May 8, 2019

Ms. Marisa Floyd
Reserve Silica Corporation
20 First Plaza Ctr. NW
Albuquerque, NM 87102

Re: Summary of RI Data Gaps Investigation Results: Plant Site and Lower Haul Road
Reserve Silica, Ravensdale, Washington
Project No. 160315-002-04

Dear Marisa:

Introduction

This report presents the results of additional environmental investigation conducted at the Plant Site and Lower Haul Road portions of the Reserve Silica Corporation (Reserve) Property (herein identified as the Property) located in Ravensdale, Washington (Figure 1). Portions of the Property were historically used for coal and sandstone mining and processing and is divided into seven tax lots totaling 377 acres (Lots 1 through 6 and the Plant Site lot).

Aspect Consulting, LLC (Aspect) prepared a Remedial Investigation (RI) Report in November 2017 (Aspect, 2017). The RI Report summarized information collected to characterize the nature and extent of contamination at the Property. The RI Report was reviewed by the Washington State Department of Ecology (Ecology), who identified RI data gaps in a January 30, 2018, letter (Ecology, 2018).

The additional investigation, represented by this summary report, was performed in accordance with Aspect's July 26, 2018, "Work Plan to Investigate Data Gaps: Plant Site and Lower Haul Road" (Work Plan; Aspect, 2018) to address data gaps identified by Ecology for these areas of the Property. The Work Plan was reviewed by Ecology, who provided informal comments in an August 8, 2018, email. Changes to the scope of work based on Ecology's comments are summarized in the "Deviations from Work Plan" section below.

The additional investigation was conducted to address data gaps outlined by Ecology for the Plant Site and Lower Haul Road (Ecology, 2018). The environmental concerns at the Plant Site consist of the following: surface releases of hazardous substances in the fueling and vehicle maintenance area (referred to as the Hazardous Materials Storage Area); surface releases of petroleum hydrocarbons, and related substances, attributable to long-term operations on the Plant Site, including sandstone processing, storage and loading of sand, vehicle and heavy equipment use, and process water management; and potential spills or leaks from the diesel underground storage tank (UST). The environmental concern for the Lower Haul Road pertains to the presence, nature, and extent of arsenic and lead in soil associated with the past import of slag for the use in road construction. The specific data gaps identified by Ecology to further evaluate these environmental concerns are summarized in the following section.

Summary of Data Gaps

After reviewing the RI, Ecology identified the following data gaps for the Plant Site and at the Lower Haul Road:

Hazardous Materials Storage Area

1. **Hazardous materials storage area.** Additional sampling/testing of soil that could have been impacted by spills from the waste-oil tank and in the equipment storage area.

Main Processing Area

2. **Drainage Ditch Sediments.** Evaluate impact from historical spills and discharges containing fuel and oil, as documented in past Ecology site inspections.

3. **Boring AB-2 Area (near historical coal and sand processing).** Further delineation of naphthalene and carcinogenic polycyclic aromatic hydrocarbon (cPAH) concentrations detected in soil at previous exploration AB-2.

4. **Transformers.** Investigate soil in area for possible polychlorinated biphenyl (PCB) contamination or explanation of why it is not a concern.

5. **Diesel underground storage tank.** When tank is removed, perform soil, UST pit water and groundwater testing to evaluate extent of affected soil and confirm adequate soil removal.

Lower Haul Road

6. **Imported slag.** Evaluate leachability of arsenic and lead from imported slag used for roadbed construction using liquid that simulates groundwater with high pH.

The Hazardous Materials Storage Area and Main Processing Area are depicted on Figures 2 through 4. The Lower Haul Road is depicted on Figure 6. In order to evaluate data gaps 1 through 6 above, Aspect completed additional exploration that consisted of the excavation of test pits, collection of soil samples for laboratory analysis of the contaminants of concern (COCs), and further leachability testing of slag samples. The investigations were completed in general accordance with the scope of work and analytical approach described in the Work Plan. The results for the data gap investigation of the Plant Site and Lower Haul Road, including a brief summary of the scope of work, soil and groundwater conditions observed, the results of analytical testing, and any deviations from the Work Plan are summarized below.

Deviations from the Work Plan

Based on Ecology's comments on the Work Plan, the following adjustments were made to the scope of work:

- Three test pits were added to evaluate soil conditions around boring AB-4 in the Hazardous Materials Storage Area.
- One test pit was added to evaluate soil conditions near the sump pond in the Main Processing Area.

In addition, the following modifications to the scope of work were implemented because of logistical challenges:

- The UST has not yet been decommissioned. An electrical control box sits on a concrete pad over the UST, preventing access to the UST for its removal. Reserve is planning to decommission the UST by permanent removal as soon as the electrical control box can be relocated.
- The work planned to evaluate soil conditions at the Former Railroad Drainage Ditch[1] was modified because Reserve does not have access to the BNSF right-of-way. Instead of completing borings in the former ditch, test pit TP-26 was excavated at the head of the ditch, where oily water was historically observed by Ecology to be entering the ditch. The test pit is located nearest to the potential sources of oily water, which include former elevated fueling tanks and wastewater from the diesel-fired air scrubber in the sand processing area and are expected to represent the worst-case conditions.

The analytical approach presented in the Work Plan for the data gap investigation included analysis of soil samples where field indications of petroleum hydrocarbons or other contamination were observed. Otherwise, the Work Plan indicated that a soil sample collected between 2 and 3 feet below ground surface (bgs) would be submitted for laboratory analysis. This approach was developed because the shallow fill soil would most accurately reflect the presence of hazardous substances attributable to potential surface releases. However, in many test pits, the thickness of the fill soil overlying historic coal tailings was less than 2 feet; in these instances, samples of the fill soil were collected at shallower intervals to meet the objectives of the data gap investigation.

Plant Site Data Gaps Investigation

A total of 26 test pits were excavated across the Plant Site areas (Figures 3 and 4). Test pits were excavated to maximum depths of 6 feet bgs, refusal, groundwater, coal, or native soils, whichever occurred shallowest. Soils observed were classified in accordance with the ASTM International, Inc. (ASTM) Method D2488 *Standard Practice for Description and Identification of Soils*, and soil descriptions, field screening results, and other relevant details (staining, odors, etc.) were recorded on the test-pit logs provided in Appendix A. Photographs of the test pits are included in Appendix B.

Soils observed in test pits excavated at the Plant Site areas consisted primarily of orange-yellow sand and silty sand with variable amounts of gravel, mixed with coal and woody debris, interpreted to be fill soil. Below the fill soil, sand mixed with coal tailings (approximately 50 to 80 percent coal, with increasing coal with depth) was encountered in all test pits at depths ranging from 10 inches to 4.5 feet bgs, except where test pits were terminated due to refusal on concrete (TP-4 through TP-7), groundwater (TP-21), or the maximum exploration depth of 6 feet bgs (TP-09). Test pit TP-10 was excavated to 3.7 feet bgs, where a PVC pipe was encountered, and further excavation was not completed.

Groundwater was observed in only one test-pit excavation (TP-21) at approximately 4 feet bgs. Groundwater was measured in existing Plant Site wells (AMW-01 to AMW-05, Figure 5) between 5.68 feet bgs and 21.82 feet bgs, corresponding to elevations of 589.03 feet North American

[1] The historical ditch has been filled by ballast rock and soil and, based on an April 18, 2018 site inspection, it does not appear that active drainage is ongoing. Currently, surface water runoff flows into the Plant Site Drainage Ditch, into the sump pond.

Vertical Datum (NAVD88) and 585.43 feet NAVD88 (Table 1). Groundwater elevation contours are shown on Figure 5.

The chemical analytical results for soil samples collected during the data gaps investigation are summarized on Tables 2 and 3. The laboratory analytical reports are attached as Appendix C. The results for the data gaps investigation work are summarized below for the Main Processing Area and the Hazardous Material Storage Area. The chemical analytical results are compared to the Washington State Model Toxics Control Act (MTCA) cleanup regulation Method A or B cleanup levels for unrestricted land use.

Hazardous Material Storage Area

On February 26, 2019, Aspect observed eight test-pit explorations (TP-1 through TP-8) proximal to the Hazardous Material Storage Area to address data gap 1 (Figure 4). Field screening did not identify the presence of petroleum hydrocarbons or volatile compounds in soil collected from any of the test pits excavated in this area. One soil sample from each test pit was collected and submitted to Onsite Environmental for laboratory analysis of the following COCs:

- Gasoline-, diesel-, and oil-range petroleum hydrocarbons by Northwest Methods NWTPH-Gx and NWTPH-Dx
- Benzene, toluene, ethylbenzene and xylenes (BTEX) by U.S. Environmental Protection Agency (EPA) Method 8021B
- cPAHs and naphthalene by EPA Method 8270D/SIM
- PCBs by EPA Method 8082A
- Halogenated volatile organic compounds (HVOCs) by EPA Method 8260C
- Total lead by EPA Method 6010D
- Fuel additives and blending compounds consisting of dibromoethane; 1,2-(EDB); dichloroethane; 1,2-(EDC); and methyl tertiary-butyl ether (MTBE) by EPA Method 8260C

The subsurface observations indicate the presence of a buried concrete pad at depths of approximately 2 feet bgs in TP-4 through TP-7; the estimated extent of the concrete pad is depicted on Figure 4. The concrete pad was observed to be approximately 6 to 12 inches thick and sitting directly on top of coal tailings. In test pits where the concrete slab was observed, the fill soil overlying the concrete slab was targeted for sampling.

Results

Diesel-range and heavy oil-range petroleum hydrocarbons were detected in soil samples collected from seven of the eight test pits completed in the Hazardous s Material Storage Area (Table 2). The reported concentrations are below the MTCA Method A cleanup levels of 2,000 milligrams per kilogram (mg/kg), except for the following:

- The soil sample collected from TP-7, where oil-range petroleum hydrocarbons were reported at a concentration of 2,500 mg/kg in a sample collected from 1 foot bgs.

Concentrations of lead, naphthalenes, and cPAHs were detected in soil samples collected from the test pits; the reported concentrations are all below the applicable MTCA Method A or B cleanup levels (Table 2). The laboratory did not report concentrations of VOCs (including HVOCs, BTEX,

and fuel additives) or PCBs above the laboratory reporting limits in soil samples collected from test pit explorations in the Hazardous Material Storage Area (Tables 2 and 3).

