipment	Geoprobe 5400
Easting (X) Northing (Y)	2381134.73 449499.64	System Datum	WA State Plane North NAD83	Groundwater not observed at time of exploration	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
1975	0		36					ML	Brown silt with sand and gravel (medium stiff, moist)			
						DP-12 (2-2.25)				NS	<1	
			42							NS	<1	
1970	5									NS	<1	
						DP-12 (7-7.25)				NS	<1	
									Grades to gray-blue			
			24							NS	14.7	
1965	10					DP-12 (9.5-9.75) CA		GM	Gray silty fine to coarse gravel with sand (medium dense, moist)	SS	67.2	
										SS	20.7	

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

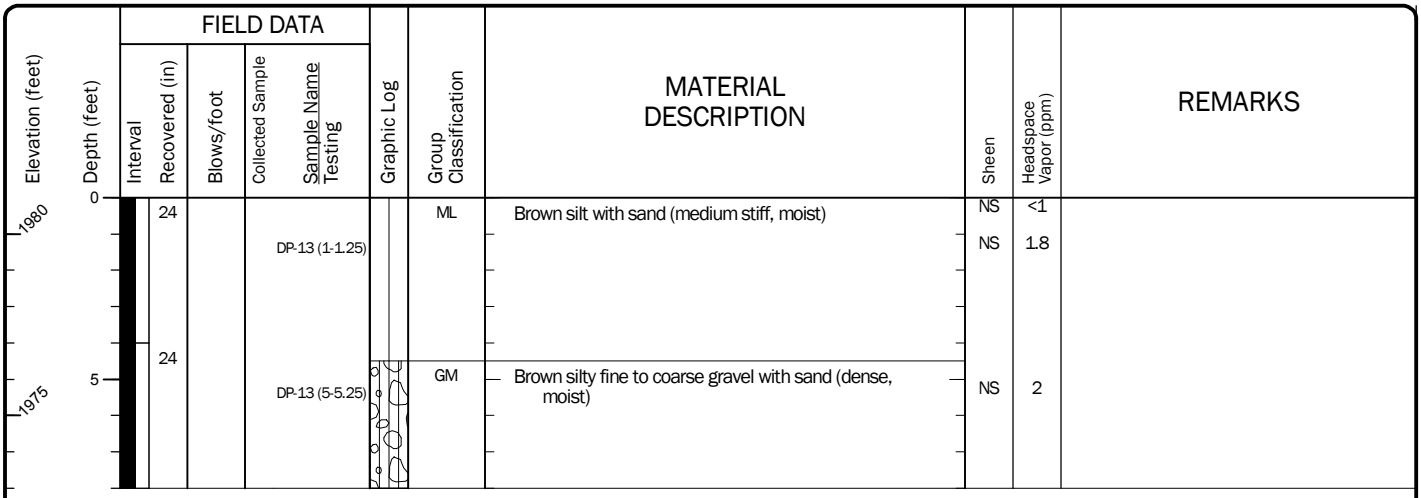
Log of Direct-Push Boring DP-12

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-13
Sheet 1 of 1

Drilled Start 3/28/2017 End 3/28/2017	Total Depth (ft) 8	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1981 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381000.88 Northing (Y) 449512.11		System Datum WA State Plane North NAD83		Groundwater not observed at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-13

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-14
Sheet 1 of 1

Drilled Start 3/28/2017 End 3/28/2017	Total Depth (ft) 4	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1981 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381000.84 Northing (Y) 449507.62		System Datum WA State Plane North NAD83		Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
1980	0		36					SP-SM	Brown fine to coarse sand with silt (medium dense, moist)			
						DP-14 (2.75-3)		ML	Brown silt with sand (medium stiff, moist)	NS	<1	

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-14

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-15
Sheet 1 of 1

Drilled	Start 3/28/2017	End 3/28/2017	Total Depth (ft)	10	Logged By	CMD	Driller	Environmental West Exploration, Inc.	Drilling Method	Direct-Push
					Checked By	SHL				

Surface Elevation (ft) Vertical Datum	1981 NAVD88	Hammer Data		Drilling Equipment	Geoprobe 5400
Easting (X) Northing (Y)	2380998.02 449504.57	System Datum	WA State Plane North NAD83	Groundwater observed at 9.4 feet at time of exploration	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
1980	0							SP-SM	Brown fine to coarse sand with silt (medium stiff, moist)			
								ML	Brown silt with sand (medium stiff, moist)			
						DP-15 (2.75-3)				NS	<1	
										NS	<1	
1975	5											
						DP-15 (6.75-7)				NS	<1	
								ML	Brown silt with sand and gravel (stiff, wet)			
						DP-15 (9-9.25)				NS	<1	
	10								Boring terminated at approximately 10 feet below ground surface due to refusal			

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

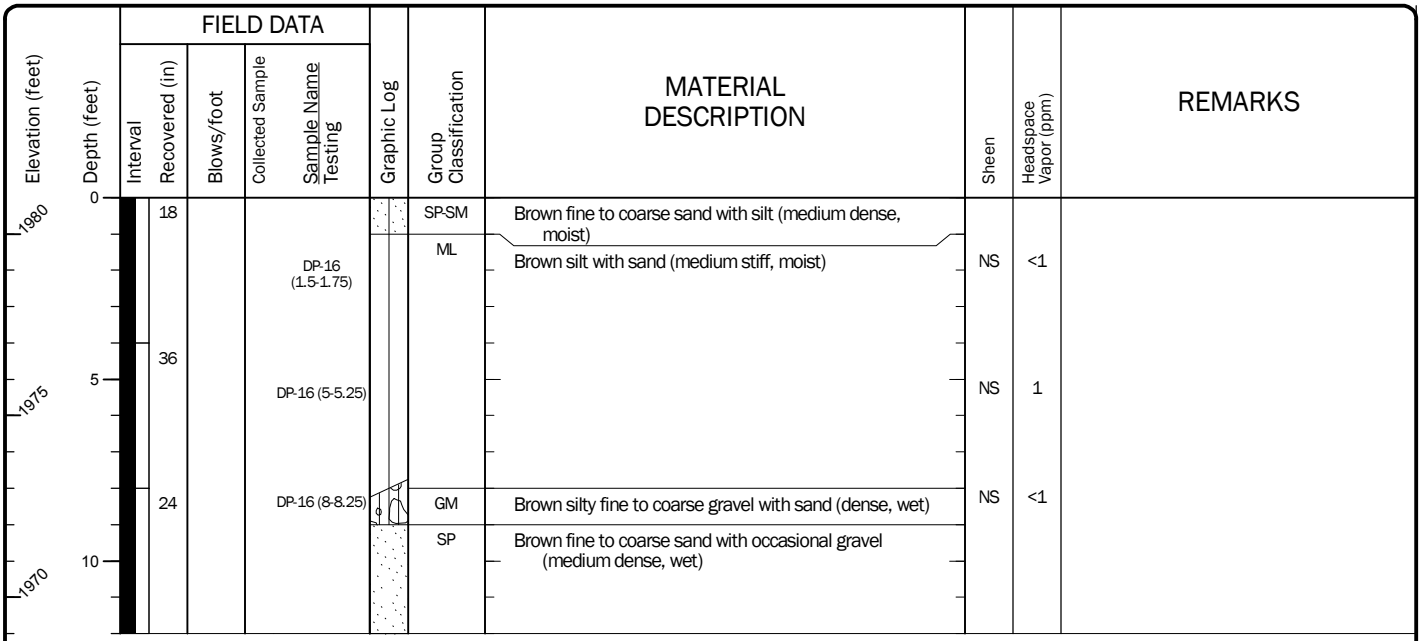
Log of Direct-Push Boring DP-15

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-16
Sheet 1 of 1

Drilled Start 3/28/2017 End 3/28/2017	Total Depth (ft) 12	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1981 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381004.15 Northing (Y) 449504.65		System Datum WA State Plane North NAD83		Groundwater observed at 7.8 feet at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-16

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-17
Sheet 1 of 1

Drilled Start 3/28/2017 End 3/28/2017	Total Depth (ft) 4.5	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1977 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381001.42 Northing (Y) 449503.48		System Datum WA State Plane North NAD83		Groundwater observed at 4 feet at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
1975	0		0					ML	Brown silt with sand and gravel (medium stiff, moist)			Water and product observed

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-17

GeoEngineers

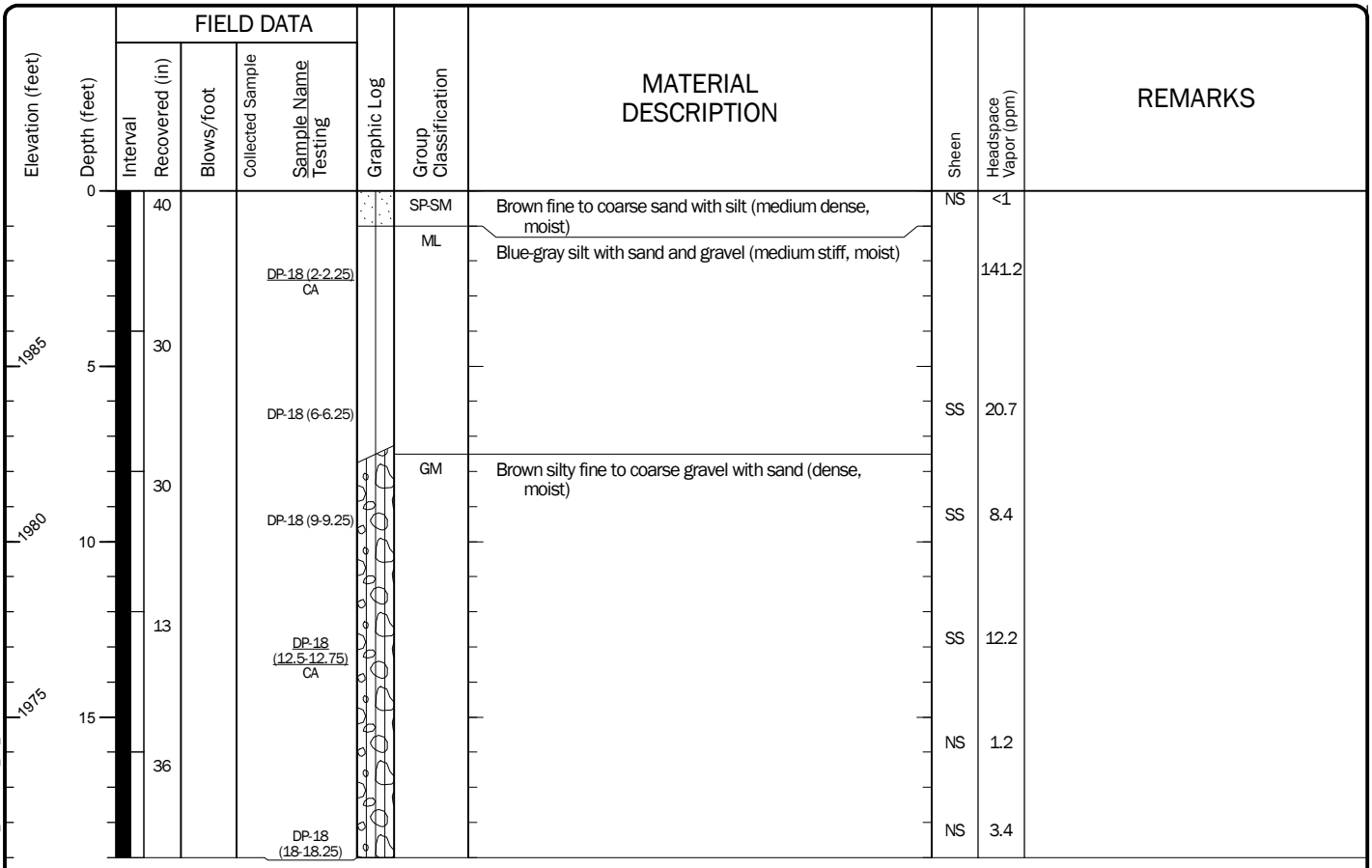
Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-18
Sheet 1 of 1

Drilled	Start 3/28/2017	End 3/28/2017	Total Depth (ft)	19	Logged By	CMD	Driller	Environmental West Exploration, Inc.	Drilling Method	Direct-Push
					Checked By	SHL				

Surface Elevation (ft) Vertical Datum	1990 NAVD88	Hammer Data		Drilling Equipment	Geoprobe 5400
Easting (X) Northing (Y)	2381108.46 449580.75	System Datum	WA State Plane North NAD83	Groundwater not observed at time of exploration	

Notes:



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-18

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-19
Sheet 1 of 1

Drilled Start 3/28/2017 End 3/28/2017	Total Depth (ft) 24	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1990 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381098.11 Northing (Y) 449581.22		System Datum WA State Plane North NAD83		Groundwater observed at 20.5 feet at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		30					SP-SM	Brown fine to coarse sand with silt (medium dense, moist)			
								ML	Brown silt with sand (medium stiff, moist)			
						DP-19 (2-2.25)				NS	<1	
1985	5		46						Grades to blue-gray silt with sand and gravel (stiff, moist)	SS	30.2	
						DP-19 (6-6.25				MS	50.2	
								GM	Gray-brown silty fine to coarse gravel with sand (dense, moist)			
			48							SS	30.4	
1980	10									SS	31.6	
						DP-19 (11.75-12) CA				MS	107.9	
1975	15		12			DP-19 (16-16.25) CA				SS	57.2	
1970	20		12			DP-19 (20-20.5) CA		GP-GM	Brown-gray fine to coarse sand with silt (very dense, wet)	NS	3.4	

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

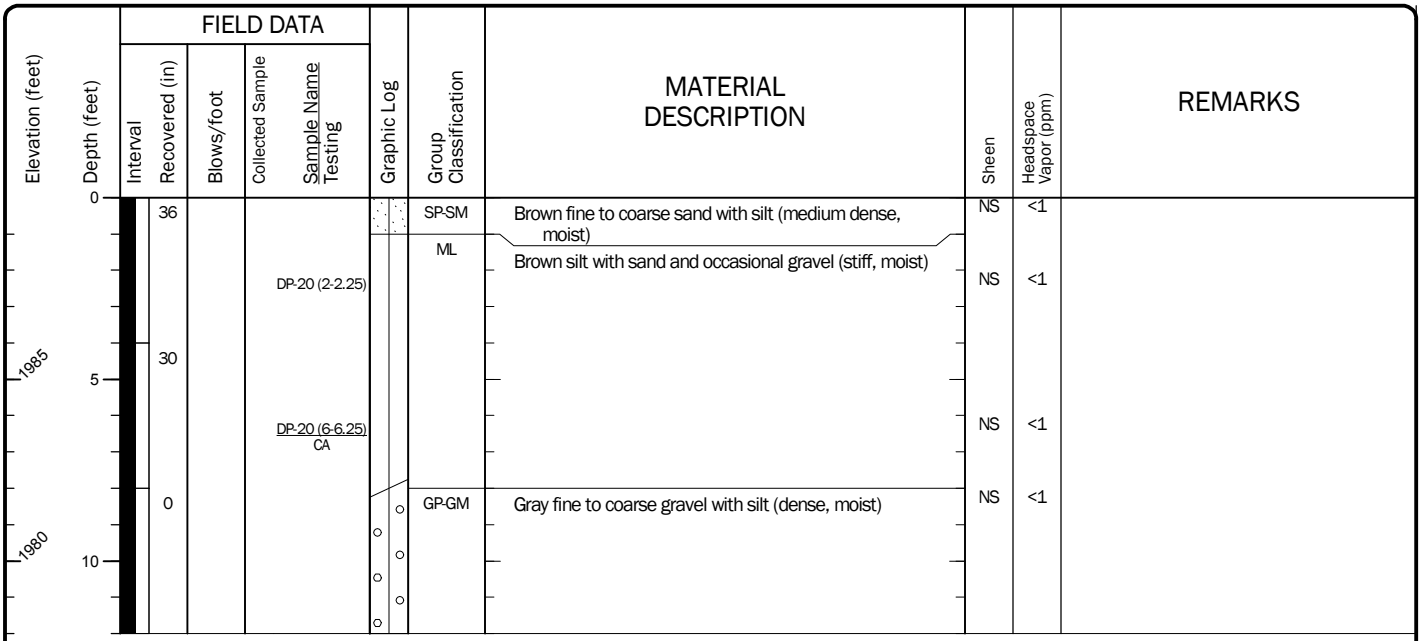
Log of Direct-Push Boring DP-19

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-20
Sheet 1 of 1

Drilled Start 3/29/2017 End 3/29/2017	Total Depth (ft) 12	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1990 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381089.72 Northing (Y) 449580.24		System Datum WA State Plane North NAD83		Groundwater not observed at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-20

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-21
Sheet 1 of 1

Drilled: Start 3/29/2017 End 3/29/2017	Total Depth (ft): 17	Logged By: CMD Checked By: SHL	Driller: Environmental West Exploration, Inc.	Drilling Method: Direct-Push	
Surface Elevation (ft): 1985 Vertical Datum: NAVD88		Hammer Data:		Drilling Equipment: Geoprobe 5400	
Easting (X): 2381159.42 Northing (Y): 449576.71		System Datum: WA State Plane North NAD83		Groundwater observed at 16 feet at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name / Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	0		12			DP-21 (0.75-1)		SP-SM	Brown fine to coarse sand with silt (medium dense, moist)	NS	<1	
								ML	Brown silt with sand and gravel (medium stiff, moist)			
1980	5		18			DP-21 (5-5.25)		ML	Grades to blue-gray	SS	7.2	
			24					GP-GM	Gray fine to coarse gravel with silt (very dense, moist)			
1975	10					DP-21 (9.75-10) CA				MS	207.9	
			48					ML	Gray silt with sand and gravel (very stiff, moist)	MS	176.5	
										SS	163.4	
1970	15							SP-SM	Black fine to coarse sand with silt and gravel (dense, moist)	MS	187.3	
			12			DP-21 (15.75-16) CA		SP	Gray fine to coarse sand with trace silt (dense, moist)	NS	27.2	
						DP-21 (16.5-16.75) CA						

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-21

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-22
Sheet 1 of 1

Drilled Start 3/29/2017 End 3/29/2017	Total Depth (ft) 16	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1986 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381179.15 Northing (Y) 449577.44		System Datum WA State Plane North NAD83		Groundwater observed at 7.5 feet at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
1985	0		36					ML	Brown silt with sand and gravel (stiff, moist)			
						DP-22 (2-2.25)				NS	<1	
										NS	8.4	
1980	5		0									
			6			DP-22 (8-8.25)				NS	3.2	
1975	10		12									
						DP-22 (12.75-13) CA				NS	3.4	
1970	15											

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-22

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-23
Sheet 1 of 1

Drilled: Start 3/29/2017 End 3/29/2017	Total Depth (ft): 16	Logged By: CMD Checked By: SHL	Driller: Environmental West Exploration, Inc.	Drilling Method: Direct-Push	
Surface Elevation (ft) Vertical Datum: 1981 NAVD88		Hammer Data:		Drilling Equipment: Geoprobe 5400	
Easting (X) Northing (Y): 2381183.28 449540.85		System Datum: WA State Plane North NAD83		Groundwater not observed at time of exploration	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
1980	0		12			DP-23 (0.75-1)		ML	Brown silt with sand (stiff, moist)	NS	<1	
			24						Grades to blue-gray	NS	5.6	
1975	5					DP-23 (5-5.25) CA				NS	29.6	
			12			DP-23 (8-8.25) CA		GM	Brown silty fine to coarse gravel with sand (very dense, moist)	NS	2.1	
1970	10		24			DP-23 (13-13.25)		GP	Brown fine to coarse gravel with sand and trace silt (very dense, moist)	NS	<1	
1965	15											