Main Processing Area

On February 26 and 27, 2019, Aspect observed 18 test-pit explorations (TP-9 through TP-26), in and around the Main Processing Area and at the head of the Former Railroad Drainage Ditch, to address data gaps 2 through 5 (Figure 3). One soil sample from each test pit was obtained and submitted to Onsite Environmental in Redmond, Washington, for laboratory analysis of the following COCs:

- Gasoline-, diesel-, and oil-range petroleum hydrocarbons by Northwest Methods NWTPH-Gx and NWTPH-Dx
- BTEX by EPA Method 8021b
- cPAHs and naphthalene by EPA Method 8270D/SIM

Additionally, four surface soil samples (SS-1 through SS-4) were obtained from the base of the electrical transformer to address data gap 4. Surface soil samples were submitted for laboratory analysis of mineral oil-range petroleum hydrocarbons and PCBs by EPA Method 8082A.

During excavation of TP-21, an abandoned sump vault was encountered at approximately 2 feet bgs (Figure 3). The sump vault appeared filled with concrete or similar material. The soil in TP-21 exhibited petroleum-like odors and gray staining between 2 and 4 feet bgs. Soil was collected from this depth interval for chemical analysis.

Results

Diesel-range and heavy oil-range petroleum hydrocarbons were detected in soil samples collected from 15 of the 18 test pits completed in the Main Processing Area, but only 3 of the 18 samples contained concentrations exceeding the MTCA Method A cleanup levels (Table 2). The reported concentrations are below the MTCA Method A cleanup levels of 2,000 mg/kg, except for the following:

- The soil sample collected from TP-21 at a depth of 2 feet, located near the sump pond and abandoned sump vault, where oil-range petroleum hydrocarbons were detected at 2,400 mg/kg.
- Soil samples collected from TP-24 and TP-25 at a depth of 2 feet, located west of the Plant Site office, where concentrations of diesel-range petroleum hydrocarbons were detected at 3,200 and 8,500 mg/kg respectively (Figure 3). The analytical laboratory indicates that the petroleum in these samples is consistent with Diesel Fuel #2.

Total xylenes were detected in one test-pit soil sample (TP-25) at concentrations below the MTCA Method A cleanup level. Naphthalenes and cPAHs were detected in 10 of the 18 soil samples, all reported concentrations are below the applicable MTCA Method A or B cleanup levels.

One of the four surface soil samples collected from around the base of the electrical transformer contained mineral oil-range petroleum hydrocarbons at a concentration of 3,400 mg/kg (SS-2), which is below the MTCA Method A cleanup level of 4,000 mg/kg (Table 2). PCBs were not detected in any of the four surface soil samples (Table 2).

Lower Haul Road Investigation

The presence, nature, and extent of arsenic and lead in soil associated with reported placement of ASARCO slag as roadbed material in the Lower Haul Road was originally investigated in May 2017 to support preparation of the RI report. The 2017 investigation included advancing eight borings along the Lower Haul Road to observe and classify soil, and to collect soil samples for laboratory analysis of arsenic and lead in leachate, as tested by the Synthetic Precipitation Leaching Procedure (SPLP) that measures potential leachability of metals under natural pH conditions. Ecology identified an outstanding data gap and requested that further leachability testing be completed using liquid that simulates groundwater with high pH, which is more representative of conditions near the Lower Haul Road.

On April 5, 2018, Aspect observed four test-pit explorations (ATP-1 through ATP-4; Figure 6) excavated along the Lower Haul Road in the general area of the soil borings completed during previous RI field activities. Test pits were excavated to refusal, which occurred between approximately 3 feet and 5.5 feet bgs. Soils observed were classified in accordance with the ASTM Method D2488 *Standard Practice for Description and Identification of Soils,* and soil descriptions, field screening results, and other relevant details (staining, odors, etc.) were recorded on the test-pit logs provided in Appendix A. Photographs of the test pits are included in Appendix B.

Soils observed in the Lower Haul Road test pits primarily consisted of gravelly, silty sand with slag fragments and orange-yellow sand with coal and slag fragments to the maximum depths excavated (5.5 feet bgs in ATP-2). Anthropogenic debris (bricks and plastic fragments) were encountered in roadbed material in test pit ATP-2.

Bulk soil samples were obtained from each test pit where the highest percentage of slag fragments was observed. Bulk soil was processed to segregate and estimate the relative percentages of slag and soil. One bulk sample, consisting of soil mixed with slag fragments, and one sample of segregated slag from each test pit were submitted to Friedman and Bruya, Inc., in Seattle, Washington, for laboratory analysis of leachate obtained under basic conditions (pH = 12) to simulate conditions at the Property. The resulting leachate was analyzed for arsenic, lead, iron, and manganese. The chemical results are summarized in Table 4; the laboratory analytical report is included in Appendix C.

Results

Processing of samples obtained from the Lower Haul Road showed a range of slag content (in percent by weight) between 5 percent (ATP-3) and 53 percent (ATP-1), as summarized in Table 4.

Analysis of leachate from bulk soil samples showed one detection of arsenic (5.07 milligrams per liter [mg/L] in ATP-1) and two detections of iron (up to 9.44 mg/L in ATP-3). Analysis of the leachate from slag-only samples showed one detection of arsenic (1.7 mg/L in ATP-3), and one detection of iron (18.8 mg/L in ATP-3). Lead and manganese were not detected in any of the leachate samples analyzed.

Conclusions

Investigation Findings Summary – Plant Site

The results of the data gap investigation on the Plant Site are consistent with the results of the previous investigation. Low concentrations of petroleum hydrocarbons are present in shallow soil throughout the Plant Site. Petroleum hydrocarbons have been detected sporadically at concentrations exceeding the MTCA Method A cleanup levels in soil samples collected between 1 and 2.5 feet bgs. The findings with respect to specific data gaps on the Plant Site are summarized below, including consideration of data collected during the RI:

- Data Gap 1 – Soil impacted by the operations in the Hazardous Material Storage Area appears shallow and localized, likely the result of compounded surface spills and not significant release(s). A total of 11 explorations have been completed in the Hazardous Material Storage Area and the only COC exceedances of the MTCA cleanup levels in soil are in two locations: oil-range petroleum hydrocarbons at TP-7 during the data gap investigation and arsenic at AMW-5 during the initial investigation (Table 2). A groundwater sample collected from AMW-5 in April 2017 did not contain concentrations of petroleum hydrocarbons or arsenic above the laboratory reporting limits, indicating that contaminants in soil are not leaching to groundwater. The presence of the buried concrete slab in this area likely prevents downward migration of contaminants released to the ground surface, reducing the potential for impact to groundwater or deeper soils.
- Data Gaps 2 and 3 – Soil quality in the Main Processing Area does not appear to have been significantly impacted by the long history of operations, including past discharge and runoff of oily wastewater from sandstone processing operations. A total of 22 soil explorations have been completed in the Main Processing Area and the only COC exceedances of the MTCA cleanup levels are in two discrete areas: boring AB-2, where oil-range hydrocarbons and cPAHs were reported in shallow soil; and the area of test pits TP-21, TP-24 and TP-25, where diesel- and oil-range petroleum hydrocarbons are reported in shallow soil. Elsewhere, soil samples obtained from test pits excavated in the Main Processing Area contained low concentrations of petroleum hydrocarbons and cPAHs, all well below the MTCA cleanup levels.
- Data Gap 4 – Surface soil samples obtained from around the base of the electrical transformer pad suggest that historical surface spills of mineral oil have occurred. However, the detected concentration is below the MTCA Method A cleanup level of 4,000 mg/kg, and PCBs were not detected above the laboratory reporting limits.

Investigation Findings Summary – Lower Haul Road

The results of investigation into the road-base material of the Lower Haul Road in 2017 identified concentrations of total arsenic and lead in soil exceeding MTCA criteria for the protection of human health and ecological receptors (Aspect, 2017). However, the arsenic and lead were not found to be leachable under natural pH conditions (Aspect, 2017) in the 15 samples submitted for SPLP testing in the 2017 study.

The results of high-pH leachability testing completed as part of the data gaps investigation resulted in arsenic in leachate from one of the bulk soil samples and one of the slag-only samples. Although the highest concentration of arsenic in leachate was reported in the bulk soil sample with the greatest amount of slag by weight (ATP-1; Table 4), three of the four slag-only samples did not

contain leachable arsenic under high-pH conditions, suggesting that the slag is not the primary source of arsenic in leachate.

Outstanding Plant Site Data Gaps

Data Gap 5 – This data gap pertaining to the soil and groundwater quality in the vicinity of the diesel UST will be characterized during permanent decommissioning by removal of the tank through completion of a UST site assessment, as required by Washington Administrative Code (WAC) 173-360A-0730, and to be performed in accordance with Ecology's Guidance for Site Checks and Site Assessments for USTs (Ecology, 1991).

References

Aspect Consulting, LLC (Aspect), 2017, Remedial Investigation Report, Reserve Silica Ravensdale Site, November 2017.

Aspect Consulting, LLC (Aspect), 2018, Work Plan to Investigate Data Gaps: Plant Site and Lower Haul Road, Reserve Silica, Ravensdale, Washington, July 26, 2018.

Washington State Department of Ecology (Ecology), 2018, Reserve Silica Corporation Cleanup Site, Preliminary Data Gaps, January 30, 2018.

Limitations

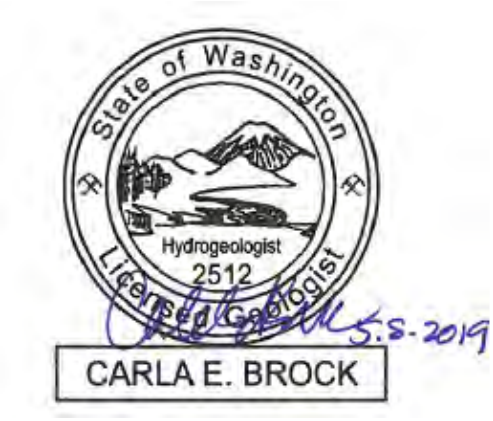
Work for this project was performed for Reserve Silica (Client), and this letter was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This letter does not represent a legal opinion. No other warranty, expressed or implied, is made.

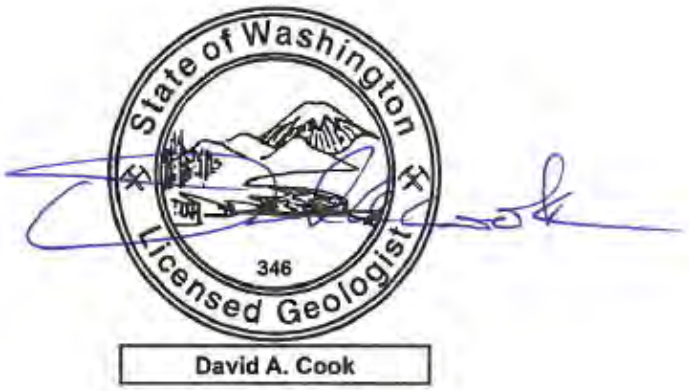
All reports prepared by Aspect Consulting for the Client apply only to the services described in the Agreement(s) with the Client. Any use or reuse by any party other than the Client is at the sole risk of that party, and without liability to Aspect Consulting. Aspect Consulting's original files/reports shall govern in the event of any dispute regarding the content of electronic documents furnished to others.

Please refer to Appendix D titled "Report Limitations and Guidelines for Use" for additional information governing the use of this report.

Sincerely,

Aspect consulting, LLC





Carla E. Brock, LHG
Associate Geologist
cbrock@aspectconsulting.com

David A. Cook, LG, CPG
Principal Geologist
dcook@aspectconsulting.com

Attachments:

Table 1–Plant Site Investigation Groundwater Elevations
Table 2–Plant Site Investigation Soil Results – TPH, BTEX, Metals, PAHs, and PCBs
Table 3–Plant Site Investigation Soil Results – VOCs
Table 4–Lower Haul Road Investigation – High pH Soil Leaching Results
Figure 1–Property Location Map
Figure 2–Plant Site Layout
Figure 3–Site Plan, Main Processing Area
Figure 4–Site Plan, Hazardous Material Storage Area
Figure 5–Groundwater Elevation Map, February 27, 2019
Figure 6–Lower Haul Road Investigation Locations
Appendix A–Test Pit Logs
Appendix B–Photographs
Appendix C–Laboratory Reports
Appendix D–Report Limitations and Guidelines for Use

V:\160315 Reserve Silica - RIFS\Deliverables\Plant Site Data Gap Inv Report\Plant Site Data Gap Investigation Report_20190508.docx

TABLES

Table 1. Plant Site Investigation Groundwater Elevations

Project No. 160315, Reserve Silica Plant Site, Ravensdale, Washington

Well Identification	AMW-1		AMW-2		AMW-3		AMW-4		AMW-5	
TOC Elevation (feet NAVD88)	611.48		601.03		591.44		599.49		599.92	
Approximate Range of Screened Interval (feet NAVD88)	567-582		577-587		571-586		576-591		576-591	
Sample Date	4/6/2017	2/27/2019	4/6/2017	2/27/2019	4/6/2017	2/27/2019	4/6/2017	2/27/2019	4/6/2017	2/27/2019
Depth to Water (feet below TOC)	20.39	21.82	11.99	12.81	5.52	5.68	13.18	13.33	13.95	14.08
Groundwater Elevation (feet NAVD88)	590.46	589.03	588.39	587.57	585.59	585.43	585.58	585.43	585.66	585.53

Notes:

Casing and groundwater elevations relative to North American Vertical Datum of 1988 (NAVD88).

Depth to water measured in feet below the top of casing (TOC).

Table 2. Plant Site Investigation Soil Results - TPH, BTEX, Metals, PAHs, and PCBs

Project No. 160315, Reserve Silica Plant Site, Ravensdale, Washington

Investigation Area			Hazardous Material Storage Area										
Location Name			TP-1	TP-2	TP-3	TP-4	TP-5	TP-6	TP-7	TP-8	AB-3	AB-4	AMW-5
Sample Date	MTCA Method A	MTCA Method B	02/26/2019	02/26/2019	02/26/2019	02/26/2019	02/26/2019	02/26/2019	02/26/2019	02/26/2019	3/29/2017	3/29/2017	3/29/2017
Sample ID	Unrestricted	Most Restrictive	TP-1-1.0	TP-2-1.8	TP-3-1.3	TP-4-1.0	TP-5-1.0	TP-6-1.0	TP-7-1.0	TP-8-1.5	AB-3-2.5	AB-4-2.5	AMW-5-2.5
Depth	Land Use	Cleanup Level	1 ft	1.8 ft	1.3 ft	1 ft	1 ft	1 ft	1 ft	1.5 ft	2.5 ft	2.5 ft	2.5 ft
Petroleum Hydrocarbons[1] (mg/kg)													
Gasoline Range Organics	100	1500	6.4 U	6.7 U	6.6 U	6.4 U	6.3 U	6.1 U	7.5 U	6.9 U	7.1 U	7.4 U	6.8 U
Diesel Range Organics	2,000	ne	27 U	27 U	28 U	**610 X**	91 U	**47 X**	280 U	29 U	**810**	**1,100**	**380**
Motor Oil Range Organics	2,000	ne	**68**	53 U	**74**	**1,200 X**	**850**	**64 X**	**2,500**	**66**	**520**	**1,800**	**510**
Mineral Oil Range Organics	4,000	ne	--	--	--	--	--	--	--	--	--	--	--
BTEX[2] (mg/kg)													
Benzene	0.03	18	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Toluene	7	6,400	0.064 U	0.067 U	0.066 U	0.064 U	0.063 U	0.061 U	0.075 U	0.069 U	0.071 U	0.074 U	0.068 U
Ethylbenzene	6	8,000	0.064 U	0.067 U	0.066 U	0.064 U	0.063 U	0.061 U	0.075 U	0.069 U	0.071 U	0.074 U	0.068 U
Total Xylenes	9	16,000	0.064 U	0.067 U	0.066 U	0.064 U	0.063 U	0.061 U	0.075 U	0.069 U	0.071 U	0.074 U	0.068 U
Metals[3] (mg/kg)													
Arsenic	20	0.67	--	--	--	--	--	--	--	--	12 U	12 U	**21**
Barium	ne	16,000	--	--	--	--	--	--	--	--	**150**	**110**	**78**
Cadmium	2	80	--	--	--	--	--	--	--	--	0.59 U	0.62 U	0.59 U
Chromium	ne	ne	--	--	--	--	--	--	--	--	**32**	**22**	**20**
Lead	250	ne	5.5 U	5.3 U	**150**	**31**	**42**	**8.1**	**8.7**	5.8 U	**11**	**12**	**9.1**
Mercury	2	24	--	--	--	--	--	--	--	--	0.30 U	0.31 U	0.29 U
Selenium	ne	400	--	--	--	--	--	--	--	--	12 U	12 U	12 U
Silver	ne	400	--	--	--	--	--	--	--	--	1.2 U	1.2 U	1.2 U
cPAHs and Naphthalenes[4] (mg/kg)													
1-Methylnaphthalene	ne	35	0.0073 U	0.0071 U	**0.017**	**0.19**	**0.013**	0.0074 U	0.0076 U	**0.022**	--	--	--
2-Methylnaphthalene	ne	320	0.0073 U	0.0071 U	**0.021**	**0.25**	**0.016**	0.0074 U	0.0076 U	**0.039**	--	--	--
Naphthalene	ne	1,600	0.0073 U	0.0071 U	**0.023**	**0.14**	**0.0084**	0.0074 U	0.0076 U	**0.05**	--	--	--
Total Naphthalene	5	1,600	0.0073 U	0.0071 U	**0.061**	**0.58**	**0.0374**	0.0074 U	0.0076 U	**0.111**	--	--	--
Benz(a)anthracene	ne	1.4	0.0073 U	0.0071 U	**0.039**	**0.03**	0.0072 U	0.0074 U	0.0076 U	0.0077 U	--	--	--
Benzo(a)pyrene	0.1	0.14	0.0073 U	0.0071 U	**0.058**	**0.03**	**0.0083**	0.0074 U	0.0076 U	0.0077 U	--	--	--
Benzo(b)fluoranthene	ne	1.4	0.0073 U	0.0071 U	**0.068**	**0.038**	**0.016**	0.0074 U	0.0076 U	0.0077 U	--	--	--
Benzo(j,k)fluoranthene	ne	ne	0.0073 U	0.0071 U	**0.023**	**0.0099**	0.0072 U	0.0074 U	0.0076 U	0.0077 U	--	--	--
Chrysene	ne	140	0.0073 U	0.0071 U	**0.048**	**0.039**	**0.012**	0.0074 U	0.0076 U	0.0077 U	--	--	--
Dibenzo(a,h)anthracene	ne	0.14	0.0073 U	0.0071 U	**0.0084**	0.0073 U	0.0072 U	0.0074 U	0.0076 U	0.0077 U	--	--	--
Indeno(1,2,3-cd)pyrene	ne	1.4	0.0073 U	0.0071 U	**0.043**	**0.022**	**0.014**	0.0074 U	0.0076 U	0.0077 U	--	--	--
Total cPAHs TEQ (ND = 1/2 RDL	0.1	0.14	0.0055115 U	0.0053605 U	**0.07662**	**0.040745**	**0.0125**	0.005587 U	0.005738 U	0.0058135 U			
PCBs[5] (mg/kg)													
Aroclor 1016	ne	5.6	0.055 U	0.053 U	0.055 U	0.055 U	0.054 U	0.055 U	0.057 U	0.058 U	--	--	--
Aroclor 1221	ne	ne	0.055 U	0.053 U	0.055 U	0.055 U	0.054 U	0.055 U	0.057 U	0.058 U	--	--	--
Aroclor 1232	ne	ne	0.055 U	0.053 U	0.055 U	0.055 U	0.054 U	0.055 U	0.057 U	0.058 U	--	--	--
Aroclor 1242	ne	ne	0.055 U	0.053 U	0.055 U	0.055 U	0.054 U	0.055 U	0.057 U	0.058 U	--	--	--
Aroclor 1248	ne	ne	0.055 U	0.053 U	0.055 U	0.055 U	0.054 U	0.055 U	0.057 U	0.058 U	--	--	--
Aroclor 1254	ne	0.5	0.055 U	0.053 U	0.055 U	0.055 U	0.054 U	0.055 U	0.057 U	0.058 U	--	--	--
Aroclor 1260	ne	0.5	0.055 U	0.053 U	0.055 U	0.055 U	0.054 U	0.055 U	0.057 U	0.058 U	--	--	--
Total PCBs (Sum of Aroclors)	1	0.5	0.055 U	0.053 U	0.055 U	0.055 U	0.054 U	0.055 U	0.057 U	0.058 U	--	--	--