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-23

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-24
Sheet 1 of 1

Drilled: Start 3/29/2017 End 3/29/2017	Total Depth (ft): 13	Logged By: CMD Checked By: SHL	Driller: Environmental West Exploration, Inc.	Drilling Method: Direct-Push	
Surface Elevation (ft) Vertical Datum: 1981 NAVD88		Hammer Data:		Drilling Equipment: Geoprobe 5400	
Easting (X) Northing (Y): 2381166 449517.81		System Datum: WA State Plane North NAD83		Groundwater not observed at time of exploration	

Notes:

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
1980	0		24			DP-24 (1-1.25)		ML	Dark brown silt with sand (stiff, moist)	NS	<1	
									Grades to blue-green			
1975	5		12			DP-24 (4.5-4.75) CA		GM	Gray-blue silty fine to coarse gravel with sand (dense, moist)	SS	20.7	
			48					GP-GM	Gray fine to coarse gravel with silt and sand (very dense, moist)	NS	<1	
1970	10					DP-24 (10-10.25) CA				NS	<1	
			12			DP-24 (12-12.25)				NS	<1	

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

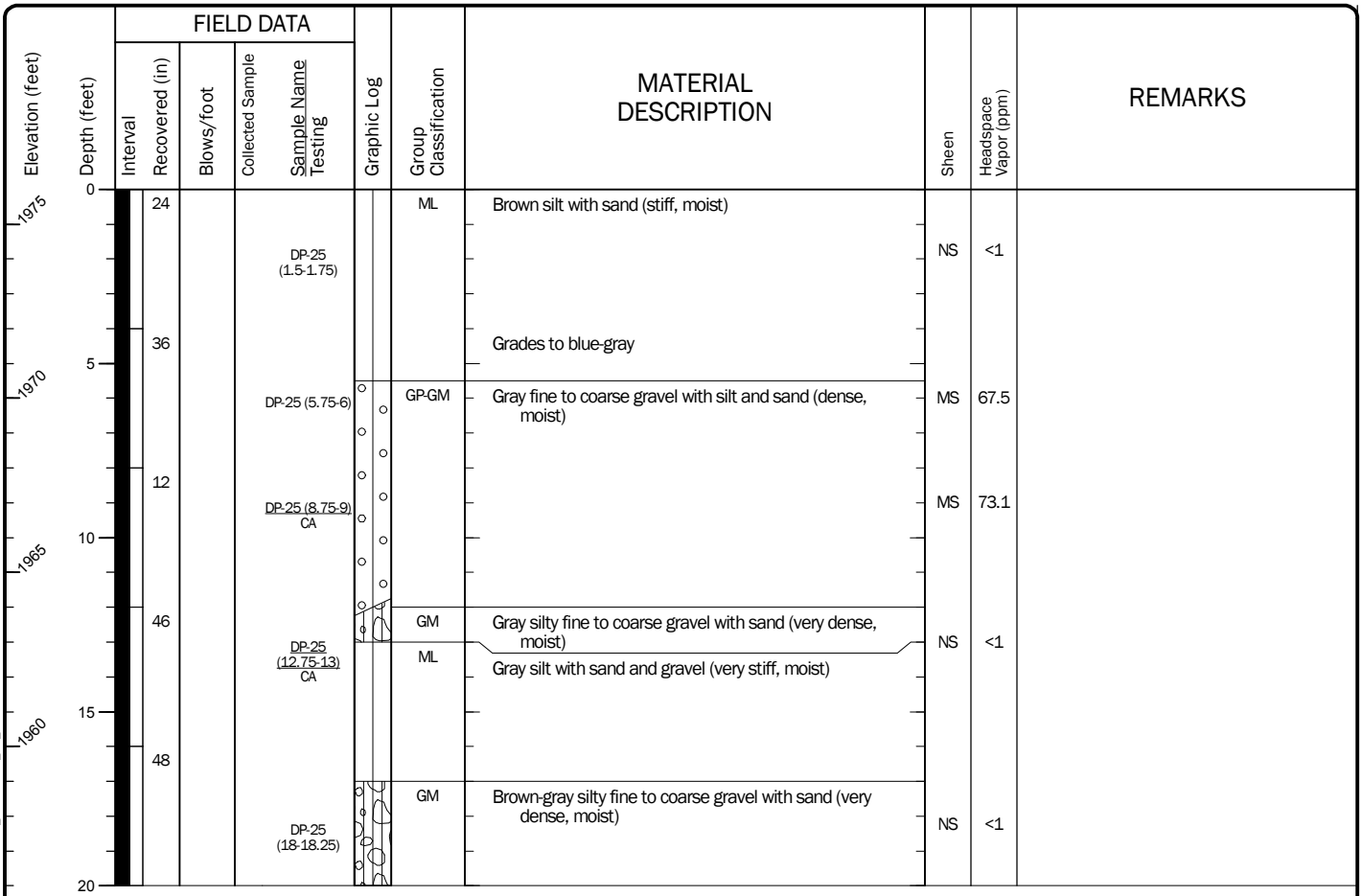
Log of Direct-Push Boring DP-24

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-25
Sheet 1 of 1

Drilled Start 3/29/2017 End 3/29/2017	Total Depth (ft) 20	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1976 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381148.69 Northing (Y) 449500.4		System Datum WA State Plane North NAD83		Groundwater not observed at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

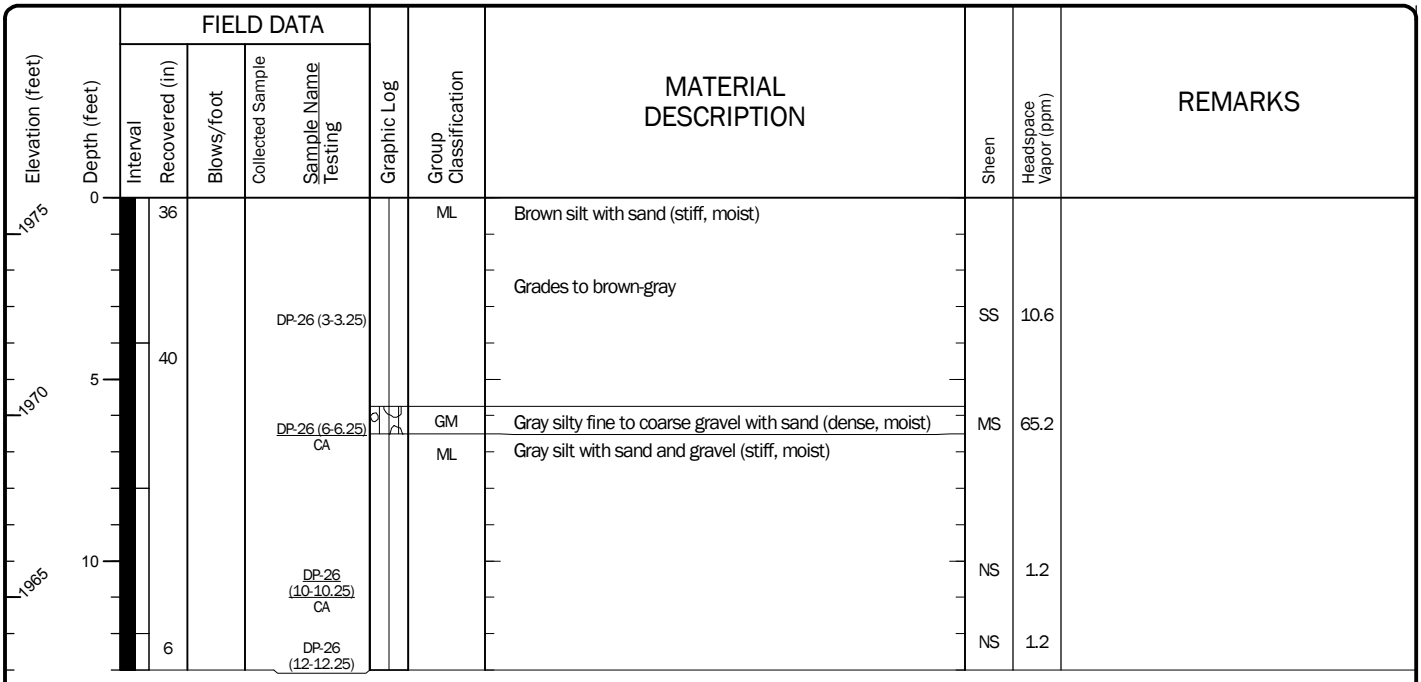
Log of Direct-Push Boring DP-25

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-26
Sheet 1 of 1

Drilled Start 3/29/2017 End 3/29/2017	Total Depth (ft) 13	Logged By CMD Checked By SHL	Driller Environmental West Exploration, Inc.	Drilling Method Direct-Push	
Surface Elevation (ft) 1976 Vertical Datum NAVD88		Hammer Data		Drilling Equipment Geoprobe 5400	
Easting (X) 2381160.23 Northing (Y) 449500.37		System Datum WA State Plane North NAD83		Groundwater observed at 12 feet at time of exploration	
Notes:					



Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-26

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-27
Sheet 1 of 1

Drilled: Start 3/27/2017 End 3/27/2017	Total Depth (ft): 11	Logged By: CMD Checked By: SHL	Driller: Environmental West Exploration, Inc.	Drilling Method: Direct-Push	
Surface Elevation (ft): 1976 Vertical Datum: NAVD88		Hammer Data:		Drilling Equipment: Geoprobe 5400	
Easting (X): 2381172.56 Northing (Y): 449500.93		System Datum: WA State Plane North NAD83		Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
1975	0		12			DP-27 (0.75-1)		GP	Crushed gray fine to coarse gravel with sand and silt (dense, moist)	NS	<1	
			12			DP-27 (4.75-5) CA		GM	Gray silty fine to coarse gravel with sand (dense, moist)	NS	134	
1970	5		6			DP-27 (8-8.25) CA				NS	<1	
1965	10											

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on Aerial Imagery, Vertical approximated based on Google Earth

Log of Direct-Push Boring DP-27

GeoEngineers

Project: Dawson Trucking
Project Location: Valley, Washington
Project Number: 0504-130-00

Figure A-28
Sheet 1 of 1

APPENDIX B
Chemical Analytical Laboratory Reports

APPENDIX B
CHEMICAL ANALYTICAL LABORATORY REPORTS

Samples

Chain-of-custody procedures were followed during the transport of the field samples to TestAmerica located in Spokane Valley, Washington. The samples were held in cold storage pending extraction and/or analysis. The analytical results and quality control records are included in this appendix.

Analytical Data Review

The laboratory maintains an internal quality assurance/quality control (QA/QC) program as documented in its laboratory quality assurance manual. The laboratory uses a combination of blanks, surrogate recoveries, duplicates, matrix spike recoveries, matrix spike duplicate recoveries, blank spike recoveries and blank spike duplicate recoveries to evaluate the analytical results. The laboratory also uses data quality goals for individual chemicals or groups of chemicals based on the long-term performance of the test methods. The data quality goals were included in the two laboratory reports dated April 7 and May 16, 2017.

Because of the high concentrations of contaminants, the laboratory noted numerous surrogate recovery exceptions associated with the soil samples collected from the direct-push borings. These exceptions resulted in elevated reporting limits. However, the chemical analytical results are suitable for their intended use.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-5801-1
Client Project/Site: Dawson/0504-130-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Scott Lathen

Authorized for release by:
4/7/2017 10:42:34 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

Table of Contents

Case Narrative

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-5801-1

Job ID: 590-5801-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 3/31/2017 1:05 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.6º C.

Receipt Exceptions
The container label for the following sample did not match the information listed on the Chain-of-Custody (COC): DP-10 (9.75-10) (590-5801-16). The container labels list DP-12 (7-7.5), while the COC lists DP-9.5-9.75. The client was contacted, and the lab was instructed to log in sample according to COC.

GC/MS VOA
Method 8260C: Surrogate 4-Bromofluorobenzene recovery for the following samples was outside control limits: DP-2 (6-6.25) (590-5801-3), DP-3 (9-9.25) (590-5801-5), DP-6 (6.25-6.5) (590-5801-11), DP-7 (6.25-6.5) (590-5801-13), DP-11 (1.75-2) (590-5801-17), DP-11 (4.75-5) (590-5801-18), DP-12 (9.5-9.75) (590-5801-19), DP-26 (6-6.25) (590-5801-36) and DP-27 (4.75-5) (590-5801-37). Evidence of matrix interference due to non-target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8260C: The following samples were diluted due to the abundance of non-target analytes: DP-1 (2.75-3) (590-5801-1), DP-1 (16.5-16.75) (590-5801-2), DP-19 (11.75-12) (590-5801-22), DP-21 (15.75-16) (590-5801-27) and DP-26 (6-6.25) (590-5801-36). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method NWTPH-Dx: Surrogate recovery for the following samples was outside control limits: DP-1 (2.75-3) (590-5801-1), DP-2 (6-6.25) (590-5801-3), DP-2 (12-12.25) (590-5801-4), DP-3 (9-9.25) (590-5801-5), DP-5 (7.5-7.75) (590-5801-8), DP-5 (12.25-12.5) (590-5801-10), DP-6 (6.25-6.5) (590-5801-11), DP-7 (6.25-6.5) (590-5801-13), DP-11 (1.75-2) (590-5801-17), DP-11 (4.75-5) (590-5801-18), DP-18 (2-2.25) (590-5801-20), DP-19 (11.75-12) (590-5801-22), DP-19 (16-16.25) (590-5801-23), DP-21 (9.75-10) (590-5801-26), DP-21 (15.75-16) (590-5801-27), DP-21 (16.5-16.75) (590-5801-28), DP-23 (5-5.25) (590-5801-30), DP-24 (4.5-4.75) (590-5801-32), DP-25 (8.75-9) (590-5801-34), DP-27 (4.75-5) (590-5801-37), DP-26 (10-10.25) (590-5801-39), (590-5801-C-1-A DU), (590-5801-B-2-A DU) and (590-5801-C-22-A DU). Evidence of matrix interference due to high target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

Method NWTPH-Dx: Detected hydrocarbons in the oil range appear to be due to diesel overlap in the following samples: DP-21 (9.75-10) (590-5801-26), DP-25 (8.75-9) (590-5801-34) and DP-27 (4.75-5) (590-5801-37).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-5801-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-5801-1	DP-1 (2.75-3)	Solid	03/27/17 10:00	03/31/17 13:05
590-5801-2	DP-1 (16.5-16.75)	Solid	03/27/17 11:15	03/31/17 13:05
590-5801-3	DP-2 (6-6.25)	Solid	03/27/17 11:35	03/31/17 13:05
590-5801-4	DP-2 (12-12.25)	Solid	03/27/17 12:40	03/31/17 13:05
590-5801-5	DP-3 (9-9.25)	Solid	03/27/17 14:00	03/31/17 13:05
590-5801-6	DP-3 (12-12.25)	Solid	03/27/17 14:10	03/31/17 13:05
590-5801-7	DP-4 (2-2.25)	Solid	03/27/17 14:45	03/31/17 13:05
590-5801-8	DP-5 (7.5-7.75)	Solid	03/27/17 15:25	03/31/17 13:05
590-5801-9	DP-5 (8-8.75)	Solid	03/27/17 15:30	03/31/17 13:05
590-5801-10	DP-5 (12.25-12.5)	Solid	03/27/17 15:40	03/31/17 13:05
590-5801-11	DP-6 (6.25-6.5)	Solid	03/27/17 16:40	03/31/17 13:05
590-5801-12	DP-6 (9-9.25)	Solid	03/27/17 16:45	03/31/17 13:05
590-5801-13	DP-7 (6.25-6.5)	Solid	03/28/17 08:10	03/31/17 13:05
590-5801-14	DP-8 (8.75-9)	Solid	03/28/17 08:30	03/31/17 13:05
590-5801-15	DP-9 (7-7.25)	Solid	03/28/17 09:05	03/31/17 13:05
590-5801-16	DP-10 (9.75-10)	Solid	03/28/17 09:25	03/31/17 13:05
590-5801-17	DP-11 (1.75-2)	Solid	03/28/17 09:40	03/31/17 13:05
590-5801-18	DP-11 (4.75-5)	Solid	03/28/17 09:45	03/31/17 13:05
590-5801-19	DP-12 (9.5-9.75)	Solid	03/28/17 10:30	03/31/17 13:05
590-5801-20	DP-18 (2-2.25)	Solid	03/28/17 14:30	03/31/17 13:05
590-5801-21	DP-18 (12.5-12.75)	Solid	03/28/17 14:45	03/31/17 13:05
590-5801-22	DP-19 (11.75-12)	Solid	03/28/17 16:00	03/31/17 13:05
590-5801-23	DP-19 (16-16.25)	Solid	03/28/17 16:20	03/31/17 13:05
590-5801-24	DP-19 (20-20.25)	Solid	03/28/17 16:30	03/31/17 13:05
590-5801-25	DP-20 (6-6.25)	Solid	03/29/17 08:05	03/31/17 13:05
590-5801-26	DP-21 (9.75-10)	Solid	03/29/17 09:05	03/31/17 13:05
590-5801-27	DP-21 (15.75-16)	Solid	03/29/17 09:15	03/31/17 13:05
590-5801-28	DP-21 (16.5-16.75)	Solid	03/29/17 09:50	03/31/17 13:05
590-5801-29	DP-22 (12.75-13)	Solid	03/29/17 11:30	03/31/17 13:05
590-5801-30	DP-23 (5-5.25)	Solid	03/29/17 12:00	03/31/17 13:05
590-5801-31	DP-23 (8-8.25)	Solid	03/29/17 12:05	03/31/17 13:05
590-5801-32	DP-24 (4.5-4.75)	Solid	03/29/17 12:45	03/31/17 13:05
590-5801-33	DP-24 (10-10.25)	Solid	03/29/17 13:00	03/31/17 13:05
590-5801-34	DP-25 (8.75-9)	Solid	03/29/17 13:45	03/31/17 13:05
590-5801-35	DP-25 (12.75-13)	Solid	03/29/17 14:00	03/31/17 13:05
590-5801-36	DP-26 (6-6.25)	Solid	03/29/17 14:30	03/31/17 13:05
590-5801-37	DP-27 (4.75-5)	Solid	03/29/17 15:30	03/31/17 13:05
590-5801-38	DP-27 (8-8.25)	Solid	03/29/17 15:40	03/31/17 13:05
590-5801-39	DP-26 (10-10.25)	Solid	03/29/17 14:40	03/31/17 13:05

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample ID: DP-1 (2.75-3)

Lab Sample ID: 590-5801-1
Date Collected: 03/27/17 10:00
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 78.3

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.32		mg/Kg	☼	04/03/17 09:32	04/03/17 20:37	10
Ethylbenzene	ND		1.6		mg/Kg	☼	04/03/17 09:32	04/03/17 20:37	10
m,p-Xylene	ND		6.4		mg/Kg	☼	04/03/17 09:32	04/03/17 20:37	10
o-Xylene	ND		3.2		mg/Kg	☼	04/03/17 09:32	04/03/17 20:37	10
Toluene	ND		1.6		mg/Kg	☼	04/03/17 09:32	04/03/17 20:37	10
Xylenes, Total	ND		9.5		mg/Kg	☼	04/03/17 09:32	04/03/17 20:37	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*75 - 120*	*04/03/17 09:32*	*04/03/17 20:37*	*10*
4-Bromofluorobenzene (Surr)	*104*		*76 - 122*	*04/03/17 09:32*	*04/03/17 20:37*	*10*
Dibromofluoromethane (Surr)	*107*		*80 - 120*	*04/03/17 09:32*	*04/03/17 20:37*	*10*
Toluene-d8 (Surr)	*103*		*80 - 120*	*04/03/17 09:32*	*04/03/17 20:37*	*10*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**430**		80		mg/Kg	☼	04/03/17 09:32	04/04/17 10:56	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*41.5 - 162*	*04/03/17 09:32*	*04/04/17 10:56*	*10*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**2800**		12		mg/Kg	☼	04/05/17 10:04	04/05/17 12:57	1
Residual Range Organics (RRO) (C25-C36)	**97**		31		mg/Kg	☼	04/05/17 10:04	04/05/17 12:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*212*	*X*	*50 - 150*	*04/05/17 10:04*	*04/05/17 12:57*	*1*
n-Triacontane-d62	*98*		*50 - 150*	*04/05/17 10:04*	*04/05/17 12:57*	*1*