Table 2. Plant Site Investigation Soil Results - TPH, BTEX, Metals, PAHs, and PCBs

Project No. 160315, Reserve Silica Plant Site, Ravensdale, Washington

Investigation Area			Electrical Transformer Area				Main Processing Area								
Location Name			SS-1	SS-2	SS-3	SS-4	TP-9	TP-10	TP-11	TP-12	TP-13	TP-14	TP-15	TP-16	TP-17
Sample Date	MTCA Method A Unrestricted Land Use	MTCA Method B Most Restrictive Cleanup Level	02/26/2019	02/26/2019	02/26/2019	02/26/2019	02/26/2019	02/26/2019	02/26/2019	02/26/2019	02/26/2019	02/26/2019	02/27/2019	02/27/2019	02/27/2019
Sample ID			SS-1	SS-2	SS-3	SS-4	TP-9-3.0	TP-10-1.8	TP-11-1.8	TP-12-1.0	TP-13-1.8	TP-14-1.0	TP-15-1.0	TP-16-0.5	TP-17-1.0
Depth			surface	surface	surface	surface	3 ft	1.8 ft	1.8 ft	1 ft	1.8 ft	1 ft	1 ft	0.5 ft	1 ft
Petroleum Hydrocarbons[1] (mg/kg)															
Gasoline Range Organics	100	1500	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel Range Organics	2,000	ne	--	--	--	--	27 U	28 U	29 U	**30 X**	61 U	**45 X**	70 U	29 U	30 U
Motor Oil Range Organics	2,000	ne	--	--	--	--	**72**	**79**	**59**	**73**	**560**	**86**	**720**	**120**	60 U
Mineral Oil Range Organics	4,000	ne	27 U	**3,400**	31 U	39 U	--	--	--	--	--	--	--	--	--
BTEX[2] (mg/kg)															
Benzene	0.03	18	--	--	--	--	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U
Toluene	7	6,400	--	--	--	--	0.065 U	0.066 U	0.069 U	0.068 U	0.066 U	0.061 U	0.064 U	0.062 U	0.079 U
Ethylbenzene	6	8,000	--	--	--	--	0.065 U	0.066 U	0.069 U	0.068 U	0.066 U	0.061 U	0.064 U	0.062 U	0.079 U
Total Xylenes	9	16,000	--	--	--	--	0.065 U	0.066 U	0.069 U	0.068 U	0.066 U	0.061 U	0.064 U	0.062 U	0.079 U
Metals[3] (mg/kg)															
Arsenic	20	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium	ne	16,000	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	2	80	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	ne	ne	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	250	ne	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	2	24	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	ne	400	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	ne	400	--	--	--	--	--	--	--	--	--	--	--	--	--
cPAHs and Naphthalenes[4] (mg/kg)															
1-Methylnaphthalene	ne	35	--	--	--	--	0.0073 U	**0.0081**	0.0077 U	**0.073**	0.0074 U	**0.015**	0.0072 U	0.0076 U	0.0079 U
2-Methylnaphthalene	ne	320	--	--	--	--	0.0073 U	0.0076 U	0.0077 U	**0.071**	0.0074 U	**0.013**	0.0072 U	0.0076 U	0.0079 U
Naphthalene	ne	1,600	--	--	--	--	0.0073 U	0.0076 U	**0.0088**	**0.045**	**0.01**	**0.0077**	0.0072 U	0.0076 U	0.0079 U
Total Naphthalene	5	1,600	--	--	--	--	0.0073 U	**0.0081**	**0.0088**	**0.189**	**0.01**	**0.0357**	0.0072 U	0.0076 U	0.0079 U
Benz(a)anthracene	ne	1.4	--	--	--	--	0.0073 U	0.0076 U	0.0077 U	**0.014**	0.0074 U	0.0072 U	0.0072 U	0.0076 U	0.0079 U
Benzo(a)pyrene	0.1	0.14	--	--	--	--	0.0073 U	0.0076 U	0.0077 U	**0.009**	0.0074 U	0.0072 U	0.0072 U	0.0076 U	0.0079 U
Benzo(b)fluoranthene	ne	1.4	--	--	--	--	0.0073 U	0.0076 U	0.0077 U	**0.014**	0.0074 U	0.0072 U	0.0072 U	0.0076 U	0.0079 U
Benzo(j,k)fluoranthene	ne	ne	--	--	--	--	0.0073 U	0.0076 U	0.0077 U	0.0074 U	0.0074 U	0.0072 U	0.0072 U	0.0076 U	0.0079 U
Chrysene	ne	140	--	--	--	--	0.0073 U	0.0076 U	0.0077 U	**0.015**	0.0074 U	0.0072 U	0.0072 U	0.0076 U	0.0079 U
Dibenzo(a,h)anthracene	ne	0.14	--	--	--	--	0.0073 U	0.0076 U	0.0077 U	0.0074 U	0.0074 U	0.0072 U	0.0072 U	0.0076 U	0.0079 U
Indeno(1,2,3-cd)pyrene	ne	1.4	--	--	--	--	0.0073 U	0.0076 U	0.0077 U	**0.0089**	0.0074 U	0.0072 U	0.0072 U	0.0076 U	0.0079 U
Total cPAHs TEQ (ND = 1/2 RDL	0.1	0.14	--	--	--	--	0.0055115 U	0.005738 U	0.0058135 U	**0.01358**	0.005587 U	0.005436 U	0.005436 U	0.005738 U	0.0059645 U
PCBs[5] (mg/kg)															
Aroclor 1016	ne	5.6	0.055 U	0.059 U	0.062 U	0.060 U	--	--	--	--	--	--	--	--	--
Aroclor 1221	ne	ne	0.055 U	0.059 U	0.062 U	0.060 U	--	--	--	--	--	--	--	--	--
Aroclor 1232	ne	ne	0.055 U	0.059 U	0.062 U	0.060 U	--	--	--	--	--	--	--	--	--
Aroclor 1242	ne	ne	0.055 U	0.059 U	0.062 U	0.060 U	--	--	--	--	--	--	--	--	--
Aroclor 1248	ne	ne	0.055 U	0.059 U	0.062 U	0.060 U	--	--	--	--	--	--	--	--	--
Aroclor 1254	ne	0.5	0.055 U	0.059 U	0.062 U	0.060 U	--	--	--	--	--	--	--	--	--
Aroclor 1260	ne	0.5	0.055 U	0.059 U	0.062 U	0.060 U	--	--	--	--	--	--	--	--	--
Total PCBs (Sum of Aroclors)	1	0.5	0.055 U	0.059 U	0.062 U	0.060 U	--	--	--	--	--	--	--	--	--

Table 2. Plant Site Investigation Soil Results - TPH, BTEX, Metals, PAHs, and PCBs

Project No. 160315, Reserve Silica Plant Site, Ravensdale, Washington

Investigation Area			Main Processing Area, continued									Main Processing Area, continued			
Location Name			TP-18	TP-19	TP-20	TP-21	TP-22	TP-23	TP-24	TP-25	TP-26	AB-1	AB-2	AB-2	AMW-3
Sample Date	MTCA Method A Unrestricted Land Use	MTCA Method B Most Restrictive Cleanup Level	02/27/2019	02/27/2019	02/27/2019	02/27/2019	02/27/2019	02/27/2019	02/27/2019	02/27/2019	02/27/2019	3/30/2017	3/30/2017	3/30/2017	3/29/2017
Sample ID			TP-18-0.8	TP-19-0.5	TP-20-0.6	TP-21-2.0	TP-22-1.8	TP-23-0.7	TP-24-2.0	TP-25-2.0	TP-26-1.5	AB-1-7.5	AB-2-2.5	AB-2-7.5	AMW-3-7.5
Depth			0.8 ft	0.5 ft	0.6 ft	2 ft	1.8 ft	0.7 ft	2 ft	2 ft	1.5 ft	7.5 ft	2.5 ft	7.5 ft	7.5 ft
Petroleum Hydrocarbons[1] (mg/kg)															
Gasoline Range Organics	100	1500	--	--	--	--	--	--	--	--	--	--	--	--	--
Diesel Range Organics	2,000	ne	28 U	27 U	**48 X**	**1,500 X**	**39 X**	28 U	**3,200 ***	**8,500 ***	27 U	42 U	**1,600**	33 U	**160**
Motor Oil Range Organics	2,000	ne	57 U	54 U	**200**	**2,400 X**	**99**	**150**	**1,000 X**	**1,800 X**	**83**	84 U	**3,000**	67 U	**350**
Mineral Oil Range Organics	4,000	ne	--	--	--	--	--	--	--	--	--	--	--	--	--
BTEX[2] (mg/kg)															
Benzene	0.03	18	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.020 U	0.026 U	0.023 U	0.020 U	0.021 U	0.020 UJ	0.020 U	0.022 U
Toluene	7	6,400	0.070 U	0.058 U	0.058 U	0.079 U	0.083 U	0.060 U	0.13 U	0.11 U	0.060 U	0.11 U	0.072 UJ	0.071 U	0.11 U
Ethylbenzene	6	8,000	0.070 U	0.058 U	0.058 U	0.079 U	0.083 U	0.060 U	0.13 U	0.11 U	0.060 U	0.11 U	0.072 UJ	0.071 U	0.11 U
Total Xylenes	9	16,000	0.070 U	0.058 U	0.058 U	0.079 U	0.083 U	0.060 U	0.13 U	**0.46**	0.060 U	0.11 U	0.072 UJ	0.071 U	0.11 U
Metals[3] (mg/kg)															
Arsenic	20	0.67	--	--	--	--	--	--	--	--	--	--	--	--	--
Barium	ne	16,000	--	--	--	--	--	--	--	--	--	--	--	--	--
Cadmium	2	80	--	--	--	--	--	--	--	--	--	--	--	--	--
Chromium	ne	ne	--	--	--	--	--	--	--	--	--	--	--	--	--
Lead	250	ne	--	--	--	--	--	--	--	--	--	--	--	--	--
Mercury	2	24	--	--	--	--	--	--	--	--	--	--	--	--	--
Selenium	ne	400	--	--	--	--	--	--	--	--	--	--	--	--	--
Silver	ne	400	--	--	--	--	--	--	--	--	--	--	--	--	--
cPAHs and Naphthalenes[4] (mg/kg)															
1-Methylnaphthalene	ne	35	0.0076 U	0.0072 U	**0.016**	0.0080 U	0.0084 U	**0.012**	**2.7**	**15**	0.0072 U	**0.036**	**23**	**0.017**	**0.066**
2-Methylnaphthalene	ne	320	0.0076 U	0.0072 U	**0.014**	**0.0099**	0.0084 U	**0.013**	**2.9**	**23**	0.0072 U	**0.059**	**43**	**0.03**	**0.098**
Naphthalene	ne	1,600	0.0076 U	0.0072 U	0.0075 U	0.0080 U	0.0084 U	0.0074 U	**0.68**	**3.2**	0.0072 U	**0.13**	**63**	**0.077**	**0.17**
Total Naphthalene	5	1,600	0.0076 U	0.0072 U	**0.03**	**0.0099**	0.0084 U	**0.025**	**6.28**	**41.2**	0.0072 U	**0.225**	**129**	**0.124**	**0.334**
Benz(a)anthracene	ne	1.4	0.0076 U	0.0072 U	0.0075 U	**0.014**	0.0084 U	0.0074 U	**0.011**	**0.014**	0.0072 U	0.011 U	**5.4**	0.0089 U	**0.019**
Benzo(a)pyrene	0.1	0.14	0.0076 U	0.0072 U	0.0075 U	0.0080 U	0.0084 U	0.0074 U	0.0072 U	0.0071 U	0.0072 U	0.011 U	**0.75**	0.0089 U	**0.012**
Benzo(b)fluoranthene	ne	1.4	0.0076 U	0.0072 U	0.0075 U	**0.0092**	0.0084 U	0.0074 U	0.0072 U	**0.0086**	0.0072 U	0.011 U	**1.6**	0.0089 U	0.011 U
Benzo(j,k)fluoranthene	ne	ne	0.0076 U	0.0072 U	0.0075 U	0.0080 U	0.0084 U	0.0074 U	0.0072 U	0.0071 U	0.0072 U	0.011 U	**0.61**	0.0089 U	0.011 U
Chrysene	ne	140	0.0076 U	0.0072 U	0.0075 U	**0.037**	0.0084 U	0.0074 U	**0.037**	**0.074**	0.0072 U	0.011 U	**4.5**	0.0089 U	**0.013**
Dibenzo(a,h)anthracene	ne	0.14	0.0076 U	0.0072 U	0.0075 U	0.0080 U	0.0084 U	0.0074 U	0.0072 U	0.0071 U	0.0072 U	0.011 U	0.43 U	0.0089 U	0.011 U
Indeno(1,2,3-cd)pyrene	ne	1.4	0.0076 U	0.0072 U	0.0075 U	0.0080 U	0.0084 U	0.0074 U	0.0072 U	0.0071 U	0.0072 U	0.011 U	0.43 U	0.0089 U	0.011 U
Total cPAHs TEQ (ND = 1/2 RDL	0.1	0.14	0.005738 U	0.005436 U	0.0056625 U	**0.00789**	0.006342 U	0.005587 U	**0.00651**	**0.007615**	0.005436 U	0.008305 U	**1.599**	0.0067195 U	0.01623
PCBs[5] (mg/kg)															
Aroclor 1016	ne	5.6	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1221	ne	ne	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1232	ne	ne	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1242	ne	ne	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1248	ne	ne	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1254	ne	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
Aroclor 1260	ne	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--
Total PCBs (Sum of Aroclors)	1	0.5	--	--	--	--	--	--	--	--	--	--	--	--	--

Notes:

[1]Petroleum hydrocarbons analyzed using Northwest Methods NWTPH-Gx and NWTPH-Dx.
[2]Benzene (B), toluene (T), ethylbenzene (E), and xylenes (X) analyzed using Environmental Protection Agency (EPA) method 8021E
[3]Total metals (As, Ba, Cd, Cr, Pb, Hg, Se, and Ag) by EPA method 6010C/7471E
[4]Carcinogenic polycyclic aromatic hydrocarbons (cPAHs) and naphthalenes by EPA method 8270D/SIM
[5]Polychlorinated biphenols (PBCs) analyzed using EPA method 8082A

mg/kg = milligrams per kilogram (parts per million)
ft = feet below ground surface
MTCA= Model Toxics Control Act
J = the internal standard associated with the analyte is out of control limits and the reported concentration is an estimate.
ne = not established

X = Chromatographic pattern did not match fuel pattern.
-- = analyte not tested
U = analyte was not detected at a concentration greater than the indicated laboratory reporting limit.
* = Chromatigraphic pattern was interpretted to represent Diesel Fuel #2 by the laboratory
Bold denotes a detected concentration.
Shading indicates a concentration that exceeds the MTCA Method A cleanup level, or Method B cleanup level where Method A is not established.

Table 3. Plant Site Investigation Soil Results - VOCs

Project No. 160315, Reserve Silica Plant Site, Ravensdale, Washington

Location Name	MTCA Method A Unrestricted Land Use	MTCA Method B Most Restrictive Cleanup Level	TP-1	TP-2	TP-3	TP-4	TP-5	TP-6	TP-7	TP-8
Sample Date			02/26/2019	02/26/2019	02/26/2019	02/26/2019	02/26/2019	02/26/2019	02/26/2019	02/26/2019
Sample ID			TP-1-1.0	TP-2-1.8	TP-3-1.3	TP-4-1.0	TP-5-1.0	TP-6-1.0	TP-7-1.0	TP-8-1.5
Depth (bgs)			1 ft	1.8 ft	1.3 ft	1 ft	1 ft	1 ft	1 ft	1.5 ft
HVOCs[1] (mg/kg)										
1,1,1,2-Tetrachloroethane	ne	38	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
1,1,1-Trichloroethane	2	160,000	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
1,1,2,2-Tetrachloroethane	ne	5	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
1,1,2-Trichloroethane	ne	18	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
1,1-Dichloroethane	ne	16,000	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
1,1-Dichloroethene	ne	4,000	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
1,1-Dichloropropene	ne	ne	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
1,2,3-Trichlorobenzene	ne	ne	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
1,2,3-Trichloropropane	ne	0.033	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
1,2,4-Trichlorobenzene	ne	35	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
1,2-Dibromo-3-chloropropane	ne	1.3	0.0068 U	0.0069 U	0.0062 U	0.0065 U	0.0058 U	0.0068 U	0.0071 U	0.0062 U
1,2-Dibromoethane (EDB)	0.005	0.5	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
1,2-Dichlorobenzene	ne	7,200	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
1,2-Dichloroethane (EDC)	ne	11	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
1,2-Dichloropropane	ne	ne	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
1,3-Dichlorobenzene	ne	ne	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
1,3-Dichloropropane	ne	ne	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
1,4-Dichlorobenzene	ne	ne	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
2,2-Dichloropropane	ne	ne	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
2-Chloroethyl Vinyl Ether	ne	ne	0.0096 U	0.0098 U	0.0088 U	0.0092 U	0.0082 U	0.0097 U	0.010 U	0.0088 U
2-Chlorotoluene	ne	1,600	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
4-Chlorotoluene	ne	ne	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
Bromobenzene	ne	ne	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
Bromochloromethane	ne	ne	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
Bromodichloromethane	ne	16	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
Bromoform	ne	130	0.0068 U	0.0069 U	0.0062 U	0.0065 U	0.0058 U	0.0068 U	0.0071 U	0.0062 U
Bromomethane	ne	110	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
Carbon Tetrachloride	ne	14	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
Chlorobenzene	ne	1,600	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
Chloroethane	ne	ne	0.0068 U	0.0069 U	0.0062 U	0.0065 U	0.0058 U	0.0068 U	0.0071 U	0.0062 U
Chloroform	ne	800	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
Chloromethane	ne	ne	0.0068 U	0.0069 U	0.0062 U	0.0065 U	0.0058 U	0.0068 U	0.0071 U	0.0062 U
cis-1,2-Dichloroethene (DCE)	ne	160	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
cis-1,3-Dichloropropene	ne	ne	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
Dibromochloromethane	ne	12	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
Dibromomethane	ne	800	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
Dichlorodifluoromethane	ne	16,000	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
Hexachlorobutadiene	ne	13	0.0068 U	0.0069 U	0.0062 U	0.0065 U	0.0058 U	0.0068 U	0.0071 U	0.0062 U
Methyl tert-butyl ether (MTBE)	0.1	ne	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
Methylene Chloride	0.02	130	0.0068 U	0.0069 U	0.0062 U	0.0065 U	0.0058 U	0.0068 U	0.0071 U	0.0062 U
Methyliodide	ne	ne	0.0068 U	0.0069 U	0.0062 U	0.0065 U	0.0058 U	0.0068 U	0.0071 U	0.0062 U
Tetrachloroethene (PCE)	0.05	480	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
trans-1,2-Dichloroethene	ne	1,600	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
trans-1,3-Dichloropropene	ne	ne	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
Trichloroethene (TCE)	0.03	12	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
Trichlorofluoromethane	ne	24,000	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U
Vinyl Chloride	ne	0.67	0.0014 U	0.0014 U	0.0012 U	0.0013 U	0.0012 U	0.0014 U	0.0014 U	0.0012 U

Notes:

[1] Halogenated volatile organic compounds (HVOCs) analyzed by EPA Method 8260C.

mg/kg = milligrams per kilogram (parts per million)

MTCA= Model Toxics Control Act

U = analyte was not detected at a concentration greater than the indicated laboratory reporting limit.

J = the internal standard associated with the analyte is out of control limits and the reported concentration is an estimate.

-- = analyte not tested

ft = feet below ground surface

Bold denotes a detected concentration.