Client Sample ID: DP-1 (16.5-16.75)

Lab Sample ID: 590-5801-2
Date Collected: 03/27/17 11:15
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 90.5

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26		mg/Kg	☼	04/03/17 09:32	04/03/17 12:54	10
Ethylbenzene	ND		1.3		mg/Kg	☼	04/03/17 09:32	04/03/17 12:54	10
m,p-Xylene	ND		5.1		mg/Kg	☼	04/03/17 09:32	04/03/17 12:54	10
o-Xylene	ND		2.6		mg/Kg	☼	04/03/17 09:32	04/03/17 12:54	10
Toluene	ND		1.3		mg/Kg	☼	04/03/17 09:32	04/03/17 12:54	10
Xylenes, Total	ND		7.7		mg/Kg	☼	04/03/17 09:32	04/03/17 12:54	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 120*	*04/03/17 09:32*	*04/03/17 12:54*	*10*
4-Bromofluorobenzene (Surr)	*99*		*76 - 122*	*04/03/17 09:32*	*04/03/17 12:54*	*10*
Dibromofluoromethane (Surr)	*100*		*80 - 120*	*04/03/17 09:32*	*04/03/17 12:54*	*10*
Toluene-d8 (Surr)	*103*		*80 - 120*	*04/03/17 09:32*	*04/03/17 12:54*	*10*

Client Sample ID: DP-1 (16.5-16.75)

Lab Sample ID: 590-5801-2
Date Collected: 03/27/17 11:15
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 90.5

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**330**		11		mg/Kg	☼	04/05/17 10:04	04/05/17 12:20	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	☼	04/05/17 10:04	04/05/17 12:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*142*		*50 - 150*	*04/05/17 10:04*	*04/05/17 12:20*	*1*
n-Triacontane-d62	*94*		*50 - 150*	*04/05/17 10:04*	*04/05/17 12:20*	*1*

Client Sample ID: DP-2 (6-6.25)

Lab Sample ID: 590-5801-3
Date Collected: 03/27/17 11:35
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 89.6

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.073**		0.021		mg/Kg	☼	04/03/17 09:32	04/03/17 13:15	1
Ethylbenzene	**2.2**		0.10		mg/Kg	☼	04/03/17 09:32	04/03/17 13:15	1
m,p-Xylene	**1.2**		0.41		mg/Kg	☼	04/03/17 09:32	04/03/17 13:15	1
o-Xylene	ND		0.21		mg/Kg	☼	04/03/17 09:32	04/03/17 13:15	1
Toluene	ND		0.10		mg/Kg	☼	04/03/17 09:32	04/03/17 13:15	1
Xylenes, Total	**1.3**		0.62		mg/Kg	☼	04/03/17 09:32	04/03/17 13:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*75 - 120*	*04/03/17 09:32*	*04/03/17 13:15*	*1*
4-Bromofluorobenzene (Surr)	*127*	*X*	*76 - 122*	*04/03/17 09:32*	*04/03/17 13:15*	*1*
Dibromofluoromethane (Surr)	*99*		*80 - 120*	*04/03/17 09:32*	*04/03/17 13:15*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*04/03/17 09:32*	*04/03/17 13:15*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**1700**		11		mg/Kg	☼	04/05/17 10:04	04/05/17 12:38	1
Residual Range Organics (RRO) (C25-C36)	**28**		27		mg/Kg	☼	04/05/17 10:04	04/05/17 12:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*214*	*X*	*50 - 150*	*04/05/17 10:04*	*04/05/17 12:38*	*1*
n-Triacontane-d62	*103*		*50 - 150*	*04/05/17 10:04*	*04/05/17 12:38*	*1*

Client Sample ID: DP-2 (12-12.25)

Lab Sample ID: 590-5801-4
Date Collected: 03/27/17 12:40
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 93.0

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.024**		0.019		mg/Kg	☼	04/03/17 09:32	04/03/17 13:36	1
Ethylbenzene	**0.10**		0.094		mg/Kg	☼	04/03/17 09:32	04/03/17 13:36	1
m,p-Xylene	ND		0.38		mg/Kg	☼	04/03/17 09:32	04/03/17 13:36	1
o-Xylene	ND		0.19		mg/Kg	☼	04/03/17 09:32	04/03/17 13:36	1
Toluene	ND		0.094		mg/Kg	☼	04/03/17 09:32	04/03/17 13:36	1
Xylenes, Total	ND		0.57		mg/Kg	☼	04/03/17 09:32	04/03/17 13:36	1

Client Sample ID: DP-2 (12-12.25)

Lab Sample ID: 590-5801-4
Date Collected: 03/27/17 12:40
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 93.0

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 120*	*04/03/17 09:32*	*04/03/17 13:36*	*1*
4-Bromofluorobenzene (Surr)	*102*		*76 - 122*	*04/03/17 09:32*	*04/03/17 13:36*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*04/03/17 09:32*	*04/03/17 13:36*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*	*04/03/17 09:32*	*04/03/17 13:36*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**33**		4.7		mg/Kg	☼	04/03/17 09:32	04/03/17 13:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*41.5 - 162*	*04/03/17 09:32*	*04/03/17 13:36*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**3500**		110		mg/Kg	☼	04/05/17 10:04	04/06/17 09:31	10
Residual Range Organics (RRO) (C25-C36)	ND		270		mg/Kg	☼	04/05/17 10:04	04/06/17 09:31	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*475*	*X*	*50 - 150*	*04/05/17 10:04*	*04/06/17 09:31*	*10*
n-Triacontane-d62	*58*		*50 - 150*	*04/05/17 10:04*	*04/06/17 09:31*	*10*

Client Sample ID: DP-3 (9-9.25)

Lab Sample ID: 590-5801-5
Date Collected: 03/27/17 14:00
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 90.7

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.017		mg/Kg	☼	04/03/17 09:32	04/03/17 13:57	1
Ethylbenzene	**0.29**		0.087		mg/Kg	☼	04/03/17 09:32	04/03/17 13:57	1
m,p-Xylene	ND		0.35		mg/Kg	☼	04/03/17 09:32	04/03/17 13:57	1
o-Xylene	**0.65**		0.17		mg/Kg	☼	04/03/17 09:32	04/03/17 13:57	1
Toluene	ND		0.087		mg/Kg	☼	04/03/17 09:32	04/03/17 13:57	1
Xylenes, Total	**0.76**		0.52		mg/Kg	☼	04/03/17 09:32	04/03/17 13:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 120*	*04/03/17 09:32*	*04/03/17 13:57*	*1*
4-Bromofluorobenzene (Surr)	*128*	*X*	*76 - 122*	*04/03/17 09:32*	*04/03/17 13:57*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*04/03/17 09:32*	*04/03/17 13:57*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*04/03/17 09:32*	*04/03/17 13:57*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**250**		4.4		mg/Kg	☼	04/03/17 09:32	04/03/17 13:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*128*		*41.5 - 162*	*04/03/17 09:32*	*04/03/17 13:57*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**1300**		11		mg/Kg	☼	04/05/17 10:04	04/05/17 13:15	1

Client Sample ID: DP-3 (9-9.25)

Lab Sample ID: 590-5801-5
Date Collected: 03/27/17 14:00
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 90.7

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	☼	04/05/17 10:04	04/05/17 13:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*325*	*X*	*50 - 150*	*04/05/17 10:04*	*04/05/17 13:15*	*1*
n-Triacontane-d62	*96*		*50 - 150*	*04/05/17 10:04*	*04/05/17 13:15*	*1*

Client Sample ID: DP-3 (12-12.25)

Lab Sample ID: 590-5801-6
Date Collected: 03/27/17 14:10
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 92.4

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.026		mg/Kg	☼	04/03/17 09:32	04/03/17 14:18	1
Ethylbenzene	ND		0.13		mg/Kg	☼	04/03/17 09:32	04/03/17 14:18	1
m,p-Xylene	ND		0.51		mg/Kg	☼	04/03/17 09:32	04/03/17 14:18	1
o-Xylene	ND		0.26		mg/Kg	☼	04/03/17 09:32	04/03/17 14:18	1
Toluene	ND		0.13		mg/Kg	☼	04/03/17 09:32	04/03/17 14:18	1
Xylenes, Total	ND		0.77		mg/Kg	☼	04/03/17 09:32	04/03/17 14:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 120*	*04/03/17 09:32*	*04/03/17 14:18*	*1*
4-Bromofluorobenzene (Surr)	*98*		*76 - 122*	*04/03/17 09:32*	*04/03/17 14:18*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*	*04/03/17 09:32*	*04/03/17 14:18*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*	*04/03/17 09:32*	*04/03/17 14:18*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	☼	04/05/17 10:04	04/05/17 13:34	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	04/05/17 10:04	04/05/17 13:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*04/05/17 10:04*	*04/05/17 13:34*	*1*
n-Triacontane-d62	*90*		*50 - 150*	*04/05/17 10:04*	*04/05/17 13:34*	*1*

Client Sample ID: DP-4 (2-2.25)

Lab Sample ID: 590-5801-7
Date Collected: 03/27/17 14:45
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 87.3

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.027		mg/Kg	☼	04/03/17 09:32	04/03/17 14:39	1
Ethylbenzene	ND		0.13		mg/Kg	☼	04/03/17 09:32	04/03/17 14:39	1
m,p-Xylene	ND		0.54		mg/Kg	☼	04/03/17 09:32	04/03/17 14:39	1
o-Xylene	ND		0.27		mg/Kg	☼	04/03/17 09:32	04/03/17 14:39	1
Toluene	ND		0.13		mg/Kg	☼	04/03/17 09:32	04/03/17 14:39	1
Xylenes, Total	ND		0.80		mg/Kg	☼	04/03/17 09:32	04/03/17 14:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 120*	*04/03/17 09:32*	*04/03/17 14:39*	*1*

Client Sample ID: DP-4 (2-2.25)

Date Collected: 03/27/17 14:45
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-7
Matrix: Solid
Percent Solids: 87.3

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*97*		*76 - 122*	*04/03/17 09:32*	*04/03/17 14:39*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*04/03/17 09:32*	*04/03/17 14:39*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*04/03/17 09:32*	*04/03/17 14:39*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	04/05/17 10:04	04/05/17 13:52	1
Residual Range Organics (RRO) (C25-C36)	ND		28		mg/Kg	☼	04/05/17 10:04	04/05/17 13:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*92*		*50 - 150*	*04/05/17 10:04*	*04/05/17 13:52*	*1*
n-Triacontane-d62	*88*		*50 - 150*	*04/05/17 10:04*	*04/05/17 13:52*	*1*

Client Sample ID: DP-5 (7.5-7.75)

Date Collected: 03/27/17 15:25
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-8
Matrix: Solid
Percent Solids: 90.0

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.024**		0.021		mg/Kg	☼	04/03/17 09:32	04/03/17 15:21	1
Ethylbenzene	**0.68**		0.11		mg/Kg	☼	04/03/17 09:32	04/03/17 15:21	1
m,p-Xylene	**0.51**		0.43		mg/Kg	☼	04/03/17 09:32	04/03/17 15:21	1
o-Xylene	ND		0.21		mg/Kg	☼	04/03/17 09:32	04/03/17 15:21	1
Toluene	ND		0.11		mg/Kg	☼	04/03/17 09:32	04/03/17 15:21	1
Xylenes, Total	**0.68**		0.64		mg/Kg	☼	04/03/17 09:32	04/03/17 15:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 120*	*04/03/17 09:32*	*04/03/17 15:21*	*1*
4-Bromofluorobenzene (Surr)	*111*		*76 - 122*	*04/03/17 09:32*	*04/03/17 15:21*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*	*04/03/17 09:32*	*04/03/17 15:21*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*	*04/03/17 09:32*	*04/03/17 15:21*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**250**		53		mg/Kg	☼	04/03/17 09:32	04/04/17 09:32	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*100*		*41.5 - 162*	*04/03/17 09:32*	*04/04/17 09:32*	*10*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**900**		11		mg/Kg	☼	04/05/17 10:04	04/05/17 14:10	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	04/05/17 10:04	04/05/17 14:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*189*	*X*	*50 - 150*	*04/05/17 10:04*	*04/05/17 14:10*	*1*
n-Triacontane-d62	*95*		*50 - 150*	*04/05/17 10:04*	*04/05/17 14:10*	*1*

Client Sample ID: DP-5 (8-8.75)

Lab Sample ID: 590-5801-9
Date Collected: 03/27/17 15:30
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 92.3

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.032**		0.030		mg/Kg	☼	04/03/17 09:32	04/03/17 15:42	1
Ethylbenzene	**0.67**		0.15		mg/Kg	☼	04/03/17 09:32	04/03/17 15:42	1
m,p-Xylene	**2.0**		0.60		mg/Kg	☼	04/03/17 09:32	04/03/17 15:42	1
o-Xylene	**1.1**		0.30		mg/Kg	☼	04/03/17 09:32	04/03/17 15:42	1
Toluene	**0.26**		0.15		mg/Kg	☼	04/03/17 09:32	04/03/17 15:42	1
Xylenes, Total	**3.1**		0.90		mg/Kg	☼	04/03/17 09:32	04/03/17 15:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*75 - 120*	*04/03/17 09:32*	*04/03/17 15:42*	*1*
4-Bromofluorobenzene (Surr)	*109*		*76 - 122*	*04/03/17 09:32*	*04/03/17 15:42*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*	*04/03/17 09:32*	*04/03/17 15:42*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*	*04/03/17 09:32*	*04/03/17 15:42*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg	☼	04/05/17 10:04	04/05/17 13:15	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	04/05/17 10:04	04/05/17 13:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*101*		*50 - 150*	*04/05/17 10:04*	*04/05/17 13:15*	*1*
n-Triacontane-d62	*96*		*50 - 150*	*04/05/17 10:04*	*04/05/17 13:15*	*1*

Client Sample ID: DP-5 (12.25-12.5)

Lab Sample ID: 590-5801-10
Date Collected: 03/27/17 15:40
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 93.4

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.055**		0.025		mg/Kg	☼	04/03/17 09:32	04/03/17 16:03	1
Ethylbenzene	ND		0.13		mg/Kg	☼	04/03/17 09:32	04/03/17 16:03	1
m,p-Xylene	ND		0.50		mg/Kg	☼	04/03/17 09:32	04/03/17 16:03	1
o-Xylene	ND		0.25		mg/Kg	☼	04/03/17 09:32	04/03/17 16:03	1
Toluene	ND		0.13		mg/Kg	☼	04/03/17 09:32	04/03/17 16:03	1
Xylenes, Total	ND		0.75		mg/Kg	☼	04/03/17 09:32	04/03/17 16:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 120*	*04/03/17 09:32*	*04/03/17 16:03*	*1*
4-Bromofluorobenzene (Surr)	*96*		*76 - 122*	*04/03/17 09:32*	*04/03/17 16:03*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*04/03/17 09:32*	*04/03/17 16:03*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*	*04/03/17 09:32*	*04/03/17 16:03*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**1200**		10		mg/Kg	☼	04/05/17 10:04	04/05/17 13:34	1
Residual Range Organics (RRO) (C25-C36)	ND		25		mg/Kg	☼	04/05/17 10:04	04/05/17 13:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*257*	*X*	*50 - 150*	*04/05/17 10:04*	*04/05/17 13:34*	*1*

Client Sample ID: DP-5 (12.25-12.5)

Lab Sample ID: 590-5801-10
Date Collected: 03/27/17 15:40
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 93.4

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
n-Triacontane-d62	*103*		*50 - 150*	*04/05/17 10:04*	*04/05/17 13:34*	*1*

Client Sample ID: DP-6 (6.25-6.5)

Lab Sample ID: 590-5801-11
Date Collected: 03/27/17 16:40
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 85.3

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.022		mg/Kg	☼	04/03/17 09:32	04/03/17 16:24	1
Ethylbenzene	**0.59**		0.11		mg/Kg	☼	04/03/17 09:32	04/03/17 16:24	1
m,p-Xylene	**2.9**		0.45		mg/Kg	☼	04/03/17 09:32	04/03/17 16:24	1
o-Xylene	ND		0.22		mg/Kg	☼	04/03/17 09:32	04/03/17 16:24	1
Toluene	ND		0.11		mg/Kg	☼	04/03/17 09:32	04/03/17 16:24	1
Xylenes, Total	**2.9**		0.67		mg/Kg	☼	04/03/17 09:32	04/03/17 16:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*101*		*75 - 120*	*04/03/17 09:32*	*04/03/17 16:24*	*1*
4-Bromofluorobenzene (Surr)	*160*	*X*	*76 - 122*	*04/03/17 09:32*	*04/03/17 16:24*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*	*04/03/17 09:32*	*04/03/17 16:24*	*1*
Toluene-d8 (Surr)	*106*		*80 - 120*	*04/03/17 09:32*	*04/03/17 16:24*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**4600**		110		mg/Kg	☼	04/05/17 10:04	04/06/17 09:31	10
Residual Range Organics (RRO) (C25-C36)	ND		280		mg/Kg	☼	04/05/17 10:04	04/06/17 09:31	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	*1075*	*X*	*50 - 150*	*04/05/17 10:04*	*04/06/17 09:31*	*10*
n-Triacontane-d62	*54*		*50 - 150*	*04/05/17 10:04*	*04/06/17 09:31*	*10*

Client Sample ID: DP-6 (9-9.25)

Lab Sample ID: 590-5801-12
Date Collected: 03/27/17 16:45
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 92.6

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg	☼	04/03/17 09:32	04/03/17 16:45	1
Ethylbenzene	ND		0.12		mg/Kg	☼	04/03/17 09:32	04/03/17 16:45	1
m,p-Xylene	ND		0.48		mg/Kg	☼	04/03/17 09:32	04/03/17 16:45	1
o-Xylene	ND		0.24		mg/Kg	☼	04/03/17 09:32	04/03/17 16:45	1
Toluene	ND		0.12		mg/Kg	☼	04/03/17 09:32	04/03/17 16:45	1
Xylenes, Total	ND		0.72		mg/Kg	☼	04/03/17 09:32	04/03/17 16:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 120*	*04/03/17 09:32*	*04/03/17 16:45*	*1*
4-Bromofluorobenzene (Surr)	*104*		*76 - 122*	*04/03/17 09:32*	*04/03/17 16:45*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*	*04/03/17 09:32*	*04/03/17 16:45*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*	*04/03/17 09:32*	*04/03/17 16:45*	*1*

Client Sample ID: DP-6 (9-9.25)

Lab Sample ID: 590-5801-12
Date Collected: 03/27/17 16:45
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 92.6

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	04/05/17 10:04	04/05/17 14:10	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	04/05/17 10:04	04/05/17 14:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*04/05/17 10:04*	*04/05/17 14:10*	*1*
n-Triacontane-d62	*85*		*50 - 150*	*04/05/17 10:04*	*04/05/17 14:10*	*1*

Client Sample ID: DP-7 (6.25-6.5)

Lab Sample ID: 590-5801-13
Date Collected: 03/28/17 08:10
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 87.2

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.22**		0.018		mg/Kg	☼	04/03/17 09:32	04/03/17 17:06	1
Ethylbenzene	**1.7**		0.092		mg/Kg	☼	04/03/17 09:32	04/03/17 17:06	1
m,p-Xylene	**1.3**		0.37		mg/Kg	☼	04/03/17 09:32	04/03/17 17:06	1
o-Xylene	ND		0.18		mg/Kg	☼	04/03/17 09:32	04/03/17 17:06	1
Toluene	ND		0.092		mg/Kg	☼	04/03/17 09:32	04/03/17 17:06	1
Xylenes, Total	**1.3**		0.55		mg/Kg	☼	04/03/17 09:32	04/03/17 17:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 120*	*04/03/17 09:32*	*04/03/17 17:06*	*1*
4-Bromofluorobenzene (Surr)	*127*	*X*	*76 - 122*	*04/03/17 09:32*	*04/03/17 17:06*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*04/03/17 09:32*	*04/03/17 17:06*	*1*
Toluene-d8 (Surr)	*109*		*80 - 120*	*04/03/17 09:32*	*04/03/17 17:06*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**3400**		11		mg/Kg	☼	04/05/17 10:04	04/05/17 14:28	1
Residual Range Organics (RRO) (C25-C36)	**56**		28		mg/Kg	☼	04/05/17 10:04	04/05/17 14:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*256*	*X*	*50 - 150*	*04/05/17 10:04*	*04/05/17 14:28*	*1*
n-Triacontane-d62	*102*		*50 - 150*	*04/05/17 10:04*	*04/05/17 14:28*	*1*

Client Sample ID: DP-8 (8.75-9)

Lab Sample ID: 590-5801-14
Date Collected: 03/28/17 08:30
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 91.8

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg	☼	04/03/17 09:32	04/03/17 17:27	1
Ethylbenzene	ND		0.12		mg/Kg	☼	04/03/17 09:32	04/03/17 17:27	1
m,p-Xylene	ND		0.48		mg/Kg	☼	04/03/17 09:32	04/03/17 17:27	1
o-Xylene	ND		0.24		mg/Kg	☼	04/03/17 09:32	04/03/17 17:27	1
Toluene	ND		0.12		mg/Kg	☼	04/03/17 09:32	04/03/17 17:27	1
Xylenes, Total	ND		0.72		mg/Kg	☼	04/03/17 09:32	04/03/17 17:27	1

Client Sample ID: DP-8 (8.75-9)

Lab Sample ID: 590-5801-14
Date Collected: 03/28/17 08:30
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 91.8

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 120*	*04/03/17 09:32*	*04/03/17 17:27*	*1*
4-Bromofluorobenzene (Surr)	*100*		*76 - 122*	*04/03/17 09:32*	*04/03/17 17:27*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*	*04/03/17 09:32*	*04/03/17 17:27*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*04/03/17 09:32*	*04/03/17 17:27*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	04/05/17 10:04	04/05/17 14:46	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	☼	04/05/17 10:04	04/05/17 14:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*50 - 150*	*04/05/17 10:04*	*04/05/17 14:46*	*1*
n-Triacontane-d62	*86*		*50 - 150*	*04/05/17 10:04*	*04/05/17 14:46*	*1*

Client Sample ID: DP-9 (7-7.25)

Lab Sample ID: 590-5801-15
Date Collected: 03/28/17 09:05
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 88.1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.020		mg/Kg	☼	04/03/17 09:32	04/03/17 17:48	1
Ethylbenzene	ND		0.10		mg/Kg	☼	04/03/17 09:32	04/03/17 17:48	1
m,p-Xylene	ND		0.41		mg/Kg	☼	04/03/17 09:32	04/03/17 17:48	1
o-Xylene	ND		0.20		mg/Kg	☼	04/03/17 09:32	04/03/17 17:48	1
Toluene	ND		0.10		mg/Kg	☼	04/03/17 09:32	04/03/17 17:48	1
Xylenes, Total	ND		0.61		mg/Kg	☼	04/03/17 09:32	04/03/17 17:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 120*	*04/03/17 09:32*	*04/03/17 17:48*	*1*
4-Bromofluorobenzene (Surr)	*97*		*76 - 122*	*04/03/17 09:32*	*04/03/17 17:48*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*	*04/03/17 09:32*	*04/03/17 17:48*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*	*04/03/17 09:32*	*04/03/17 17:48*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**310**		11		mg/Kg	☼	04/05/17 10:04	04/05/17 14:28	1
Residual Range Organics (RRO) (C25-C36)	ND		28		mg/Kg	☼	04/05/17 10:04	04/05/17 14:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*131*		*50 - 150*	*04/05/17 10:04*	*04/05/17 14:28*	*1*
n-Triacontane-d62	*92*		*50 - 150*	*04/05/17 10:04*	*04/05/17 14:28*	*1*

Client Sample ID: DP-10 (9.75-10)

Lab Sample ID: 590-5801-16
Date Collected: 03/28/17 09:25
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 91.6

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.029		mg/Kg	☼	04/03/17 09:32	04/03/17 18:10	1

Client Sample ID: DP-10 (9.75-10)

Lab Sample ID: 590-5801-16
Date Collected: 03/28/17 09:25
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 91.6

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.15		mg/Kg	☼	04/03/17 09:32	04/03/17 18:10	1
m,p-Xylene	ND		0.59		mg/Kg	☼	04/03/17 09:32	04/03/17 18:10	1
o-Xylene	ND		0.29		mg/Kg	☼	04/03/17 09:32	04/03/17 18:10	1
Toluene	ND		0.15		mg/Kg	☼	04/03/17 09:32	04/03/17 18:10	1
Xylenes, Total	ND		0.88		mg/Kg	☼	04/03/17 09:32	04/03/17 18:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 120*	*04/03/17 09:32*	*04/03/17 18:10*	*1*
4-Bromofluorobenzene (Surr)	*95*		*76 - 122*	*04/03/17 09:32*	*04/03/17 18:10*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*04/03/17 09:32*	*04/03/17 18:10*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*	*04/03/17 09:32*	*04/03/17 18:10*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	04/05/17 10:04	04/05/17 14:46	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	☼	04/05/17 10:04	04/05/17 14:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*97*		*50 - 150*	*04/05/17 10:04*	*04/05/17 14:46*	*1*
n-Triacontane-d62	*92*		*50 - 150*	*04/05/17 10:04*	*04/05/17 14:46*	*1*

Client Sample ID: DP-11 (1.75-2)

Lab Sample ID: 590-5801-17
Date Collected: 03/28/17 09:40
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 77.0

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.028		mg/Kg	☼	04/03/17 09:32	04/03/17 18:31	1
Ethylbenzene	**0.19**		0.14		mg/Kg	☼	04/03/17 09:32	04/03/17 18:31	1
m,p-Xylene	ND		0.56		mg/Kg	☼	04/03/17 09:32	04/03/17 18:31	1
o-Xylene	ND		0.28		mg/Kg	☼	04/03/17 09:32	04/03/17 18:31	1
Toluene	ND		0.14		mg/Kg	☼	04/03/17 09:32	04/03/17 18:31	1
Xylenes, Total	ND		0.85		mg/Kg	☼	04/03/17 09:32	04/03/17 18:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*75 - 120*	*04/03/17 09:32*	*04/03/17 18:31*	*1*
4-Bromofluorobenzene (Surr)	*130*	*X*	*76 - 122*	*04/03/17 09:32*	*04/03/17 18:31*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*	*04/03/17 09:32*	*04/03/17 18:31*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*	*04/03/17 09:32*	*04/03/17 18:31*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**3200**		12		mg/Kg	☼	04/05/17 10:04	04/05/17 15:22	1
Residual Range Organics (RRO) (C25-C36)	**66**		31		mg/Kg	☼	04/05/17 10:04	04/05/17 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*172*	*X*	*50 - 150*	*04/05/17 10:04*	*04/05/17 15:22*	*1*
n-Triacontane-d62	*97*		*50 - 150*	*04/05/17 10:04*	*04/05/17 15:22*	*1*

Client Sample ID: DP-11 (4.75-5)

Lab Sample ID: 590-5801-18
Date Collected: 03/28/17 09:45
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 89.8

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.021		mg/Kg	☼	04/03/17 09:32	04/03/17 19:13	1
Ethylbenzene	**0.50**		0.10		mg/Kg	☼	04/03/17 09:32	04/03/17 19:13	1
m,p-Xylene	**2.6**		0.41		mg/Kg	☼	04/03/17 09:32	04/03/17 19:13	1
o-Xylene	ND		0.21		mg/Kg	☼	04/03/17 09:32	04/03/17 19:13	1
Toluene	ND		0.10		mg/Kg	☼	04/03/17 09:32	04/03/17 19:13	1
Xylenes, Total	**2.6**		0.62		mg/Kg	☼	04/03/17 09:32	04/03/17 19:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*75 - 120*	*04/03/17 09:32*	*04/03/17 19:13*	*1*
4-Bromofluorobenzene (Surr)	*152*	*X*	*76 - 122*	*04/03/17 09:32*	*04/03/17 19:13*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*	*04/03/17 09:32*	*04/03/17 19:13*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*	*04/03/17 09:32*	*04/03/17 19:13*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**840**		51		mg/Kg	☼	04/03/17 09:32	04/04/17 09:53	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*41.5 - 162*	*04/03/17 09:32*	*04/04/17 09:53*	*10*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**5600**		110		mg/Kg	☼	04/05/17 10:04	04/06/17 09:50	10
Residual Range Organics (RRO) (C25-C36)	ND		270		mg/Kg	☼	04/05/17 10:04	04/06/17 09:50	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*627*	*X*	*50 - 150*	*04/05/17 10:04*	*04/06/17 09:50*	*10*
n-Triacontane-d62	*77*		*50 - 150*	*04/05/17 10:04*	*04/06/17 09:50*	*10*

Client Sample ID: DP-12 (9.5-9.75)

Lab Sample ID: 590-5801-19
Date Collected: 03/28/17 10:30
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 77.6

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.031		mg/Kg	☼	04/03/17 09:32	04/03/17 19:34	1
Ethylbenzene	ND		0.16		mg/Kg	☼	04/03/17 09:32	04/03/17 19:34	1
m,p-Xylene	ND		0.63		mg/Kg	☼	04/03/17 09:32	04/03/17 19:34	1
o-Xylene	ND		0.31		mg/Kg	☼	04/03/17 09:32	04/03/17 19:34	1
Toluene	ND		0.16		mg/Kg	☼	04/03/17 09:32	04/03/17 19:34	1
Xylenes, Total	ND		0.94		mg/Kg	☼	04/03/17 09:32	04/03/17 19:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 120*	*04/03/17 09:32*	*04/03/17 19:34*	*1*
4-Bromofluorobenzene (Surr)	*138*	*X*	*76 - 122*	*04/03/17 09:32*	*04/03/17 19:34*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*04/03/17 09:32*	*04/03/17 19:34*	*1*
Toluene-d8 (Surr)	*109*		*80 - 120*	*04/03/17 09:32*	*04/03/17 19:34*	*1*

Client Sample ID: DP-12 (9.5-9.75)

Lab Sample ID: 590-5801-19
Date Collected: 03/28/17 10:30
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 77.6

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**22**		13		mg/Kg	☼	04/05/17 10:04	04/05/17 15:22	1
Residual Range Organics (RRO) (C25-C36)	ND		31		mg/Kg	☼	04/05/17 10:04	04/05/17 15:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*04/05/17 10:04*	*04/05/17 15:22*	*1*
n-Triacontane-d62	*81*		*50 - 150*	*04/05/17 10:04*	*04/05/17 15:22*	*1*

Client Sample ID: DP-18 (2-2.25)

Lab Sample ID: 590-5801-20
Date Collected: 03/28/17 14:30
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 79.0

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.027		mg/Kg	☼	04/03/17 09:32	04/03/17 19:55	1
Ethylbenzene	**0.21**		0.13		mg/Kg	☼	04/03/17 09:32	04/03/17 19:55	1
m,p-Xylene	ND		0.54		mg/Kg	☼	04/03/17 09:32	04/03/17 19:55	1
o-Xylene	ND		0.27		mg/Kg	☼	04/03/17 09:32	04/03/17 19:55	1
Toluene	ND		0.13		mg/Kg	☼	04/03/17 09:32	04/03/17 19:55	1
Xylenes, Total	ND		0.81		mg/Kg	☼	04/03/17 09:32	04/03/17 19:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 120*	*04/03/17 09:32*	*04/03/17 19:55*	*1*
4-Bromofluorobenzene (Surr)	*122*		*76 - 122*	*04/03/17 09:32*	*04/03/17 19:55*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*	*04/03/17 09:32*	*04/03/17 19:55*	*1*
Toluene-d8 (Surr)	*110*		*80 - 120*	*04/03/17 09:32*	*04/03/17 19:55*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**420**		67		mg/Kg	☼	04/03/17 09:32	04/04/17 10:14	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*41.5 - 162*	*04/03/17 09:32*	*04/04/17 10:14*	*10*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**6000**		120		mg/Kg	☼	04/05/17 10:04	04/06/17 09:50	10
Residual Range Organics (RRO) (C25-C36)	ND		310		mg/Kg	☼	04/05/17 10:04	04/06/17 09:50	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*1316*	*X*	*50 - 150*	*04/05/17 10:04*	*04/06/17 09:50*	*10*
n-Triacontane-d62	*57*		*50 - 150*	*04/05/17 10:04*	*04/06/17 09:50*	*10*

Client Sample ID: DP-18 (12.5-12.75)

Lab Sample ID: 590-5801-21
Date Collected: 03/28/17 14:45
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 92.3

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.025		mg/Kg	☼	04/04/17 08:49	04/04/17 13:45	1
Ethylbenzene	ND		0.12		mg/Kg	☼	04/04/17 08:49	04/04/17 13:45	1
m,p-Xylene	ND		0.50		mg/Kg	☼	04/04/17 08:49	04/04/17 13:45	1
o-Xylene	ND		0.25		mg/Kg	☼	04/04/17 08:49	04/04/17 13:45	1
Toluene	ND		0.12		mg/Kg	☼	04/04/17 08:49	04/04/17 13:45	1
Xylenes, Total	ND		0.75		mg/Kg	☼	04/04/17 08:49	04/04/17 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 120*	*04/04/17 08:49*	*04/04/17 13:45*	*1*
4-Bromofluorobenzene (Surr)	*96*		*76 - 122*	*04/04/17 08:49*	*04/04/17 13:45*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*	*04/04/17 08:49*	*04/04/17 13:45*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*04/04/17 08:49*	*04/04/17 13:45*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**360**		11		mg/Kg	☼	04/06/17 10:45	04/06/17 13:42	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	04/06/17 10:45	04/06/17 13:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*148*		*50 - 150*	*04/06/17 10:45*	*04/06/17 13:42*	*1*
n-Triacontane-d62	*84*		*50 - 150*	*04/06/17 10:45*	*04/06/17 13:42*	*1*

Client Sample ID: DP-19 (11.75-12)

Lab Sample ID: 590-5801-22
Date Collected: 03/28/17 16:00
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 89.8

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.20		mg/Kg	☼	04/04/17 08:49	04/04/17 12:00	10
Ethylbenzene	**1.5**		1.0		mg/Kg	☼	04/04/17 08:49	04/04/17 12:00	10
m,p-Xylene	ND		4.0		mg/Kg	☼	04/04/17 08:49	04/04/17 12:00	10
o-Xylene	ND		2.0		mg/Kg	☼	04/04/17 08:49	04/04/17 12:00	10
Toluene	ND		1.0		mg/Kg	☼	04/04/17 08:49	04/04/17 12:00	10
Xylenes, Total	ND		6.0		mg/Kg	☼	04/04/17 08:49	04/04/17 12:00	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*104*		*75 - 120*	*04/04/17 08:49*	*04/04/17 12:00*	*10*
4-Bromofluorobenzene (Surr)	*102*		*76 - 122*	*04/04/17 08:49*	*04/04/17 12:00*	*10*
Dibromofluoromethane (Surr)	*106*		*80 - 120*	*04/04/17 08:49*	*04/04/17 12:00*	*10*
Toluene-d8 (Surr)	*104*		*80 - 120*	*04/04/17 08:49*	*04/04/17 12:00*	*10*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	**800**		50		mg/Kg	☼	04/04/17 08:49	04/04/17 12:00	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*41.5 - 162*	*04/04/17 08:49*	*04/04/17 12:00*	*10*

Client Sample ID: DP-19 (11.75-12)

Lab Sample ID: 590-5801-22
Date Collected: 03/28/17 16:00
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 89.8

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**1400**		11		mg/Kg	☼	04/06/17 10:45	04/06/17 13:05	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	☼	04/06/17 10:45	04/06/17 13:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*253*	*X*	*50 - 150*	*04/06/17 10:45*	*04/06/17 13:05*	*1*
n-Triacontane-d62	*90*		*50 - 150*	*04/06/17 10:45*	*04/06/17 13:05*	*1*

Client Sample ID: DP-19 (16-16.25)

Lab Sample ID: 590-5801-23
Date Collected: 03/28/17 16:20
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 93.6

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.036		mg/Kg	☼	04/04/17 08:49	04/04/17 14:06	1
Ethylbenzene	ND		0.18		mg/Kg	☼	04/04/17 08:49	04/04/17 14:06	1
m,p-Xylene	ND		0.72		mg/Kg	☼	04/04/17 08:49	04/04/17 14:06	1
o-Xylene	ND		0.36		mg/Kg	☼	04/04/17 08:49	04/04/17 14:06	1
Toluene	ND		0.18		mg/Kg	☼	04/04/17 08:49	04/04/17 14:06	1
Xylenes, Total	ND		1.1		mg/Kg	☼	04/04/17 08:49	04/04/17 14:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*75 - 120*	*04/04/17 08:49*	*04/04/17 14:06*	*1*
4-Bromofluorobenzene (Surr)	*97*		*76 - 122*	*04/04/17 08:49*	*04/04/17 14:06*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*	*04/04/17 08:49*	*04/04/17 14:06*	*1*
Toluene-d8 (Surr)	*103*		*80 - 120*	*04/04/17 08:49*	*04/04/17 14:06*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**670**		10		mg/Kg	☼	04/06/17 10:45	04/06/17 13:24	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	04/06/17 10:45	04/06/17 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*179*	*X*	*50 - 150*	*04/06/17 10:45*	*04/06/17 13:24*	*1*
n-Triacontane-d62	*92*		*50 - 150*	*04/06/17 10:45*	*04/06/17 13:24*	*1*

Client Sample ID: DP-19 (20-20.25)

Lab Sample ID: 590-5801-24
Date Collected: 03/28/17 16:30
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 90.1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg	☼	04/04/17 08:49	04/04/17 14:27	1
Ethylbenzene	ND		0.12		mg/Kg	☼	04/04/17 08:49	04/04/17 14:27	1
m,p-Xylene	ND		0.46		mg/Kg	☼	04/04/17 08:49	04/04/17 14:27	1
o-Xylene	ND		0.23		mg/Kg	☼	04/04/17 08:49	04/04/17 14:27	1
Toluene	ND		0.12		mg/Kg	☼	04/04/17 08:49	04/04/17 14:27	1
Xylenes, Total	ND		0.69		mg/Kg	☼	04/04/17 08:49	04/04/17 14:27	1

Client Sample ID: DP-19 (20-20.25)

Lab Sample ID: 590-5801-24
Date Collected: 03/28/17 16:30
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 90.1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*75 - 120*	*04/04/17 08:49*	*04/04/17 14:27*	*1*
4-Bromofluorobenzene (Surr)	*93*		*76 - 122*	*04/04/17 08:49*	*04/04/17 14:27*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*04/04/17 08:49*	*04/04/17 14:27*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*04/04/17 08:49*	*04/04/17 14:27*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**18**		11		mg/Kg	☼	04/06/17 10:45	04/06/17 13:42	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	☼	04/06/17 10:45	04/06/17 13:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*96*		*50 - 150*	*04/06/17 10:45*	*04/06/17 13:42*	*1*
n-Triacontane-d62	*85*		*50 - 150*	*04/06/17 10:45*	*04/06/17 13:42*	*1*