Shading indicates a concentration that exceeds the MTCA Method A regulatory cleanup level.

ne = not established

Table 4. Lower Haul Road Investigation - High pH Soil Leaching Results

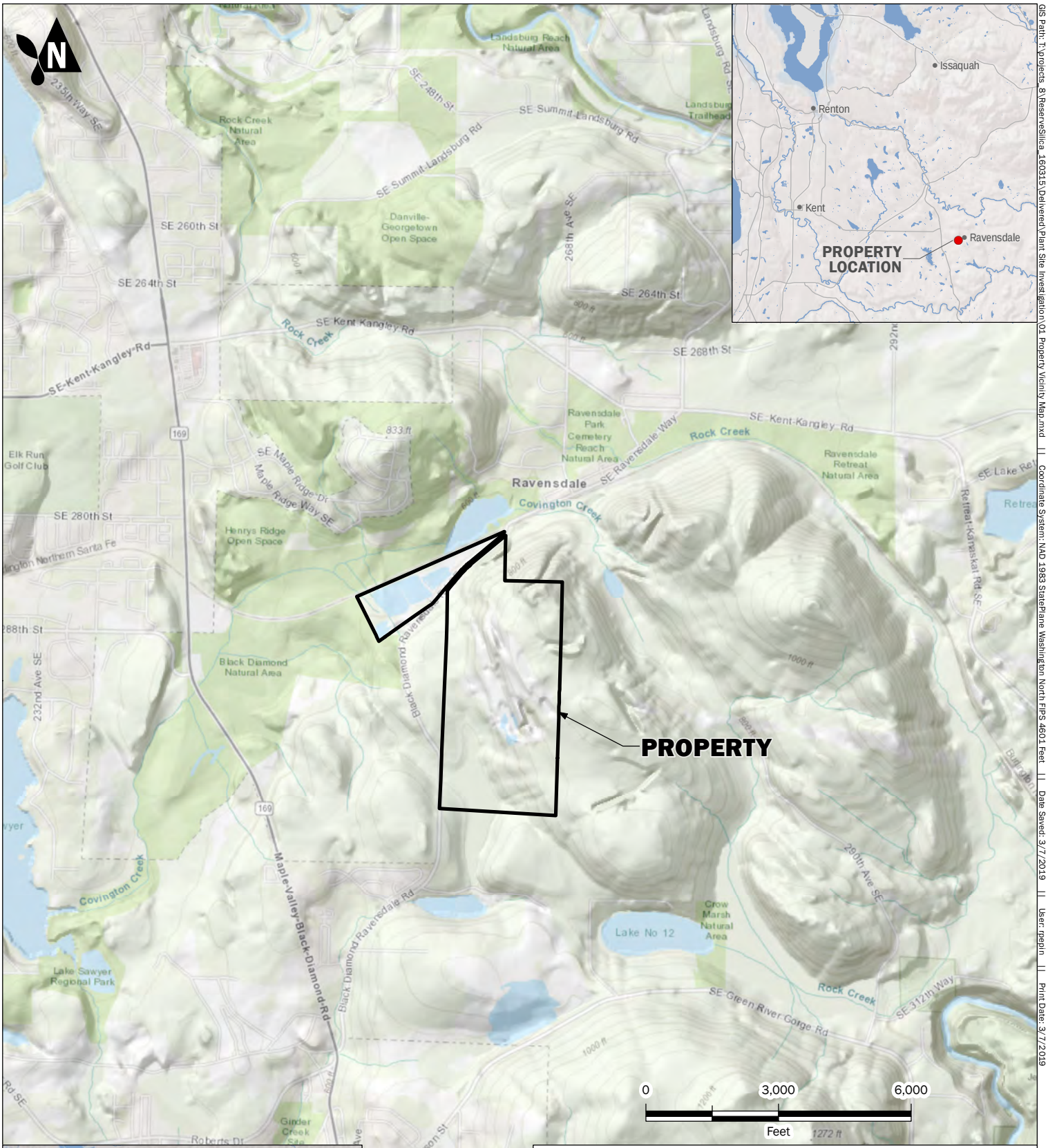
Project No. 160315, Reserve Silica Ravensdale Site, Ravensdale, Washington

Sample Identification	%slag by weight	Sample Type	TCLP Metals (pH=12) (mg/L)			
			Arsenic	Lead	Iron	Manganese
ATP-1	53%	Bulk Soil	5.07	1 U	6.75	1 U
		Slag Only	1 U	1 U	5 U	1 U
ATP-2	6%	Bulk Soil	1 U	1 U	--	--
		Slag Only	1 U	1 U	--	--
ATP-3	5%	Bulk Soil	1 U	1 U	9.44	1 U
		Slag Only	1.7	1 U	18.8	1 U
ATP-4	20%	Bulk Soil	1 U	1 U	--	--
		Slag Only	1 U	1 U	--	--

Test Methods:

Aspect collected bulk soil samples from four test pits advanced in the Lower Haul Road, where previous investigation work identified slag fragments mixed in road bed soils. Half of each bulk soil sample was processed in Aspect's geotechnical laboratory to estimate the percent of slag, by weight, in each of the bulk samples. Following processing, slag only samples were collected for separate laboratory processing and analysis. Friedman & Bruya, Inc. tumbled bulk soil and slag only samples in deionized water, adjusted to pH 12 with sodium hydroxide. After tumbling, the pH was checked and confirmed to still be 12. The liquid was analyzed for TCLP Metals by EPA Method 6020A and 1311 mod.

FIGURES



Property Location Map

Plant Site Investigation
Reserve Silica
Ravensdale, Washington

Aspect CONSULTING	MAR-2019	BY: CEB / RAP	FIGURE NO. 1
	PROJECT NO. 160315	REVISED BY: ALC / RAP	

Basemap Layer Credits | | Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, © OpenStreetMap contributors, and the GIS User Community

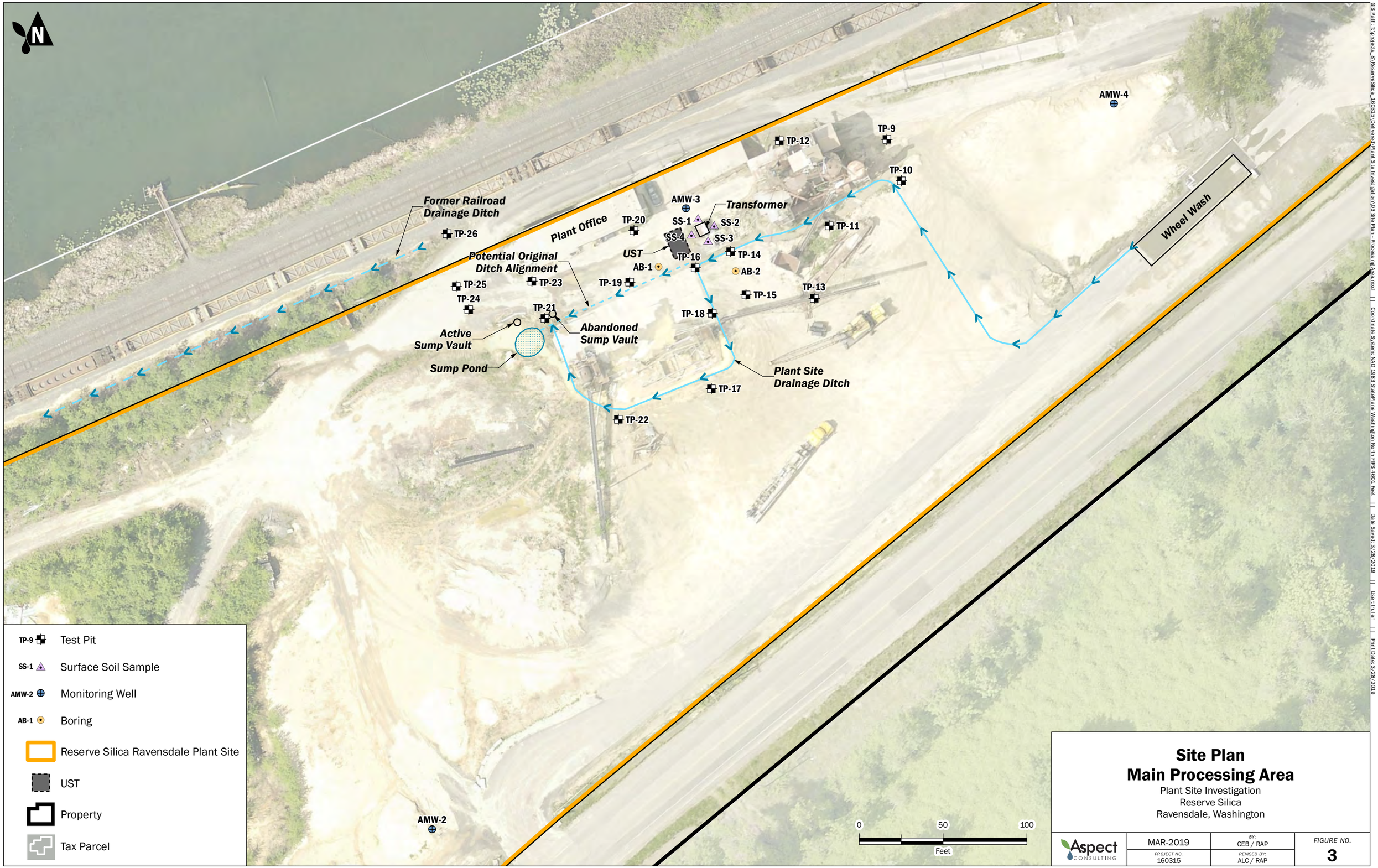
GIS Path: T:\projects_8\ReserveSilica_160315\Delivered\Plant Site Investigation\01 Property Vicinity Map.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 3/7/2019 || User: jpepin || Print Date: 3/7/2019

Plant Site Layout

Plant Site Investigation
Reserve Silica
Ravensdale, Washington

Aspect Consulting	MAR-2019	BY: CEB / RAP	FIGURE NO. 2
	PROJECT NO. 160315	REVISED BY: ---	

GIS Path: T:\projects_8\ReserveSilica_160315\Delivered\Plant Site Investigation\02 Plant Site Layout.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 3/28/2019 || User: tnullen || Print Date: 3/28/2019