Client Sample ID: DP-20 (6-6.25)

Lab Sample ID: 590-5801-25
Date Collected: 03/29/17 08:05
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 89.4

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.020		mg/Kg	☼	04/04/17 08:49	04/04/17 14:49	1
Ethylbenzene	ND		0.10		mg/Kg	☼	04/04/17 08:49	04/04/17 14:49	1
m,p-Xylene	ND		0.40		mg/Kg	☼	04/04/17 08:49	04/04/17 14:49	1
o-Xylene	ND		0.20		mg/Kg	☼	04/04/17 08:49	04/04/17 14:49	1
Toluene	ND		0.10		mg/Kg	☼	04/04/17 08:49	04/04/17 14:49	1
Xylenes, Total	ND		0.60		mg/Kg	☼	04/04/17 08:49	04/04/17 14:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 120*	*04/04/17 08:49*	*04/04/17 14:49*	*1*
4-Bromofluorobenzene (Surr)	*91*		*76 - 122*	*04/04/17 08:49*	*04/04/17 14:49*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*	*04/04/17 08:49*	*04/04/17 14:49*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*	*04/04/17 08:49*	*04/04/17 14:49*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	04/06/17 10:45	04/06/17 14:00	1
Residual Range Organics (RRO) (C25-C36)	ND		28		mg/Kg	☼	04/06/17 10:45	04/06/17 14:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*94*		*50 - 150*	*04/06/17 10:45*	*04/06/17 14:00*	*1*
n-Triacontane-d62	*73*		*50 - 150*	*04/06/17 10:45*	*04/06/17 14:00*	*1*

Client Sample ID: DP-21 (9.75-10)

Lab Sample ID: 590-5801-26
Date Collected: 03/29/17 09:05
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 90.1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.49**		0.23		mg/Kg	☼	04/04/17 08:49	04/04/17 12:20	10

Client Sample ID: DP-21 (9.75-10)

Lab Sample ID: 590-5801-26
Date Collected: 03/29/17 09:05
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 90.1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	5.6		1.1		mg/Kg	☼	04/04/17 08:49	04/04/17 12:20	10
m,p-Xylene	16		4.6		mg/Kg	☼	04/04/17 08:49	04/04/17 12:20	10
o-Xylene	6.3		2.3		mg/Kg	☼	04/04/17 08:49	04/04/17 12:20	10
Toluene	1.6		1.1		mg/Kg	☼	04/04/17 08:49	04/04/17 12:20	10
Xylenes, Total	22		6.8		mg/Kg	☼	04/04/17 08:49	04/04/17 12:20	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 120*	*04/04/17 08:49*	*04/04/17 12:20*	*10*
4-Bromofluorobenzene (Surr)	*104*		*76 - 122*	*04/04/17 08:49*	*04/04/17 12:20*	*10*
Dibromofluoromethane (Surr)	*105*		*80 - 120*	*04/04/17 08:49*	*04/04/17 12:20*	*10*
Toluene-d8 (Surr)	*104*		*80 - 120*	*04/04/17 08:49*	*04/04/17 12:20*	*10*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	1100		57		mg/Kg	☼	04/04/17 08:49	04/04/17 12:20	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*41.5 - 162*	*04/04/17 08:49*	*04/04/17 12:20*	*10*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	3500		11		mg/Kg	☼	04/06/17 10:45	04/06/17 14:18	1
Residual Range Organics (RRO) (C25-C36)	54		27		mg/Kg	☼	04/06/17 10:45	04/06/17 14:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*30*	*X*	*50 - 150*	*04/06/17 10:45*	*04/06/17 14:18*	*1*
n-Triacontane-d62	*92*		*50 - 150*	*04/06/17 10:45*	*04/06/17 14:18*	*1*

Client Sample ID: DP-21 (15.75-16)

Lab Sample ID: 590-5801-27
Date Collected: 03/29/17 09:15
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 89.5

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.044		0.042		mg/Kg	☼	04/04/17 08:49	04/04/17 15:10	2
Ethylbenzene	3.0		0.21		mg/Kg	☼	04/04/17 08:49	04/04/17 15:10	2
m,p-Xylene	3.4		0.84		mg/Kg	☼	04/04/17 08:49	04/04/17 15:10	2
o-Xylene	ND		0.42		mg/Kg	☼	04/04/17 08:49	04/04/17 15:10	2
Toluene	ND		0.21		mg/Kg	☼	04/04/17 08:49	04/04/17 15:10	2
Xylenes, Total	3.7		1.3		mg/Kg	☼	04/04/17 08:49	04/04/17 15:10	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 120*	*04/04/17 08:49*	*04/04/17 15:10*	*2*
4-Bromofluorobenzene (Surr)	*122*		*76 - 122*	*04/04/17 08:49*	*04/04/17 15:10*	*2*
Dibromofluoromethane (Surr)	*105*		*80 - 120*	*04/04/17 08:49*	*04/04/17 15:10*	*2*
Toluene-d8 (Surr)	*108*		*80 - 120*	*04/04/17 08:49*	*04/04/17 15:10*	*2*

Client Sample ID: DP-21 (15.75-16)

Lab Sample ID: 590-5801-27
Date Collected: 03/29/17 09:15
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 89.5

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**10000**		110		mg/Kg	☼	04/06/17 10:45	04/06/17 16:24	10
Residual Range Organics (RRO) (C25-C36)	ND		280		mg/Kg	☼	04/06/17 10:45	04/06/17 16:24	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*1377*	*X*	*50 - 150*	*04/06/17 10:45*	*04/06/17 16:24*	*10*
n-Triacontane-d62	*91*		*50 - 150*	*04/06/17 10:45*	*04/06/17 16:24*	*10*

Client Sample ID: DP-21 (16.5-16.75)

Lab Sample ID: 590-5801-28
Date Collected: 03/29/17 09:50
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 88.8

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.018		mg/Kg	☼	04/04/17 08:49	04/04/17 15:31	1
Ethylbenzene	**0.11**		0.091		mg/Kg	☼	04/04/17 08:49	04/04/17 15:31	1
m,p-Xylene	ND		0.36		mg/Kg	☼	04/04/17 08:49	04/04/17 15:31	1
o-Xylene	ND		0.18		mg/Kg	☼	04/04/17 08:49	04/04/17 15:31	1
Toluene	ND		0.091		mg/Kg	☼	04/04/17 08:49	04/04/17 15:31	1
Xylenes, Total	ND		0.54		mg/Kg	☼	04/04/17 08:49	04/04/17 15:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*75 - 120*	*04/04/17 08:49*	*04/04/17 15:31*	*1*
4-Bromofluorobenzene (Surr)	*105*		*76 - 122*	*04/04/17 08:49*	*04/04/17 15:31*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*04/04/17 08:49*	*04/04/17 15:31*	*1*
Toluene-d8 (Surr)	*105*		*80 - 120*	*04/04/17 08:49*	*04/04/17 15:31*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**1300**		11		mg/Kg	☼	04/06/17 10:45	04/06/17 14:54	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	04/06/17 10:45	04/06/17 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*272*	*X*	*50 - 150*	*04/06/17 10:45*	*04/06/17 14:54*	*1*
n-Triacontane-d62	*88*		*50 - 150*	*04/06/17 10:45*	*04/06/17 14:54*	*1*

Client Sample ID: DP-22 (12.75-13)

Lab Sample ID: 590-5801-29
Date Collected: 03/29/17 11:30
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 92.9

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.020		mg/Kg	☼	04/04/17 08:49	04/04/17 15:52	1
Ethylbenzene	ND		0.10		mg/Kg	☼	04/04/17 08:49	04/04/17 15:52	1
m,p-Xylene	ND		0.40		mg/Kg	☼	04/04/17 08:49	04/04/17 15:52	1
o-Xylene	ND		0.20		mg/Kg	☼	04/04/17 08:49	04/04/17 15:52	1
Toluene	ND		0.10		mg/Kg	☼	04/04/17 08:49	04/04/17 15:52	1
Xylenes, Total	ND		0.60		mg/Kg	☼	04/04/17 08:49	04/04/17 15:52	1

Client Sample ID: DP-22 (12.75-13)

Lab Sample ID: 590-5801-29
Date Collected: 03/29/17 11:30
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 92.9

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 120*	*04/04/17 08:49*	*04/04/17 15:52*	*1*
4-Bromofluorobenzene (Surr)	*93*		*76 - 122*	*04/04/17 08:49*	*04/04/17 15:52*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*	*04/04/17 08:49*	*04/04/17 15:52*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*	*04/04/17 08:49*	*04/04/17 15:52*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	04/06/17 10:45	04/06/17 15:12	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	04/06/17 10:45	04/06/17 15:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*93*		*50 - 150*	*04/06/17 10:45*	*04/06/17 15:12*	*1*
n-Triacontane-d62	*70*		*50 - 150*	*04/06/17 10:45*	*04/06/17 15:12*	*1*

Client Sample ID: DP-23 (5-5.25)

Lab Sample ID: 590-5801-30
Date Collected: 03/29/17 12:00
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 86.8

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.020		mg/Kg	☼	04/04/17 08:49	04/04/17 16:13	1
Ethylbenzene	ND		0.099		mg/Kg	☼	04/04/17 08:49	04/04/17 16:13	1
m,p-Xylene	ND		0.40		mg/Kg	☼	04/04/17 08:49	04/04/17 16:13	1
o-Xylene	ND		0.20		mg/Kg	☼	04/04/17 08:49	04/04/17 16:13	1
Toluene	ND		0.099		mg/Kg	☼	04/04/17 08:49	04/04/17 16:13	1
Xylenes, Total	ND		0.60		mg/Kg	☼	04/04/17 08:49	04/04/17 16:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*75 - 120*	*04/04/17 08:49*	*04/04/17 16:13*	*1*
4-Bromofluorobenzene (Surr)	*109*		*76 - 122*	*04/04/17 08:49*	*04/04/17 16:13*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*	*04/04/17 08:49*	*04/04/17 16:13*	*1*
Toluene-d8 (Surr)	*108*		*80 - 120*	*04/04/17 08:49*	*04/04/17 16:13*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**620**		11		mg/Kg	☼	04/06/17 10:45	04/06/17 15:30	1
Residual Range Organics (RRO) (C25-C36)	ND		28		mg/Kg	☼	04/06/17 10:45	04/06/17 15:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*163*	*X*	*50 - 150*	*04/06/17 10:45*	*04/06/17 15:30*	*1*
n-Triacontane-d62	*79*		*50 - 150*	*04/06/17 10:45*	*04/06/17 15:30*	*1*

Client Sample ID: DP-23 (8-8.25)

Lab Sample ID: 590-5801-31
Date Collected: 03/29/17 12:05
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 90.8

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.022		mg/Kg	☼	04/04/17 08:49	04/04/17 16:34	1

Client Sample ID: DP-23 (8-8.25)

Lab Sample ID: 590-5801-31
Date Collected: 03/29/17 12:05
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 90.8

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.11		mg/Kg	☼	04/04/17 08:49	04/04/17 16:34	1
m,p-Xylene	ND		0.44		mg/Kg	☼	04/04/17 08:49	04/04/17 16:34	1
o-Xylene	ND		0.22		mg/Kg	☼	04/04/17 08:49	04/04/17 16:34	1
Toluene	ND		0.11		mg/Kg	☼	04/04/17 08:49	04/04/17 16:34	1
Xylenes, Total	ND		0.66		mg/Kg	☼	04/04/17 08:49	04/04/17 16:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*75 - 120*	*04/04/17 08:49*	*04/04/17 16:34*	*1*
4-Bromofluorobenzene (Surr)	*93*		*76 - 122*	*04/04/17 08:49*	*04/04/17 16:34*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*	*04/04/17 08:49*	*04/04/17 16:34*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*04/04/17 08:49*	*04/04/17 16:34*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	04/06/17 10:45	04/06/17 16:06	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	☼	04/06/17 10:45	04/06/17 16:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*95*		*50 - 150*	*04/06/17 10:45*	*04/06/17 16:06*	*1*
n-Triacontane-d62	*76*		*50 - 150*	*04/06/17 10:45*	*04/06/17 16:06*	*1*

Client Sample ID: DP-24 (4.5-4.75)

Lab Sample ID: 590-5801-32
Date Collected: 03/29/17 12:45
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 84.6

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.023		mg/Kg	☼	04/04/17 08:49	04/04/17 16:56	1
Ethylbenzene	ND		0.12		mg/Kg	☼	04/04/17 08:49	04/04/17 16:56	1
m,p-Xylene	ND		0.46		mg/Kg	☼	04/04/17 08:49	04/04/17 16:56	1
o-Xylene	ND		0.23		mg/Kg	☼	04/04/17 08:49	04/04/17 16:56	1
Toluene	ND		0.12		mg/Kg	☼	04/04/17 08:49	04/04/17 16:56	1
Xylenes, Total	ND		0.69		mg/Kg	☼	04/04/17 08:49	04/04/17 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*101*		*75 - 120*	*04/04/17 08:49*	*04/04/17 16:56*	*1*
4-Bromofluorobenzene (Surr)	*101*		*76 - 122*	*04/04/17 08:49*	*04/04/17 16:56*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*	*04/04/17 08:49*	*04/04/17 16:56*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*	*04/04/17 08:49*	*04/04/17 16:56*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**660**		12		mg/Kg	☼	04/06/17 10:45	04/06/17 16:24	1
Residual Range Organics (RRO) (C25-C36)	ND		29		mg/Kg	☼	04/06/17 10:45	04/06/17 16:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*164*	*X*	*50 - 150*	*04/06/17 10:45*	*04/06/17 16:24*	*1*
n-Triacontane-d62	*83*		*50 - 150*	*04/06/17 10:45*	*04/06/17 16:24*	*1*

Client Sample ID: DP-24 (10-10.25)

Lab Sample ID: 590-5801-33
Date Collected: 03/29/17 13:00
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 93.5

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.026		mg/Kg	☼	04/04/17 08:49	04/04/17 17:17	1
Ethylbenzene	ND		0.13		mg/Kg	☼	04/04/17 08:49	04/04/17 17:17	1
m,p-Xylene	ND		0.52		mg/Kg	☼	04/04/17 08:49	04/04/17 17:17	1
o-Xylene	ND		0.26		mg/Kg	☼	04/04/17 08:49	04/04/17 17:17	1
Toluene	ND		0.13		mg/Kg	☼	04/04/17 08:49	04/04/17 17:17	1
Xylenes, Total	ND		0.79		mg/Kg	☼	04/04/17 08:49	04/04/17 17:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 120*	*04/04/17 08:49*	*04/04/17 17:17*	*1*
4-Bromofluorobenzene (Surr)	*93*		*76 - 122*	*04/04/17 08:49*	*04/04/17 17:17*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*	*04/04/17 08:49*	*04/04/17 17:17*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*04/04/17 08:49*	*04/04/17 17:17*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	04/06/17 10:45	04/06/17 14:00	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	04/06/17 10:45	04/06/17 14:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*04/06/17 10:45*	*04/06/17 14:00*	*1*
n-Triacontane-d62	*90*		*50 - 150*	*04/06/17 10:45*	*04/06/17 14:00*	*1*

Client Sample ID: DP-25 (8.75-9)

Lab Sample ID: 590-5801-34
Date Collected: 03/29/17 13:45
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 88.0

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.022		mg/Kg	☼	04/04/17 08:49	04/04/17 17:38	1
Ethylbenzene	ND		0.11		mg/Kg	☼	04/04/17 08:49	04/04/17 17:38	1
m,p-Xylene	ND		0.43		mg/Kg	☼	04/04/17 08:49	04/04/17 17:38	1
o-Xylene	ND		0.22		mg/Kg	☼	04/04/17 08:49	04/04/17 17:38	1
Toluene	ND		0.11		mg/Kg	☼	04/04/17 08:49	04/04/17 17:38	1
Xylenes, Total	ND		0.65		mg/Kg	☼	04/04/17 08:49	04/04/17 17:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 120*	*04/04/17 08:49*	*04/04/17 17:38*	*1*
4-Bromofluorobenzene (Surr)	*109*		*76 - 122*	*04/04/17 08:49*	*04/04/17 17:38*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*	*04/04/17 08:49*	*04/04/17 17:38*	*1*
Toluene-d8 (Surr)	*107*		*80 - 120*	*04/04/17 08:49*	*04/04/17 17:38*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**2100**		11		mg/Kg	☼	04/06/17 10:45	04/06/17 14:18	1
Residual Range Organics (RRO) (C25-C36)	**34**		28		mg/Kg	☼	04/06/17 10:45	04/06/17 14:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*257*	*X*	*50 - 150*	*04/06/17 10:45*	*04/06/17 14:18*	*1*

Client Sample ID: DP-25 (8.75-9)

Lab Sample ID: 590-5801-34
Date Collected: 03/29/17 13:45
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 88.0

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
n-Triacontane-d62	*101*		*50 - 150*	*04/06/17 10:45*	*04/06/17 14:18*	*1*

Client Sample ID: DP-25 (12.75-13)

Lab Sample ID: 590-5801-35
Date Collected: 03/29/17 14:00
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 90.8

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.022		mg/Kg	☼	04/04/17 08:49	04/04/17 17:59	1
Ethylbenzene	ND		0.11		mg/Kg	☼	04/04/17 08:49	04/04/17 17:59	1
m,p-Xylene	ND		0.43		mg/Kg	☼	04/04/17 08:49	04/04/17 17:59	1
o-Xylene	ND		0.22		mg/Kg	☼	04/04/17 08:49	04/04/17 17:59	1
Toluene	ND		0.11		mg/Kg	☼	04/04/17 08:49	04/04/17 17:59	1
Xylenes, Total	ND		0.65		mg/Kg	☼	04/04/17 08:49	04/04/17 17:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*75 - 120*	*04/04/17 08:49*	*04/04/17 17:59*	*1*
4-Bromofluorobenzene (Surr)	*94*		*76 - 122*	*04/04/17 08:49*	*04/04/17 17:59*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*	*04/04/17 08:49*	*04/04/17 17:59*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*04/04/17 08:49*	*04/04/17 17:59*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	04/06/17 10:45	04/06/17 14:36	1
Residual Range Organics (RRO) (C25-C36)	ND		26		mg/Kg	☼	04/06/17 10:45	04/06/17 14:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*04/06/17 10:45*	*04/06/17 14:36*	*1*
n-Triacontane-d62	*92*		*50 - 150*	*04/06/17 10:45*	*04/06/17 14:36*	*1*

Client Sample ID: DP-26 (6-6.25)

Lab Sample ID: 590-5801-36
Date Collected: 03/29/17 14:30
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 91.6

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.042		mg/Kg	☼	04/04/17 08:49	04/04/17 18:21	2
Ethylbenzene	ND		0.21		mg/Kg	☼	04/04/17 08:49	04/04/17 18:21	2
m,p-Xylene	ND		0.85		mg/Kg	☼	04/04/17 08:49	04/04/17 18:21	2
o-Xylene	ND		0.42		mg/Kg	☼	04/04/17 08:49	04/04/17 18:21	2
Toluene	ND		0.21		mg/Kg	☼	04/04/17 08:49	04/04/17 18:21	2
Xylenes, Total	ND		1.3		mg/Kg	☼	04/04/17 08:49	04/04/17 18:21	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 120*	*04/04/17 08:49*	*04/04/17 18:21*	*2*
4-Bromofluorobenzene (Surr)	*123*	*X*	*76 - 122*	*04/04/17 08:49*	*04/04/17 18:21*	*2*
Dibromofluoromethane (Surr)	*106*		*80 - 120*	*04/04/17 08:49*	*04/04/17 18:21*	*2*
Toluene-d8 (Surr)	*110*		*80 - 120*	*04/04/17 08:49*	*04/04/17 18:21*	*2*

Client Sample ID: DP-26 (6-6.25)

Lab Sample ID: 590-5801-36
Date Collected: 03/29/17 14:30
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 91.6

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		11		mg/Kg	☼	04/06/17 10:45	04/06/17 14:54	1
Residual Range Organics (RRO) (C25-C36)	ND		27		mg/Kg	☼	04/06/17 10:45	04/06/17 14:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*04/06/17 10:45*	*04/06/17 14:54*	*1*
n-Triacontane-d62	*90*		*50 - 150*	*04/06/17 10:45*	*04/06/17 14:54*	*1*

Client Sample ID: DP-27 (4.75-5)

Lab Sample ID: 590-5801-37
Date Collected: 03/29/17 15:30
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 81.9

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.024		mg/Kg	☼	04/04/17 08:49	04/04/17 18:42	1
Ethylbenzene	ND		0.12		mg/Kg	☼	04/04/17 08:49	04/04/17 18:42	1
m,p-Xylene	ND		0.49		mg/Kg	☼	04/04/17 08:49	04/04/17 18:42	1
o-Xylene	ND		0.24		mg/Kg	☼	04/04/17 08:49	04/04/17 18:42	1
Toluene	ND		0.12		mg/Kg	☼	04/04/17 08:49	04/04/17 18:42	1
Xylenes, Total	ND		0.73		mg/Kg	☼	04/04/17 08:49	04/04/17 18:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*75 - 120*	*04/04/17 08:49*	*04/04/17 18:42*	*1*
4-Bromofluorobenzene (Surr)	*127*	*X*	*76 - 122*	*04/04/17 08:49*	*04/04/17 18:42*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*	*04/04/17 08:49*	*04/04/17 18:42*	*1*
Toluene-d8 (Surr)	*112*		*80 - 120*	*04/04/17 08:49*	*04/04/17 18:42*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**2700**		12		mg/Kg	☼	04/06/17 10:45	04/06/17 15:12	1
Residual Range Organics (RRO) (C25-C36)	**55**		29		mg/Kg	☼	04/06/17 10:45	04/06/17 15:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*335*	*X*	*50 - 150*	*04/06/17 10:45*	*04/06/17 15:12*	*1*
n-Triacontane-d62	*96*		*50 - 150*	*04/06/17 10:45*	*04/06/17 15:12*	*1*

Client Sample ID: DP-27 (8-8.25)

Lab Sample ID: 590-5801-38
Date Collected: 03/29/17 15:40
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 81.0

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.038		mg/Kg	☼	04/04/17 08:49	04/04/17 19:03	1
Ethylbenzene	ND		0.19		mg/Kg	☼	04/04/17 08:49	04/04/17 19:03	1
m,p-Xylene	ND		0.76		mg/Kg	☼	04/04/17 08:49	04/04/17 19:03	1
o-Xylene	ND		0.38		mg/Kg	☼	04/04/17 08:49	04/04/17 19:03	1
Toluene	ND		0.19		mg/Kg	☼	04/04/17 08:49	04/04/17 19:03	1
Xylenes, Total	ND		1.1		mg/Kg	☼	04/04/17 08:49	04/04/17 19:03	1

Client Sample ID: DP-27 (8-8.25)

Lab Sample ID: 590-5801-38
Date Collected: 03/29/17 15:40
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 81.0

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		75 - 120	04/04/17 08:49	04/04/17 19:03	1
4-Bromofluorobenzene (Surr)	108		76 - 122	04/04/17 08:49	04/04/17 19:03	1
Dibromofluoromethane (Surr)	103		80 - 120	04/04/17 08:49	04/04/17 19:03	1
Toluene-d8 (Surr)	104		80 - 120	04/04/17 08:49	04/04/17 19:03	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**350**		12		mg/Kg	☼	04/06/17 10:45	04/06/17 15:30	1
Residual Range Organics (RRO) (C25-C36)	ND		30		mg/Kg	☼	04/06/17 10:45	04/06/17 15:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	134		50 - 150	04/06/17 10:45	04/06/17 15:30	1
n-Triacontane-d62	96		50 - 150	04/06/17 10:45	04/06/17 15:30	1

Client Sample ID: DP-26 (10-10.25)

Lab Sample ID: 590-5801-39
Date Collected: 03/29/17 14:40
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 79.1

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.031		mg/Kg	☼	04/04/17 08:49	04/04/17 19:24	1
Ethylbenzene	ND		0.16		mg/Kg	☼	04/04/17 08:49	04/04/17 19:24	1
m,p-Xylene	ND		0.62		mg/Kg	☼	04/04/17 08:49	04/04/17 19:24	1
o-Xylene	ND		0.31		mg/Kg	☼	04/04/17 08:49	04/04/17 19:24	1
Toluene	ND		0.16		mg/Kg	☼	04/04/17 08:49	04/04/17 19:24	1
Xylenes, Total	ND		0.94		mg/Kg	☼	04/04/17 08:49	04/04/17 19:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		75 - 120	04/04/17 08:49	04/04/17 19:24	1
4-Bromofluorobenzene (Surr)	91		76 - 122	04/04/17 08:49	04/04/17 19:24	1
Dibromofluoromethane (Surr)	103		80 - 120	04/04/17 08:49	04/04/17 19:24	1
Toluene-d8 (Surr)	101		80 - 120	04/04/17 08:49	04/04/17 19:24	1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	**5800**		120		mg/Kg	☼	04/06/17 10:45	04/07/17 08:06	10
Residual Range Organics (RRO) (C25-C36)	ND		310		mg/Kg	☼	04/06/17 10:45	04/07/17 08:06	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
o-Terphenyl	585	X	50 - 150	04/06/17 10:45	04/07/17 08:06	10
n-Triacontane-d62	78		50 - 150	04/06/17 10:45	04/07/17 08:06	10

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-11414/1-A
Matrix: Solid
Analysis Batch: 11421

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11414

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.020		mg/Kg		04/03/17 09:32	04/03/17 11:29	1
Ethylbenzene	ND		0.10		mg/Kg		04/03/17 09:32	04/03/17 11:29	1
m,p-Xylene	ND		0.40		mg/Kg		04/03/17 09:32	04/03/17 11:29	1
o-Xylene	ND		0.20		mg/Kg		04/03/17 09:32	04/03/17 11:29	1
Toluene	ND		0.10		mg/Kg		04/03/17 09:32	04/03/17 11:29	1
Xylenes, Total	ND		0.60		mg/Kg		04/03/17 09:32	04/03/17 11:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 120*	*04/03/17 09:32*	*04/03/17 11:29*	*1*
4-Bromofluorobenzene (Surr)	*93*		*76 - 122*	*04/03/17 09:32*	*04/03/17 11:29*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*	*04/03/17 09:32*	*04/03/17 11:29*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*04/03/17 09:32*	*04/03/17 11:29*	*1*

Lab Sample ID: LCS 590-11414/2-A
Matrix: Solid
Analysis Batch: 11421

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11414

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.500	0.466		mg/Kg		93	76 - 123
Ethylbenzene	0.500	0.476		mg/Kg		95	77 - 121
m,p-Xylene	0.500	0.476		mg/Kg		95	78 - 124
o-Xylene	0.500	0.456		mg/Kg		91	77 - 129
Toluene	0.500	0.471		mg/Kg		94	77 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*75 - 120*
4-Bromofluorobenzene (Surr)	*93*		*76 - 122*
Dibromofluoromethane (Surr)	*101*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

Lab Sample ID: 590-5801-20 DU
Matrix: Solid
Analysis Batch: 11421

Client Sample ID: DP-18 (2-2.25)
Prep Type: Total/NA
Prep Batch: 11414

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Benzene	ND		ND		mg/Kg	☼	NC	20
Ethylbenzene	0.21		0.197		mg/Kg	☼	5	20
m,p-Xylene	ND		ND		mg/Kg	☼	NC	20
o-Xylene	ND		ND		mg/Kg	☼	NC	20
Toluene	ND		ND		mg/Kg	☼	NC	20
Xylenes, Total	ND		ND		mg/Kg	☼	NC	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*75 - 120*
4-Bromofluorobenzene (Surr)	*119*		*76 - 122*
Dibromofluoromethane (Surr)	*105*		*80 - 120*
Toluene-d8 (Surr)	*112*		*80 - 120*

QC Sample Results

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-5801-1

Lab Sample ID: MB 590-11433/1-A
Matrix: Solid
Analysis Batch: 11428

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11433

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.020		mg/Kg		04/04/17 08:49	04/04/17 11:38	1
Ethylbenzene	ND		0.10		mg/Kg		04/04/17 08:49	04/04/17 11:38	1
m,p-Xylene	ND		0.40		mg/Kg		04/04/17 08:49	04/04/17 11:38	1
o-Xylene	ND		0.20		mg/Kg		04/04/17 08:49	04/04/17 11:38	1
Toluene	ND		0.10		mg/Kg		04/04/17 08:49	04/04/17 11:38	1
Xylenes, Total	ND		0.60		mg/Kg		04/04/17 08:49	04/04/17 11:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*75 - 120*	*04/04/17 08:49*	*04/04/17 11:38*	*1*
4-Bromofluorobenzene (Surr)	*94*		*76 - 122*	*04/04/17 08:49*	*04/04/17 11:38*	*1*
Dibromofluoromethane (Surr)	*104*		*80 - 120*	*04/04/17 08:49*	*04/04/17 11:38*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*	*04/04/17 08:49*	*04/04/17 11:38*	*1*

Lab Sample ID: LCS 590-11433/2-A
Matrix: Solid
Analysis Batch: 11428

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11433

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	0.500	0.453		mg/Kg		91	76 - 123
Ethylbenzene	0.500	0.463		mg/Kg		93	77 - 121
m,p-Xylene	0.500	0.472		mg/Kg		94	78 - 124
o-Xylene	0.500	0.462		mg/Kg		92	77 - 129
Toluene	0.500	0.467		mg/Kg		93	77 - 125

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*100*		*75 - 120*
4-Bromofluorobenzene (Surr)	*96*		*76 - 122*
Dibromofluoromethane (Surr)	*103*		*80 - 120*
Toluene-d8 (Surr)	*99*		*80 - 120*

Lab Sample ID: 590-5801-26 DU
Matrix: Solid
Analysis Batch: 11428

Client Sample ID: DP-21 (9.75-10)
Prep Type: Total/NA
Prep Batch: 11433

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Benzene	0.49		0.500		mg/Kg	☼	1	20
Ethylbenzene	5.6		5.98		mg/Kg	☼	7	20
m,p-Xylene	16		16.6		mg/Kg	☼	6	20
o-Xylene	6.3		6.80		mg/Kg	☼	8	20
Toluene	1.6		1.65		mg/Kg	☼	5	20
Xylenes, Total	22		23.4		mg/Kg	☼	7	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*75 - 120*
4-Bromofluorobenzene (Surr)	*104*		*76 - 122*
Dibromofluoromethane (Surr)	*106*		*80 - 120*
Toluene-d8 (Surr)	*105*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-11414/1-A
Matrix: Solid
Analysis Batch: 11422

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11414

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		5.0		mg/Kg		04/03/17 09:32	04/03/17 11:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*41.5 - 162*	*04/03/17 09:32*	*04/03/17 11:29*	*1*

Lab Sample ID: LCS 590-11414/3-A
Matrix: Solid
Analysis Batch: 11422

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11414

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			50.0	43.9		mg/Kg		88	74.4 - 124		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*41.5 - 162*

Lab Sample ID: 590-5801-20 DU
Matrix: Solid
Analysis Batch: 11429

Client Sample ID: DP-18 (2-2.25)
Prep Type: Total/NA
Prep Batch: 11414

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Gasoline	420			418		mg/Kg	☼			0.6	32.3

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*41.5 - 162*

Lab Sample ID: MB 590-11433/1-A
Matrix: Solid
Analysis Batch: 11429

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11433

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		5.0		mg/Kg		04/04/17 08:49	04/04/17 11:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*41.5 - 162*	*04/04/17 08:49*	*04/04/17 11:38*	*1*

Lab Sample ID: LCS 590-11433/3-A
Matrix: Solid
Analysis Batch: 11429

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11433

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			50.0	42.2		mg/Kg		84	74.4 - 124		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*41.5 - 162*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS) (Continued)

Lab Sample ID: 590-5801-26 DU
Matrix: Solid
Analysis Batch: 11429

Client Sample ID: DP-21 (9.75-10)
Prep Type: Total/NA
Prep Batch: 11433

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Gasoline	1100			1270		mg/Kg	☼			19	32.3

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*41.5 - 162*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-11454/1-A
Matrix: Solid
Analysis Batch: 11456

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11454

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg		04/05/17 10:04	04/05/17 12:01	1
Residual Range Organics (RRO) (C25-C36)	ND		25		mg/Kg		04/05/17 10:04	04/05/17 12:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*98*		*50 - 150*	*04/05/17 10:04*	*04/05/17 12:01*	*1*
n-Triacontane-d62	*85*		*50 - 150*	*04/05/17 10:04*	*04/05/17 12:01*	*1*

Lab Sample ID: LCS 590-11454/2-A
Matrix: Solid
Analysis Batch: 11456

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11454

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (DRO) (C10-C25)			66.7	66.7		mg/Kg		100	50 - 150		
Residual Range Organics (RRO) (C25-C36)			66.7	69.4		mg/Kg		104	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*107*		*50 - 150*
n-Triacontane-d62	*111*		*50 - 150*

Lab Sample ID: 590-5801-1 DU
Matrix: Solid
Analysis Batch: 11456

Client Sample ID: DP-1 (2.75-3)
Prep Type: Total/NA
Prep Batch: 11454

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)	2800			2520		mg/Kg	☼			11	40
Residual Range Organics (RRO) (C25-C36)	97			85.6		mg/Kg	☼			12	40

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
o-Terphenyl	*229*	*X*	*50 - 150*
n-Triacontane-d62	*97*		*50 - 150*

Lab Sample ID: 590-5801-2 DU
Matrix: Solid
Analysis Batch: 11457

Client Sample ID: DP-1 (16.5-16.75)
Prep Type: Total/NA
Prep Batch: 11454

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)	330			482		mg/Kg	☼			38	40
Residual Range Organics (RRO) (C25-C36)	ND			ND		mg/Kg	☼			29	40

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
o-Terphenyl	*164*	*X*	*50 - 150*
n-Triacontane-d62	*99*		*50 - 150*

Lab Sample ID: MB 590-11482/1-A
Matrix: Solid
Analysis Batch: 11483

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 11482

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		10		mg/Kg		04/06/17 10:45	04/06/17 12:47	1
Residual Range Organics (RRO) (C25-C36)	ND		25		mg/Kg		04/06/17 10:45	04/06/17 12:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*102*		*50 - 150*	*04/06/17 10:45*	*04/06/17 12:47*	*1*
n-Triacontane-d62	*77*		*50 - 150*	*04/06/17 10:45*	*04/06/17 12:47*	*1*

Lab Sample ID: LCS 590-11482/2-A
Matrix: Solid
Analysis Batch: 11483

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 11482

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (DRO) (C10-C25)			66.7	65.1		mg/Kg		98	50 - 150		
Residual Range Organics (RRO) (C25-C36)			66.7	66.6		mg/Kg		100	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*101*		*50 - 150*
n-Triacontane-d62	*98*		*50 - 150*

Lab Sample ID: 590-5801-21 DU
Matrix: Solid
Analysis Batch: 11483

Client Sample ID: DP-18 (12.5-12.75)
Prep Type: Total/NA
Prep Batch: 11482

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)	360			318		mg/Kg	☼			12	40
Residual Range Organics (RRO) (C25-C36)	ND			ND		mg/Kg	☼			24	40

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
o-Terphenyl	*134*		*50 - 150*
n-Triacontane-d62	*81*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 590-5801-22 DU
Matrix: Solid
Analysis Batch: 11484

Client Sample ID: DP-19 (11.75-12)
Prep Type: Total/NA
Prep Batch: 11482

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)	1400			1320		mg/Kg	☼			8	40
Residual Range Organics (RRO) (C25-C36)	ND			ND		mg/Kg	☼			7	40

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
o-Terphenyl	*175*	*X*	*50 - 150*
n-Triacontane-d62	*98*		*50 - 150*

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-5801-1

Client Sample ID: DP-1 (2.75-3)
Date Collected: 03/27/17 10:00
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-1 (2.75-3)
Date Collected: 03/27/17 10:00
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-1
Matrix: Solid
Percent Solids: 78.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.855 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		10	0.86 mL	43 mL	11421	04/03/17 20:37	CBW	TAL SPK
Total/NA	Prep	5035			4.855 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	NWTPH-Gx		10	0.86 mL	43 mL	11429	04/04/17 10:56	CBW	TAL SPK
Total/NA	Prep	3550C			15.32 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11456	04/05/17 12:57	NMI	TAL SPK

Client Sample ID: DP-1 (16.5-16.75)
Date Collected: 03/27/17 11:15
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-1 (16.5-16.75)
Date Collected: 03/27/17 11:15
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-2
Matrix: Solid
Percent Solids: 90.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.699 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		10	0.86 mL	43 mL	11421	04/03/17 12:54	CBW	TAL SPK
Total/NA	Prep	3550C			15.30 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11457	04/05/17 12:20	NMI	TAL SPK

Client Sample ID: DP-2 (6-6.25)
Date Collected: 03/27/17 11:35
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-2 (6-6.25)

Lab Sample ID: 590-5801-3
Date Collected: 03/27/17 11:35
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 89.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.065 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 13:15	CBW	TAL SPK
Total/NA	Prep	3550C			15.76 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11457	04/05/17 12:38	NMI	TAL SPK

Client Sample ID: DP-2 (12-12.25)

Lab Sample ID: 590-5801-4
Date Collected: 03/27/17 12:40
Matrix: Solid
Date Received: 03/31/17 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-2 (12-12.25)

Lab Sample ID: 590-5801-4
Date Collected: 03/27/17 12:40
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 93.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.197 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 13:36	CBW	TAL SPK
Total/NA	Prep	5035			6.197 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	11422	04/03/17 13:36	CBW	TAL SPK
Total/NA	Prep	3550C			15.14 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		10			11457	04/06/17 09:31	NMI	TAL SPK

Client Sample ID: DP-3 (9-9.25)

Lab Sample ID: 590-5801-5
Date Collected: 03/27/17 14:00
Matrix: Solid
Date Received: 03/31/17 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-3 (9-9.25)

Lab Sample ID: 590-5801-5
Date Collected: 03/27/17 14:00
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 90.7

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			7.152 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 13:57	CBW	TAL SPK
Total/NA	Prep	5035			7.152 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	0.86 mL	43 mL	11422	04/03/17 13:57	CBW	TAL SPK
Total/NA	Prep	3550C			15.35 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11457	04/05/17 13:15	NMI	TAL SPK

Client Sample ID: DP-3 (12-12.25)
Date Collected: 03/27/17 14:10
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-6
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-3 (12-12.25)
Date Collected: 03/27/17 14:10
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-6
Matrix: Solid
Percent Solids: 92.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.535 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 14:18	CBW	TAL SPK
Total/NA	Prep	3550C			15.54 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11457	04/05/17 13:34	NMI	TAL SPK

Client Sample ID: DP-4 (2-2.25)
Date Collected: 03/27/17 14:45
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-4 (2-2.25)
Date Collected: 03/27/17 14:45
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-7
Matrix: Solid
Percent Solids: 87.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.795 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 14:39	CBW	TAL SPK
Total/NA	Prep	3550C			15.41 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11457	04/05/17 13:52	NMI	TAL SPK

Client Sample ID: DP-5 (7.5-7.75)
Date Collected: 03/27/17 15:25
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-5 (7.5-7.75)
Date Collected: 03/27/17 15:25
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-8
Matrix: Solid
Percent Solids: 90.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.833 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK

Client Sample ID: DP-5 (7.5-7.75)

Lab Sample ID: 590-5801-8
Date Collected: 03/27/17 15:25
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 90.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 15:21	CBW	TAL SPK
Total/NA	Prep	5035			5.833 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	NWTPH-Gx		10	0.86 mL	43 mL	11429	04/04/17 09:32	CBW	TAL SPK
Total/NA	Prep	3550C			15.83 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11457	04/05/17 14:10	NMI	TAL SPK

Client Sample ID: DP-5 (8-8.75)

Lab Sample ID: 590-5801-9
Date Collected: 03/27/17 15:30
Matrix: Solid
Date Received: 03/31/17 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-5 (8-8.75)

Lab Sample ID: 590-5801-9
Date Collected: 03/27/17 15:30
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 92.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3.847 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 15:42	CBW	TAL SPK
Total/NA	Prep	3550C			15.71 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11456	04/05/17 13:15	NMI	TAL SPK

Client Sample ID: DP-5 (12.25-12.5)

Lab Sample ID: 590-5801-10
Date Collected: 03/27/17 15:40
Matrix: Solid
Date Received: 03/31/17 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-5 (12.25-12.5)

Lab Sample ID: 590-5801-10
Date Collected: 03/27/17 15:40
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 93.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.529 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 16:03	CBW	TAL SPK
Total/NA	Prep	3550C			15.94 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11456	04/05/17 13:34	NMI	TAL SPK

Client Sample ID: DP-6 (6.25-6.5)
Date Collected: 03/27/17 16:40
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-6 (6.25-6.5)
Date Collected: 03/27/17 16:40
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-11
Matrix: Solid
Percent Solids: 85.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.211 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 16:24	CBW	TAL SPK
Total/NA	Prep	3550C			15.92 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		10			11456	04/06/17 09:31	NMI	TAL SPK

Client Sample ID: DP-6 (9-9.25)
Date Collected: 03/27/17 16:45
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-6 (9-9.25)
Date Collected: 03/27/17 16:45
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-12
Matrix: Solid
Percent Solids: 92.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.788 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 16:45	CBW	TAL SPK
Total/NA	Prep	3550C			15.42 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11456	04/05/17 14:10	NMI	TAL SPK

Client Sample ID: DP-7 (6.25-6.5)
Date Collected: 03/28/17 08:10
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-7 (6.25-6.5)
Date Collected: 03/28/17 08:10
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-13
Matrix: Solid
Percent Solids: 87.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			7.455 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-5801-1

Client Sample ID: DP-7 (6.25-6.5)
Date Collected: 03/28/17 08:10
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-13
Matrix: Solid
Percent Solids: 87.2

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 17:06	CBW	TAL SPK
Total/NA	Prep	3550C			15.40 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11456	04/05/17 14:28	NMI	TAL SPK

Client Sample ID: DP-8 (8.75-9)
Date Collected: 03/28/17 08:30
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-8 (8.75-9)
Date Collected: 03/28/17 08:30
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-14
Matrix: Solid
Percent Solids: 91.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.869 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 17:27	CBW	TAL SPK
Total/NA	Prep	3550C			15.27 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11456	04/05/17 14:46	NMI	TAL SPK

Client Sample ID: DP-9 (7-7.25)
Date Collected: 03/28/17 09:05
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-9 (7-7.25)
Date Collected: 03/28/17 09:05
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-15
Matrix: Solid
Percent Solids: 88.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.425 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 17:48	CBW	TAL SPK
Total/NA	Prep	3550C			15.13 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11457	04/05/17 14:28	NMI	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-5801-1

Client Sample ID: DP-10 (9.75-10)
Date Collected: 03/28/17 09:25
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-16
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-10 (9.75-10)
Date Collected: 03/28/17 09:25
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-16
Matrix: Solid
Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3.966 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 18:10	CBW	TAL SPK
Total/NA	Prep	3550C			15.29 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11457	04/05/17 14:46	NMI	TAL SPK

Client Sample ID: DP-11 (1.75-2)
Date Collected: 03/28/17 09:40
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-17
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-11 (1.75-2)
Date Collected: 03/28/17 09:40
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-17
Matrix: Solid
Percent Solids: 77.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.841 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 18:31	CBW	TAL SPK
Total/NA	Prep	3550C			15.65 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11457	04/05/17 15:22	NMI	TAL SPK

Client Sample ID: DP-11 (4.75-5)
Date Collected: 03/28/17 09:45
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-18
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-11 (4.75-5)
Date Collected: 03/28/17 09:45
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-18
Matrix: Solid
Percent Solids: 89.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.106 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-5801-1

Client Sample ID: DP-11 (4.75-5)
Date Collected: 03/28/17 09:45
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-18
Matrix: Solid
Percent Solids: 89.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 19:13	CBW	TAL SPK
Total/NA	Prep	5035			6.106 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	NWTPH-Gx		10	0.86 mL	43 mL	11429	04/04/17 09:53	CBW	TAL SPK
Total/NA	Prep	3550C			15.21 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		10			11457	04/06/17 09:50	NMI	TAL SPK

Client Sample ID: DP-12 (9.5-9.75)
Date Collected: 03/28/17 10:30
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-19
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-12 (9.5-9.75)
Date Collected: 03/28/17 10:30
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-19
Matrix: Solid
Percent Solids: 77.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.038 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 19:34	CBW	TAL SPK
Total/NA	Prep	3550C			15.46 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11456	04/05/17 15:22	NMI	TAL SPK

Client Sample ID: DP-18 (2-2.25)
Date Collected: 03/28/17 14:30
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-20
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-18 (2-2.25)
Date Collected: 03/28/17 14:30
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-20
Matrix: Solid
Percent Solids: 79.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.868 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11421	04/03/17 19:55	CBW	TAL SPK
Total/NA	Prep	5035			5.868 g	5 mL	11414	04/03/17 09:32	CBW	TAL SPK
Total/NA	Analysis	NWTPH-Gx		10	0.86 mL	43 mL	11429	04/04/17 10:14	CBW	TAL SPK
Total/NA	Prep	3550C			15.34 g	5 mL	11454	04/05/17 10:04	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		10			11456	04/06/17 09:50	NMI	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-5801-1

Client Sample ID: DP-18 (12.5-12.75)
Date Collected: 03/28/17 14:45
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-21
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-18 (12.5-12.75)
Date Collected: 03/28/17 14:45
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-21
Matrix: Solid
Percent Solids: 92.3

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.668 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11428	04/04/17 13:45	CBW	TAL SPK
Total/NA	Prep	3550C			15.34 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11483	04/06/17 13:42	NMI	TAL SPK

Client Sample ID: DP-19 (11.75-12)
Date Collected: 03/28/17 16:00
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-22
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-19 (11.75-12)
Date Collected: 03/28/17 16:00
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-22
Matrix: Solid
Percent Solids: 89.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.234 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		10	0.86 mL	43 mL	11428	04/04/17 12:00	CBW	TAL SPK
Total/NA	Prep	5035			6.234 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	NWTPH-Gx		10	0.86 mL	43 mL	11429	04/04/17 12:00	CBW	TAL SPK
Total/NA	Prep	3550C			15.31 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11484	04/06/17 13:05	NMI	TAL SPK

Client Sample ID: DP-19 (16-16.25)
Date Collected: 03/28/17 16:20
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-23
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-19 (16-16.25)

Lab Sample ID: 590-5801-23
Date Collected: 03/28/17 16:20
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 93.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3.079 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11428	04/04/17 14:06	CBW	TAL SPK
Total/NA	Prep	3550C			15.68 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11484	04/06/17 13:24	NMI	TAL SPK

Client Sample ID: DP-19 (20-20.25)

Lab Sample ID: 590-5801-24
Date Collected: 03/28/17 16:30
Matrix: Solid
Date Received: 03/31/17 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-19 (20-20.25)

Lab Sample ID: 590-5801-24
Date Collected: 03/28/17 16:30
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 90.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.314 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11428	04/04/17 14:27	CBW	TAL SPK
Total/NA	Prep	3550C			15.59 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11484	04/06/17 13:42	NMI	TAL SPK

Client Sample ID: DP-20 (6-6.25)

Lab Sample ID: 590-5801-25
Date Collected: 03/29/17 08:05
Matrix: Solid
Date Received: 03/31/17 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-20 (6-6.25)

Lab Sample ID: 590-5801-25
Date Collected: 03/29/17 08:05
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 89.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.361 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11428	04/04/17 14:49	CBW	TAL SPK
Total/NA	Prep	3550C			15.06 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11483	04/06/17 14:00	NMI	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-5801-1

Client Sample ID: DP-21 (9.75-10)
Date Collected: 03/29/17 09:05
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-26
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-21 (9.75-10)
Date Collected: 03/29/17 09:05
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-26
Matrix: Solid
Percent Solids: 90.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.387 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		10	0.86 mL	43 mL	11428	04/04/17 12:20	CBW	TAL SPK
Total/NA	Prep	5035			5.387 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	NWTPH-Gx		10	0.86 mL	43 mL	11429	04/04/17 12:20	CBW	TAL SPK
Total/NA	Prep	3550C			15.43 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11483	04/06/17 14:18	NMI	TAL SPK

Client Sample ID: DP-21 (15.75-16)
Date Collected: 03/29/17 09:15
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-27
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-21 (15.75-16)
Date Collected: 03/29/17 09:15
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-27
Matrix: Solid
Percent Solids: 89.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.979 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		2	0.86 mL	43 mL	11428	04/04/17 15:10	CBW	TAL SPK
Total/NA	Prep	3550C			15.03 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		10			11484	04/06/17 16:24	NMI	TAL SPK

Client Sample ID: DP-21 (16.5-16.75)
Date Collected: 03/29/17 09:50
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-28
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-5801-1

Client Sample ID: DP-21 (16.5-16.75)

Lab Sample ID: 590-5801-28
Date Collected: 03/29/17 09:50
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 88.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			7.233 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11428	04/04/17 15:31	CBW	TAL SPK
Total/NA	Prep	3550C			15.99 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11483	04/06/17 14:54	NMI	TAL SPK

Client Sample ID: DP-22 (12.75-13)

Lab Sample ID: 590-5801-29
Date Collected: 03/29/17 11:30
Matrix: Solid
Date Received: 03/31/17 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-22 (12.75-13)

Lab Sample ID: 590-5801-29
Date Collected: 03/29/17 11:30
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 92.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.842 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11428	04/04/17 15:52	CBW	TAL SPK
Total/NA	Prep	3550C			15.27 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11483	04/06/17 15:12	NMI	TAL SPK

Client Sample ID: DP-23 (5-5.25)

Lab Sample ID: 590-5801-30
Date Collected: 03/29/17 12:00
Matrix: Solid
Date Received: 03/31/17 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-23 (5-5.25)

Lab Sample ID: 590-5801-30
Date Collected: 03/29/17 12:00
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 86.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.859 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11428	04/04/17 16:13	CBW	TAL SPK
Total/NA	Prep	3550C			15.70 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11483	04/06/17 15:30	NMI	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-5801-1

Client Sample ID: DP-23 (8-8.25)
Date Collected: 03/29/17 12:05
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-31
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-23 (8-8.25)
Date Collected: 03/29/17 12:05
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-31
Matrix: Solid
Percent Solids: 90.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.533 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11428	04/04/17 16:34	CBW	TAL SPK
Total/NA	Prep	3550C			15.58 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11483	04/06/17 16:06	NMI	TAL SPK

Client Sample ID: DP-24 (4.5-4.75)
Date Collected: 03/29/17 12:45
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-32
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-24 (4.5-4.75)
Date Collected: 03/29/17 12:45
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-32
Matrix: Solid
Percent Solids: 84.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.057 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11428	04/04/17 16:56	CBW	TAL SPK
Total/NA	Prep	3550C			15.22 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11483	04/06/17 16:24	NMI	TAL SPK

Client Sample ID: DP-24 (10-10.25)
Date Collected: 03/29/17 13:00
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-33
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-24 (10-10.25)
Date Collected: 03/29/17 13:00
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-33
Matrix: Solid
Percent Solids: 93.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.3 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK

Client Sample ID: DP-24 (10-10.25)

Lab Sample ID: 590-5801-33
Date Collected: 03/29/17 13:00
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 93.5

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11428	04/04/17 17:17	CBW	TAL SPK
Total/NA	Prep	3550C			15.27 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11484	04/06/17 14:00	NMI	TAL SPK

Client Sample ID: DP-25 (8.75-9)

Lab Sample ID: 590-5801-34
Date Collected: 03/29/17 13:45
Matrix: Solid
Date Received: 03/31/17 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-25 (8.75-9)

Lab Sample ID: 590-5801-34
Date Collected: 03/29/17 13:45
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 88.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.013 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11428	04/04/17 17:38	CBW	TAL SPK
Total/NA	Prep	3550C			15.35 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11484	04/06/17 14:18	NMI	TAL SPK

Client Sample ID: DP-25 (12.75-13)

Lab Sample ID: 590-5801-35
Date Collected: 03/29/17 14:00
Matrix: Solid
Date Received: 03/31/17 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-25 (12.75-13)

Lab Sample ID: 590-5801-35
Date Collected: 03/29/17 14:00
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 90.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.601 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11428	04/04/17 17:59	CBW	TAL SPK
Total/NA	Prep	3550C			15.65 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11484	04/06/17 14:36	NMI	TAL SPK

Client Sample ID: DP-26 (6-6.25)
Date Collected: 03/29/17 14:30
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-36
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-26 (6-6.25)
Date Collected: 03/29/17 14:30
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-36
Matrix: Solid
Percent Solids: 91.6

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			5.653 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		2	0.86 mL	43 mL	11428	04/04/17 18:21	CBW	TAL SPK
Total/NA	Prep	3550C			15.35 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11484	04/06/17 14:54	NMI	TAL SPK

Client Sample ID: DP-27 (4.75-5)
Date Collected: 03/29/17 15:30
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-37
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-27 (4.75-5)
Date Collected: 03/29/17 15:30
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-37
Matrix: Solid
Percent Solids: 81.9

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			6.105 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11428	04/04/17 18:42	CBW	TAL SPK
Total/NA	Prep	3550C			15.71 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11484	04/06/17 15:12	NMI	TAL SPK

Client Sample ID: DP-27 (8-8.25)
Date Collected: 03/29/17 15:40
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-38
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-27 (8-8.25)
Date Collected: 03/29/17 15:40
Date Received: 03/31/17 13:05

Lab Sample ID: 590-5801-38
Matrix: Solid
Percent Solids: 81.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			3.732 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-5801-1

Client Sample ID: DP-27 (8-8.25)

Lab Sample ID: 590-5801-38
Date Collected: 03/29/17 15:40
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 81.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11428	04/04/17 19:03	CBW	TAL SPK
Total/NA	Prep	3550C			15.27 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			11484	04/06/17 15:30	NMI	TAL SPK

Client Sample ID: DP-26 (10-10.25)

Lab Sample ID: 590-5801-39
Date Collected: 03/29/17 14:40
Matrix: Solid
Date Received: 03/31/17 13:05

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1			11440	04/04/17 12:36	NMI	TAL SPK

Client Sample ID: DP-26 (10-10.25)

Lab Sample ID: 590-5801-39
Date Collected: 03/29/17 14:40
Matrix: Solid
Date Received: 03/31/17 13:05
Percent Solids: 79.1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5035			4.869 g	5 mL	11433	04/04/17 08:49	CBW	TAL SPK
Total/NA	Analysis	8260C		1	0.86 mL	43 mL	11428	04/04/17 19:24	CBW	TAL SPK
Total/NA	Prep	3550C			15.30 g	5 mL	11482	04/06/17 10:45	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		10			11484	04/07/17 08:06	NMI	TAL SPK

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-5801-1

Laboratory: TestAmerica Spokane

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Method Summary

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-5801-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK
Moisture	Percent Moisture	EPA	TAL SPK

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

590-5801 Chain of Custody

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290
5755 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GeoEngineers
REPORT TO: S. LATHEN
ADDRESS:
PHONE: FAX:
INVOICE TO: GeoEngineers
P.O. NUMBER:
PROJECT NAME: Dawson Trucking
PROJECT NUMBER: 0504-130-00
SAMPLED BY: CMD

TURNAROUND REQUEST in Business Days *
Organic & Inorganic Analyses: [X] 10 STD. 7 5 4 3 2 1 <1
Petroleum Hydrocarbon Analyses: [X] 5 STD. 4 3 2 1 <1
OTHER Specify:
* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE / REQUESTED ANALYSES

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NWTPH-Dx	BTEX	NWTPH-Gx	NWTPH-Gx	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1	DP-1(2.75-3)	3/27/17 1000	X	X	X	X	S	3		
2	DP-1(16.5-16.75)	1115	X	X	X			~~3~~ 2		
3	DP-2(6-6.25)	1135	X	X	X			3		
4	DP-2(12-12.25)	1240	X	X	X	X		3		
5	DP-3(9-9.25)	1406	X	X	X	X		3		
6	DP-3(12-12.25)	1410	X	X	X			~~3~~ 2		
7	DP-4(2-2.25)	1445	X	X	X			2		
8	DP-5(7.5-7.75)	1525	X	X	X	X		3		
9	DP-5(8-8.75)	1530	X	X	X			3		
10	DP-5(12.25-12.5)	1540	X	X	X		↓	3		

RELEASED BY: S. Lathen DATE: 3/31/17
PRINT NAME: Scott Lathen FIRM: GEI TIME: 1305
RECEIVED BY: Sheila Kratz DATE: 3/31/17
PRINT NAME: Sheila Kratz FIRM: TA Spok TIME: 1305
RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:
ADDITIONAL REMARKS:
TEMP: 2.6 °C (2.4) IR001
PAGE 1 OF 4

TAL-1000 (0714)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

4/7/2017

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GeoEngineers
REPORT TO: S. LATHEN
ADDRESS:
PHONE: FAX:

INVOICE TO: GeoEngineers
P.O. NUMBER:

PROJECT NAME: Dawson Trucking
PROJECT NUMBER: 0504-130-00
SAMPLED BY: DMD

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: ~~10~~ STD. | 7 | 5 | 4 | 3 | 2 | 1 | <1

Petroleum Hydrocarbon Analyses: ~~5~~ STD. | 4 | 3 | 2 | 1 | <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	PRESERVATIVE	REQUESTED ANALYSES: NWTPH-Dx	BTEX	NWTPH-Gx	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1	DP-6 (6.25-6.5)	3/27/17 1640		X	X		S	3		
2	DP-6 (9-9.25)	1645		X	X			3		
3	DP-7 (6.25-6.5)	3/28/17 810		X	X			3		
4	DP-8 (8.75-9)	830		X	X			3		
5	DP-9 (7-7.25)	905		X	X			3		
6	DP-10 (9.75-10)	925		X	X			3		
7	DP-11 (1.75-2)	940		X	X			3		
8	DP-11 (4.75-5)	945		X	X	X		3		
9	DP-12 (9.5-9.75)	1030		X	X			3		
10	DP-18 (2-2.25)	1430		X	X	X		3		

RELEASED BY: Scott Lathen FIRM: GE DATE: 3/31/17 TIME: 1305
RECEIVED BY: Sheila Kratz FIRM: TA Spok DATE: 3/31/17 TIME: 1305

RELEASED BY: PRINT NAME: FIRM: DATE: TIME:
RECEIVED BY: PRINT NAME: FIRM: DATE: TIME:

ADDITIONAL REMARKS:

TEMP: 2.6 °C 2.4 °C

PAGE 2 OF 4

IR0004

AL-1000 (0714)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

4/7/2017

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GeoEngineers
REPORT TO: S. LATHEN
ADDRESS:
PHONE: FAX:
PROJECT NAME: DAWSON Trucking
PROJECT NUMBER: 0504-130-00
SAMPLED BY: CMP

INVOICE TO: GeoEngineers
P.O. NUMBER:

TURNAROUND REQUEST in Business Days *
Organic & Inorganic Analyses: [10 STD.] [7] [5] [4] [3] [2] [1] [<1]
Petroleum Hydrocarbon Analyses: [5 STD.] [4] [3] [2] [1] [<1]
[OTHER] Specify:
* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE

REQUESTED ANALYSES: NWTPH Dx; BTEX; NWTPH Gx

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NWTPH Dx	BTEX	NWTPH Gx	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1	DP-18 (12.5-12.75)	3/28/17 1445	X	X		S	3		
2	DP-19 (11.75-12)	16	X	X	X		3		
3	DP-19 (16-16.25)	1620	X	X			3		
4	DP-19 (20-20.25)	1630	X	X			2		
5	DP-20 (6-6.25)	3/29/17 805	X	X			2		
6	DP-21 (9.75-10)	905	X	X	X		3		
7	DP-21 (15.75-16)	915	X	X			3		
8	DP-21 (16.5-16.75)	950	X	X			2		
9	DP-22 (12.75-13)	1130	X	X			3		
10	DP-23 (5-5.25)	1200	X	X			3		

RELEASED BY: Scott Lathen FIRM: GEI DATE: 3/31/17 TIME: 1305
RECEIVED BY: Sheila Kratz FIRM: TA Spok DATE: 3/31/17 TIME: 1305
RELEASED BY: PRINT NAME: FIRM: DATE: TIME:
RECEIVED BY: PRINT NAME: FIRM: DATE: TIME:

ADDITIONAL REMARKS:
2.4 C
TEMP: 2.6 C
PAGE 3 OF 4
TAL-1000 (0714)

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

11922 E. First Ave., Spokane WA 99206-5302 509-924-9200 FAX 924-9290
9405 SW Nimbus Ave., Beaverton, OR 97008-7145 503-906-9200 FAX 906-9210
2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #:

CLIENT: GeoEngineers

REPORT TO: S. LATHEN
ADDRESS:

PHONE: FAX:

INVOICE TO: GeoEngineers

P.O. NUMBER:

PROJECT NAME: DAWSON Trucking

PROJECT NUMBER: 0504-130-00

SAMPLED BY: CMD

TURNAROUND REQUEST in Business Days *

Organic & Inorganic Analyses: ~~10~~ STD 7 5 4 3 2 1 <1

Petroleum Hydrocarbon Analyses: ~~5~~ STD 4 3 2 1 <1

OTHER Specify:

* Turnaround Requests less than standard may incur Rush Charges.