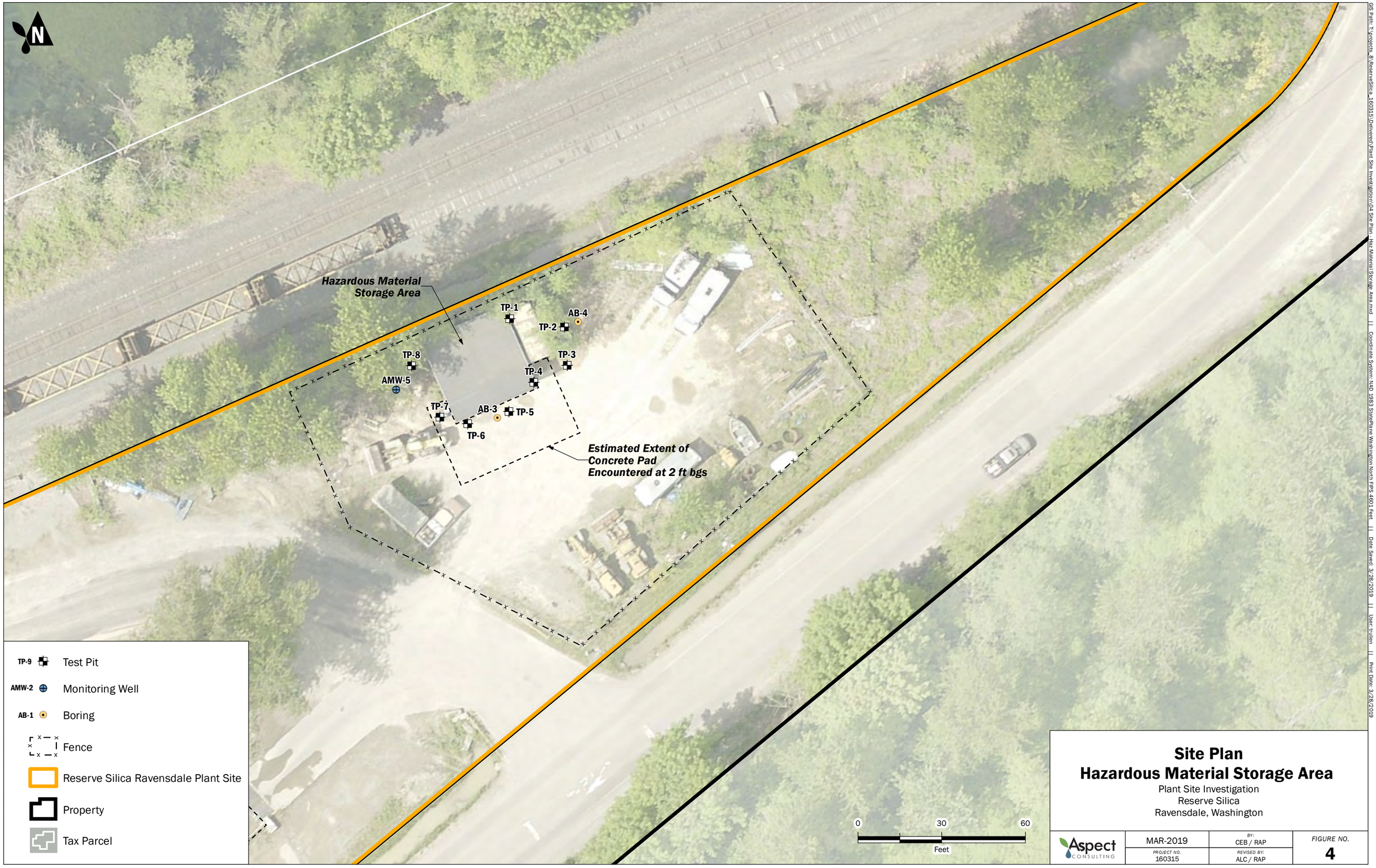
Site Plan
Main Processing Area

Plant Site Investigation
Reserve Silica
Ravensdale, Washington

Aspect Consulting	MAR-2019	BY: CEB / RAP	FIGURE NO. 3
	PROJECT NO. 160315	REVISED BY: ALC / RAP	

Basemap Layer Credits || Pictometry, King County

GIS Path: T:\projects_8\ReserveSilica_160315\Delivered\Plant Site Investigation\03 Site Plan - Processing Area.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 3/28/2019 || User: tullen || Print Date: 3/28/2019



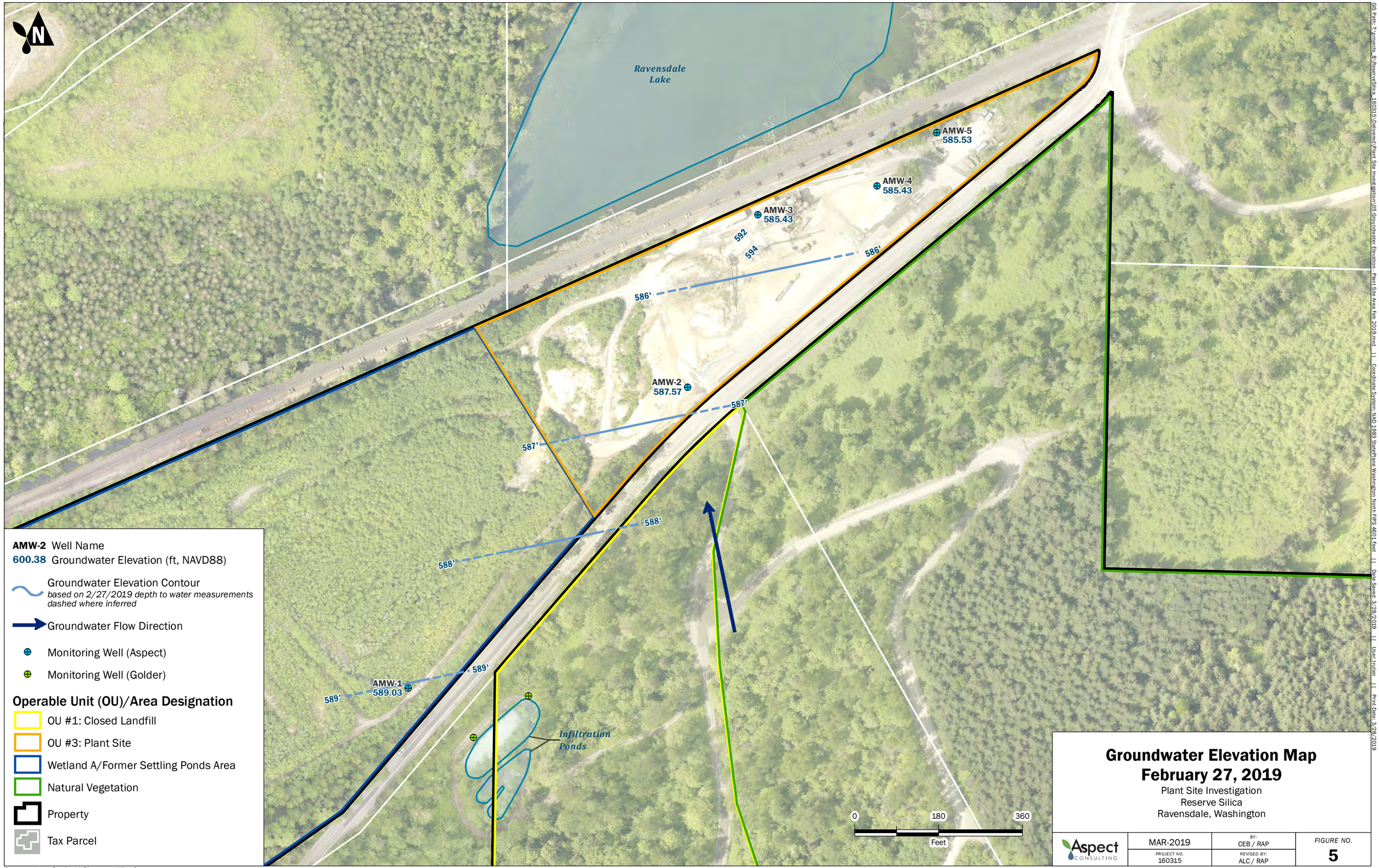
Site Plan
Hazardous Material Storage Area

Plant Site Investigation
Reserve Silica
Ravensdale, Washington

Aspect Consulting	MAR-2019	BY: CEB / RAP	FIGURE NO. 4
	PROJECT NO. 160315	REVISED BY: ALC / RAP	

Basemap Layer Credits || Pictometry, King County

GIS Path: T:\projects_8\ReserveSilica_160315\Delivered\Plant Site Investigation\04 Site Plan - Haz Material Storage Area.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 3/28/2019 || User: trullen || Print Date: 3/28/2019



Groundwater Elevation Map
February 27, 2019

Plant Site Investigation
Reserve Silica
Ravensdale, Washington

Aspect Consulting	MAR-2019	BY: CEB / RAP	FIGURE NO. 5
	PROJECT NO. 160315	REVISED BY: ALC / RAP	

Basemap Layer Credits || Pictometry, King County

GIS Path: T:\projects_8\ReserveSilica_160315\Delivered\Plant Site Investigation\05 Groundwater Elevation - Plant Site Area Feb 2019.mxd || Coordinate System: NAD 1983 StatePlane Washington North FIPS 4601 Feet || Date Saved: 3/28/2019 || User: tvullen || Print Date: 3/28/2019

Exploration Name → AB-12 (741.77) ← Surface Elevation (ft, NAVD88)

Boring (Aspect)

Test Pit

Historical Coal and/or Sand Mine Pit Extent

Property

Tax Parcel

0 50 100 Feet

Operable Unit (OU)/Area Designation

- OU #1: Closed Landfill
- OU #2: Inert Waste Landfill
- Natural Vegetation

Note: Boring surface elevation estimated from King County LiDAR, 2003.

Lower Haul Road Investigation Locations

Plant Site Investigation
Reserve Silica
Ravensdale, Washington

Aspect Consulting	MAR-2019	BY: CEB / RAP	FIGURE NO. 6
	PROJECT NO. 160315	REVISED BY: EAC	

Basemap Layer Credits || Pictometry, King County

APPENDIX A

Test Pit Logs

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, Near haul road		*Coordinates (Lat,Lon WGS84)* 47.342, -121.993 (est)	*Exploration Number* **ATP-1**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 4/5/2018	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0		Backfilled with spoils					**FILL** Moist, gray, gravelly, silty SAND (SM); fine to medium sand, fine gravel.	0
1							Increased slag fragments between 1 and 3 feet bgs.	1
2				ATP-1-Slag High pH Leachable Pb, As, Fe, Mn				2
3							Bottom of exploration at 3 ft. bgs. Note: Test pit terminated at refusal.	3
4								4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by:

Exploration Log ATP-1
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\RESERVE SILICA- 160315.GPJ March 28, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, W side of haul road near bascourse pile		*Coordinates (Lat,Lon WGS84)* 47.344, -121.993 (est)	*Exploration Number* **ATP-2**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 4/5/2018	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0		Backfilled with spoils					**FILL** Moist, gray, sandy GRAVEL (GP); fine to coarse sand, fine angular gravel; (road basecourse).	0
							Moist, yellow-orange, silty SAND (SM); fine to coarse sand, with charcoal and slag fragments.	
1								1
2								2
3								3
4								4
5				ATP-2-Slag High pH Leachable Pb, As			Moist, gray, Fill; bricks, concrete, plastic debris.	5
							Bottom of exploration at 5.5 ft. bgs.	