PRESERVATIVE

REQUESTED ANALYSES

	CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	NWTPH-Dx	BTEX	NWTPH-Gx	MATRIX (W, S, O)	# OF CONT.	LOCATION/ COMMENTS	TA WO ID
1	DP-23(8-8.25)	3/29/17 1205	X	X		S	2		
2	DP-24(4.5-4.75)	1245	X	X			3		
3	DP-24(10-10.25)	1300	X	X			2		
4	DP-25(8.75-9)	1345	X	X			3		
5	DP-25(12.75-13)	1400	X	X			2		
6	DP-26(6-6.25)	1430	X	X			3		
7	~~[illegible]~~	~~1445~~	~~X~~	~~X~~					
8	DP-27(4.75-5)	1530	X	X			3		
9	DP-27(8-8.25)	1540	X	X			2		
10	DP-26(10-10.25)	1440	X	X		S	2		

RELEASED BY: [signature] DATE: 3/31/17
PRINT NAME: Scott Lathen FIRM: GEI TIME: 1364
RECEIVED BY: Sheila Kred DATE: 3/31/17
PRINT NAME: Sheila Kraft FIRM: TA Spok TIME: 1305

RELEASED BY: DATE:
PRINT NAME: FIRM: TIME:
RECEIVED BY: DATE:
PRINT NAME: FIRM: TIME:

ADDITIONAL REMARKS: 2.4 C

TEMP: 2.6 C PAGE 4 OF 4

IRC0014000 (0714)

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-5801-1

Login Number: 5801
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Tel: (509)924-9200

TestAmerica Job ID: 590-6104-1
Client Project/Site: Dawson/0504-130-00

For:
GeoEngineers Inc
523 East Second Ave
Spokane, Washington 99202

Attn: Scott Lathen

Authorized for release by:
5/16/2017 10:33:05 AM

Randee Arrington, Project Manager II
(509)924-9200
randee.arrington@testamericainc.com

Table of Contents

Case Narrative

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-6104-1

Job ID: 590-6104-1

Laboratory: TestAmerica Spokane

Narrative

Receipt
The samples were received on 5/10/2017 12:45 PM; the samples arrived in good condition. The temperature of the cooler at receipt was 13.2º C.

Receipt Exceptions
A trip blank was submitted for analysis with these samples; however, it was not listed on the Chain of Custody (COC). The client was notified and chose to activate it for 8260C analysis on 05/11/17.

The following samples were received at the laboratory outside the required temperature criteria: MW-1:051017 (590-6104-1), MW-2 :051017 (590-6104-2), MW-3 :051017 (590-6104-3) and Trip Blank (590-6104-4). The samples are considered acceptable since it was collected and submitted to the laboratory on the same day and there is evidence that the chilling process has begun.

Analysis for NWTPH-Gx, 8260C BTEX and NWTPH-Dx for the following sample was put on hold by the client on 05/10/17: MW-1:051017 (590-6104-1). This analysis was originally requested on the chain-of-custody (COC).

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

VOA Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-6104-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
590-6104-2	MW-2 :051017	Water	05/10/17 10:00	05/10/17 12:45
590-6104-3	MW-3 :051017	Water	05/10/17 09:10	05/10/17 12:45
590-6104-4	Trip Blank	Water	05/10/17 00:00	05/10/17 12:45

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-6104-1

Client Sample ID: MW-2 :051017

Lab Sample ID: 590-6104-2
Matrix: Water
Date Collected: 05/10/17 10:00
Date Received: 05/10/17 12:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40		ug/L			05/11/17 14:05	1
Ethylbenzene	ND		1.0		ug/L			05/11/17 14:05	1
m,p-Xylene	ND		2.0		ug/L			05/11/17 14:05	1
o-Xylene	ND		1.0		ug/L			05/11/17 14:05	1
Toluene	ND		1.0		ug/L			05/11/17 14:05	1
Xylenes, Total	ND		3.0		ug/L			05/11/17 14:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 125*		*05/11/17 14:05*	*1*
4-Bromofluorobenzene (Surr)	*109*		*69 - 120*		*05/11/17 14:05*	*1*
Dibromofluoromethane (Surr)	*103*		*80 - 120*		*05/11/17 14:05*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*05/11/17 14:05*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			05/11/17 14:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*68.7 - 141*		*05/11/17 14:05*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.26		mg/L		05/15/17 10:30	05/15/17 13:24	1
Residual Range Organics (RRO) (C25-C36)	ND		0.44		mg/L		05/15/17 10:30	05/15/17 13:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*86*		*50 - 150*	*05/15/17 10:30*	*05/15/17 13:24*	*1*
n-Triacontane-d62	*80*		*50 - 150*	*05/15/17 10:30*	*05/15/17 13:24*	*1*

Client Sample ID: MW-3 :051017

Lab Sample ID: 590-6104-3
Matrix: Water
Date Collected: 05/10/17 09:10
Date Received: 05/10/17 12:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40		ug/L			05/11/17 14:27	1
Ethylbenzene	ND		1.0		ug/L			05/11/17 14:27	1
m,p-Xylene	ND		2.0		ug/L			05/11/17 14:27	1
o-Xylene	ND		1.0		ug/L			05/11/17 14:27	1
Toluene	ND		1.0		ug/L			05/11/17 14:27	1
Xylenes, Total	ND		3.0		ug/L			05/11/17 14:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 125*		*05/11/17 14:27*	*1*
4-Bromofluorobenzene (Surr)	*108*		*69 - 120*		*05/11/17 14:27*	*1*
Dibromofluoromethane (Surr)	*102*		*80 - 120*		*05/11/17 14:27*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*05/11/17 14:27*	*1*

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-6104-1

Client Sample ID: MW-3 :051017

Lab Sample ID: 590-6104-3
Matrix: Water
Date Collected: 05/10/17 09:10
Date Received: 05/10/17 12:45

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			05/11/17 14:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*68.7 - 141*		*05/11/17 14:27*	*1*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.25		mg/L		05/15/17 10:30	05/15/17 13:42	1
Residual Range Organics (RRO) (C25-C36)	ND		0.42		mg/L		05/15/17 10:30	05/15/17 13:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*90*		*50 - 150*	*05/15/17 10:30*	*05/15/17 13:42*	*1*
n-Triacontane-d62	*82*		*50 - 150*	*05/15/17 10:30*	*05/15/17 13:42*	*1*

Client Sample ID: Trip Blank

Lab Sample ID: 590-6104-4
Matrix: Water
Date Collected: 05/10/17 00:00
Date Received: 05/10/17 12:45

Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40		ug/L			05/11/17 14:49	1
Ethylbenzene	ND		1.0		ug/L			05/11/17 14:49	1
m,p-Xylene	ND		2.0		ug/L			05/11/17 14:49	1
o-Xylene	ND		1.0		ug/L			05/11/17 14:49	1
Toluene	ND		1.0		ug/L			05/11/17 14:49	1
Xylenes, Total	ND		3.0		ug/L			05/11/17 14:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 125*		*05/11/17 14:49*	*1*
4-Bromofluorobenzene (Surr)	*107*		*69 - 120*		*05/11/17 14:49*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*05/11/17 14:49*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*05/11/17 14:49*	*1*

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 590-12043/22
Matrix: Water
Analysis Batch: 12043

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.40		ug/L			05/11/17 11:55	1
Ethylbenzene	ND		1.0		ug/L			05/11/17 11:55	1
m,p-Xylene	ND		2.0		ug/L			05/11/17 11:55	1
o-Xylene	ND		1.0		ug/L			05/11/17 11:55	1
Toluene	ND		1.0		ug/L			05/11/17 11:55	1
Xylenes, Total	ND		3.0		ug/L			05/11/17 11:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 125*		*05/11/17 11:55*	*1*
4-Bromofluorobenzene (Surr)	*104*		*69 - 120*		*05/11/17 11:55*	*1*
Dibromofluoromethane (Surr)	*101*		*80 - 120*		*05/11/17 11:55*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*05/11/17 11:55*	*1*

Lab Sample ID: LCS 590-12043/1019
Matrix: Water
Analysis Batch: 12043

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	10.0	9.26		ug/L		93	80 - 120
Ethylbenzene	10.0	8.98		ug/L		90	80 - 120
m,p-Xylene	10.0	9.21		ug/L		92	80 - 120
o-Xylene	10.0	9.04		ug/L		90	80 - 120
Toluene	10.0	8.73		ug/L		87	80 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 125*
4-Bromofluorobenzene (Surr)	*104*		*69 - 120*
Dibromofluoromethane (Surr)	*98*		*80 - 120*
Toluene-d8 (Surr)	*98*		*80 - 120*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS)

Lab Sample ID: MB 590-12045/22
Matrix: Water
Analysis Batch: 12045

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		150		ug/L			05/11/17 11:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*68.7 - 141*		*05/11/17 11:55*	*1*

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC/MS) (Continued)

Lab Sample ID: LCS 590-12045/1021
Matrix: Water
Analysis Batch: 12045

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline			1000	887		ug/L		89	80 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*68.7 - 141*

Lab Sample ID: LCSD 590-12045/1030
Matrix: Water
Analysis Batch: 12045

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline			1000	930		ug/L		93	80 - 120	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*68.7 - 141*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 590-12075/1-A
Matrix: Water
Analysis Batch: 12077

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 12075

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics (DRO) (C10-C25)	ND		0.24		mg/L		05/15/17 10:30	05/15/17 12:31	1
Residual Range Organics (RRO) (C25-C36)	ND		0.40		mg/L		05/15/17 10:30	05/15/17 12:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
o-Terphenyl	*88*		*50 - 150*	*05/15/17 10:30*	*05/15/17 12:31*	*1*
n-Triacontane-d62	*69*		*50 - 150*	*05/15/17 10:30*	*05/15/17 12:31*	*1*

Lab Sample ID: LCS 590-12075/2-A
Matrix: Water
Analysis Batch: 12077

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 12075

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics (DRO) (C10-C25)			1.60	1.31		mg/L		82	50 - 150		
Residual Range Organics (RRO) (C25-C36)			1.60	1.73		mg/L		108	50 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
o-Terphenyl	*99*		*50 - 150*
n-Triacontane-d62	*96*		*50 - 150*

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 590-12075/3-A
Matrix: Water
Analysis Batch: 12077

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 12075

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics (DRO) (C10-C25)			1.60	1.24		mg/L		78	50 - 150	5	25
Residual Range Organics (RRO) (C25-C36)			1.60	1.72		mg/L		108	50 - 150	0	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
o-Terphenyl	*100*		*50 - 150*
n-Triacontane-d62	*100*		*50 - 150*

Lab Chronicle

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-6104-1

Client Sample ID: MW-2 :051017

Lab Sample ID: 590-6104-2

Date Collected: 05/10/17 10:00

Matrix: Water

Date Received: 05/10/17 12:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	12043	05/11/17 14:05	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	12045	05/11/17 14:05	MRS	TAL SPK
Total/NA	Prep	3510C			228.4 mL	2 mL	12075	05/15/17 10:30	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			12077	05/15/17 13:24	NMI	TAL SPK

Client Sample ID: MW-3 :051017

Lab Sample ID: 590-6104-3

Date Collected: 05/10/17 09:10

Matrix: Water

Date Received: 05/10/17 12:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	12043	05/11/17 14:27	MRS	TAL SPK
Total/NA	Analysis	NWTPH-Gx		1	43 mL	43 mL	12045	05/11/17 14:27	MRS	TAL SPK
Total/NA	Prep	3510C			237.1 mL	2 mL	12075	05/15/17 10:30	NMI	TAL SPK
Total/NA	Analysis	NWTPH-Dx		1			12077	05/15/17 13:42	NMI	TAL SPK

Client Sample ID: Trip Blank

Lab Sample ID: 590-6104-4

Date Collected: 05/10/17 00:00

Matrix: Water

Date Received: 05/10/17 12:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260C		1	43 mL	43 mL	12043	05/11/17 14:49	MRS	TAL SPK

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

Accreditation/Certification Summary

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-6104-1

Laboratory: TestAmerica Spokane

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Washington	State Program	10	C569	01-06-18

Analysis Method	Prep Method	Matrix	Analyte

Method Summary

Client: GeoEngineers Inc
Project/Site: Dawson/0504-130-00

TestAmerica Job ID: 590-6104-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	TAL SPK
NWTPH-Gx	Northwest - Volatile Petroleum Products (GC/MS)	NWTPH	TAL SPK
NWTPH-Dx	Northwest - Semi-Volatile Petroleum Products (GC)	NWTPH	TAL SPK

Protocol References:

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SPK = TestAmerica Spokane, 11922 East 1st Ave, Spokane, WA 99206, TEL (509)924-9200

TestAmerica Spokane
11922 East 1st Ave
Spokane, WA 99206
Phone (509) 924-9200 Fax (509) 924-9290

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: CMD	Lab PM: Arrington, Randee E	Carrier Tracking No(s):	COC No: 590-2585-894.1
Client Contact: Scott Lathen	Phone:	E-Mail: randee.arrington@testamericainc.com		Page: Page 1 of 1
Company: GeoEngineers Inc				Job #:
Address: 523 East Second Ave	Due Date Requested:			
City: Spokane	TAT Requested (days):			
State, Zip: WA, 99202				
Phone: 509-251-5239(Tel)	PO #: Purchase Order not required			
Email: slathen@geoengineers.com	WO #:			
Project Name: Dawson/0504-130-00	Project #: 59001159			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	NWTPH-G	NWTPH-Dx	B 36.1	Total Number of containers	Special Instructions/Note:
			Preservation Code:								
MW-1 : 051017	5/10/17	1050		Water			X	X	X		
MW-2 : 051017		1000		Water			X	X	X		
MW-3 : 051017		0910		Water			X	X	X		
				Water							
				Water							
				Water							

590-6104 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		5/10/17 1248	GE		5/10/17 1245	TestAmerica
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 13.2°C IR004

5/16/2017

Login Sample Receipt Checklist

Client: GeoEngineers Inc

Job Number: 590-6104-1

Login Number: 6104
List Number: 1
Creator: Kratz, Sheila J

List Source: TestAmerica Spokane

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	Received same day of collection; chilling process has begun.
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX C
Report Limitations and Guidelines for Use

APPENDIX C
REPORT LIMITATIONS AND GUIDELINES FOR USE[1]

This appendix provides information to help you manage your risks with respect to the use of this report.

Environmental Services Are Performed for Specific Purposes, Persons and Projects

This report has been prepared for the exclusive use of the Washington State Department of Ecology. This report is not intended for use by others, and the information contained herein is not applicable to other sites.

GeoEngineers structures our services to meet the specific needs of our clients. For example, an environmental site assessment study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and project site. No one except Ecology should rely on this environmental report without first conferring with GeoEngineers. This report should not be applied for any purpose or project except the one originally contemplated.

This Environmental Report is Based on a Unique Set of Project-Specific Factors

This report has been prepared for Dawson Trucking site located at 3366 Waitts Lake Road in Valley, Washington. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, do not rely on this report if it was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

If important changes are made after the date of this report, GeoEngineers should be given the opportunity to review our interpretations and recommendations and provide written modifications or confirmation, as appropriate.

Reliance Conditions for Third Parties

Our report was prepared for the exclusive use of Ecology. No other party may rely on the product of our services unless we agree in advance to such reliance in writing. This is to provide our firm and Ecology with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions. Within the limitations of scope, schedule and budget, our services

[1] Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; www.asfe.org.

have been executed in accordance with our Agreement with Ecology and generally accepted environmental practices in this area at the time this report was prepared.

Environmental Regulations are Always Evolving

Some substances may be present in the site vicinity in quantities or under conditions that may have led, or may lead, to contamination of the subject site, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substance, change or if more stringent environmental standards are developed in the future.

Uncertainty May Remain Even After This Assessment is Completed

No environmental site assessment can wholly eliminate uncertainty regarding the potential for contamination in connection with a property. Our interpretation of subsurface conditions in this study is based on field observations and chemical analytical data from widely-spaced sampling locations. It is always possible that contamination exists in areas that were not explored, sampled or analyzed.

Subsurface Conditions Can Change

This environmental report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by manmade events such as construction on or adjacent to the site, by new releases of hazardous substances, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Always contact GeoEngineers before applying this report to determine if it is still applicable.

Most Environmental Findings are Professional Opinions

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the site. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ – sometimes significantly – from those indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

Do Not Redraw the Exploration Logs

Environmental scientists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in an environmental report should never be redrawn for inclusion in other design drawings. Only photographic or electronic reproductions are acceptable, but recognize that separating logs from the report can elevate risk.

Read These Provisions Closely

Some clients, design professionals and contractors may not recognize that the geoscience practices (geotechnical engineering, geology and environmental science) are far less exact than other engineering and natural science disciplines. This lack of understanding can create unrealistic expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory “limitations”

provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you are unclear how these "Report Limitations and Guidelines for Use" apply to your project or site.

Geotechnical, Geologic and Geoenvironmental Reports Should Not be Interchanged

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually relate any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding a specific project.

Biological Pollutants

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings, or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants and no conclusions or inferences should be drawn regarding Biological Pollutants, as they may relate to this project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts.

If Ecology desires these specialized services, they should be obtained from a consultant who offers services in this specialized field.

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