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by:

Exploration Log ATP-2

Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\RESERVE SILICA- 160315.GPJ March 28, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, E side of haul road		*Coordinates (Lat,Lon WGS84)* 47.343, -121.993 (est)	*Exploration Number* **ATP-3**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 4/5/2018	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0		Backfilled with spoils					**FILL** Moist, gray, sandy GRAVEL (GP); fine to coarse sand, fine angular gravel, (road basecourse).	0
							Moist, yellow-orange, silty SAND (SM); fine to coarse sand, with charcoal and slag fragments.	
1								1
2				ATP-3-Slag High pH Leachable Pb, As, Fe, Mn				2
3								3
4							Bottom of exploration at 4 ft. bgs.	4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by:

Exploration Log ATP-3
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\RESERVE SILICA- 160315.GPJ March 28, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, West side of haul road		*Coordinates (Lat,Lon WGS84)* 47.343, -121.993 (est)	*Exploration Number* **ATP-4**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 4/5/2018	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0		Backfilled with spoils					**FILL** Moist, gray, gravelly, silty SAND (SM); fine to medium sand, fine gravel.	0
1							Slag fragments between 1 and 3 feet bgs.	1
2				ATP-4-Slag High pH Leachable Pb, As				2
3							Bottom of exploration at 3 ft. bgs. Note: Test pit terminated at refusal.	3
4								4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by:

Exploration Log ATP-4

Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINTW\PROJECTS\RESERVE SILICA- 160315.GPJ March 28, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location: 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, NE side of containment area		Coordinates (Lat,Lon WGS84): 47.350, -121.991 (est)	Exploration Number: **TP-01**
Contractor: N/A	Equipment: Excavator	Sampling Method: Grab	Ground Surface (GS) Elev.: NA	
Operator: Dean	Exploration Method(s): Test Pit	Work Start/Completion Dates: 2/26/2019	Top of Casing Elev.: NA	Depth to Water (Below GS): No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Backfilled with cuttings			PID= 0.0 Sheen= Slight		**FILL** Moist, yellow, SAND (SP); trace fine gravel, medium to coarse sand, abundant root fragments.	
1				TP-1-1.0 NWTPH-Gx, BTEX, NWTPH-Dx, PCBs, CPAHs, Naphth, HVOCs, EDB, EDC, MTBE, Lead	PID= 0.0 Sheen= Slight		Moist, brown to black, gravelly, silty SAND (SM); trace coal fragments, fine to coarse gravel.	1
2					PID= 0.0 Sheen= Slight		**COAL TAILINGS** Moist, black, sandy coal; 50% coal, coal content increases with depth.	2
3					PID= 0.0 Sheen= Slight		Coal content grades to about 80%.	3
4							Bottom of exploration at 4 ft. bgs.	4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-01
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location: 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, E of TP-01		Coordinates (Lat,Lon WGS84): 47.350, -121.991 (est)	Exploration Number: **TP-02**
Contractor: N/A	Equipment: Excavator	Sampling Method: Grab	Ground Surface (GS) Elev.: NA	
Operator: Dean	Exploration Method(s): Test Pit	Work Start/Completion Dates: 2/26/2019	Top of Casing Elev.: NA	Depth to Water (Below GS): No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0		Backfilled with cuttings			PID= 0.0 Sheen= Slight		**FILL** Moist, yellow, SAND (SP); medium to coarse sand.	0
1					PID= 0.0 Sheen= None		Moist, black, gravelly, silty SAND (SM); trace coal fragments, fine to coarse gravel, fine to medium sand.	1
2				TP-2-1.8 NWTPH-Gx, BTEX, NWTPH-Dx, PCBs, CPAHs, Naphth, HVOCs, EDB, EDC, MTBE, Lead	PID= 0.0 Sheen= Slight		Moist, white to tan, silty SAND (SM); fine to medium sand, no odor.	2
3					PID= 0.0 Sheen= None		**COAL TAILINGS** Moist, black coal	3
4							Bottom of exploration at 3.7 ft. bgs.	4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-02
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location: 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, SE of TP-01		Coordinates (Lat,Lon WGS84): 47.350, -121.991 (est)	Exploration Number: **TP-03**
Contractor: N/A	Equipment: Excavator	Sampling Method: Grab	Ground Surface (GS) Elev.: NA	
Operator: Dean	Exploration Method(s): Test Pit	Work Start/Completion Dates: 2/26/2019	Top of Casing Elev.: NA	Depth to Water (Below GS): No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0		Backfilled with cuttings					**FILL** Moist, yellow to brown, gravelly SAND (SP); fine to medium sand, fine to coarse gravel; abundant wood, metal, and concrete debris, no odor.	0
1				TP-3-1.3 NWTPH-Gx, BTEX, NWTPH-Dx, PCBs, CPAHs, Naphth, HVOCs, EDB, EDC, MTBE, Lead	PID= 0.0 Sheen= None			1
2								2
3					PID= 0.0 Sheen= Slight		**COAL TAILINGS** Moist, black coal; no odor.	3
4							Bottom of exploration at 4 ft. bgs.	4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-03

Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, E side of shed, near SE corner		*Coordinates (Lat,Lon WGS84)* 47.350, -121.991 (est)	*Exploration Number* **TP-04**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/26/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Backfilled with cuttings			PID= 0.0 Sheen= Slight		**FILL** Moist, yellow, SAND (SP); trace fine to coarse, fine to medium sand, no odor.	
1				TP-4-1.0 NWTPH-Gx, BTEX, NWTPH-Dx, PCBs, CPAHs, Naphth, HVOCs, EDB, EDC, MTBE, Lead	PID= 0.0 Sheen= Slight		Moist, brown, gravelly, silty SAND (SM); trace coal, medium sand, fine to coarse gravel, with few cobbles, no odor.	1
2							Concrete at 2.3 ft bgs.	2
							Bottom of exploration at 2.3 ft. bgs. Note: Refusal on concrete	
3								3
4								4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-04

Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed		*Coordinates (Lat,Lon WGS84)* 47.350, -121.991 (est)	*Exploration Number* **TP-05**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/26/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Backfilled with cuttings			PID= 0.0 Sheen= Slight		**FILL** Moist, yellow SAND (SP); trace coarse gravel, medium sand, no odor.	
1				TP-5-1.0 NWTPH-Gx, BTEX, NWTPH-Dx, PCBs, CPAHs, Naphth, HVOCs, EDB, EDC, MTBE, Lead	PID= 0.0 Sheen= Slight		Moist, brown, gravelly, silty SAND (SM); medium sand, fine to coarse gravel, no odor.	1
2							Concrete	2
3							Bottom of exploration at 2.7 ft. bgs. Note: Refusal on concrete.	3
4								4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-05
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed, near SW corner		*Coordinates (Lat,Lon WGS84)* 47.350, -121.991 (est)	*Exploration Number* **TP-06**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/26/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0		Backfilled with cuttings					**FILL** Moist, yellow SAND (SP); medium to coarse sand, no odor.	0
1				TP-6-1.0 NWTPH-Gx, BTEX, NWTPH-Dx, PCBs, CPAHs, Naphth, HVOCs, EDB, EDC, MTBE, Lead	PID= 0.0 Sheen= Slight			1
2					PID= 0.0 Sheen= Slight		Moist, brown, gravelly, silty SAND (SM); trace coal, medium to coarse sand, no odor.	2
							Concrete	
3							Bottom of exploration at 2.2 ft. bgs. Note: Refusal on concrete	3
4								4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-06
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, W side of shed, near SW corner		*Coordinates (Lat,Lon WGS84)* 47.350, -121.991 (est)	*Exploration Number* **TP-07**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/26/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Backfilled with cuttings			PID= 0.0 Sheen= None		**FILL** Moist, sandy, Topsoil; abundant root fragments, organic odor.	
1				TP-7-1.0 NWTPH-Gx, BTEX, NWTPH-Dx, PCBs, CPAHs, Naphth, HVOCs, EDB, EDC, MTBE, Lead	PID= 0.0 Sheen= Slight		Moist, yellow to brown, gravelly, silty SAND (SM); fine to coarse, gravel, medium to coarse sand, no odor.	1
2							Concrete	2
							COAL TAILINGS Moist, black coal	
3								3
4							Bottom of exploration at 2.2 ft. bgs.	4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-07
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, W side of shed, near NW corner		*Coordinates (Lat,Lon WGS84)* 47.350, -121.991 (est)	*Exploration Number* **TP-08**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/26/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Backfilled with cuttings			PID= 0.0 Sheen= None		**FILL** Moist, sandy, Topsoil; abundant root fragments, organic odor.	
1				TP-8-1.5 NWTPH-Gx, BTEX, NWTPH-Dx, PCBs, CPAHs, Naphth, HVOCs, EDB, EDC, MTBE, Lead	PID= 0.0 Sheen= Slight		Moist, yellow to brown, silty SAND (SM)	1
2							Some concrete debris. Layer of coal from 1.9 to 2.4 ft bgs	2
3							**COAL TAILINGS** Moist, black coal	3
4							Bottom of exploration at 3.9 ft. bgs.	4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-08

Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, E side of plant		*Coordinates (Lat,Lon WGS84)* 47.349, -121.992 (est)	*Exploration Number* **TP-09**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/26/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0							**FILL** Moist, yellow-orange SAND (SP); medium to coarse sand, no odor.	0
1		Backfilled with cuttings						1
2								2
3				TP-9-3.0 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 0.0 Sheen= None			3
4							Moist to wet, gravelly SAND (SP); medium sand, fine to coarse gravel, no odor.	4
5					PID= 0.0 Sheen= None			5
6							Bottom of exploration at 6 ft. bgs.	6

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-09

Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, SE corner of plant		*Coordinates (Lat,Lon WGS84)* 47.349, -121.992 (est)	*Exploration Number* **TP-10**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/26/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
1		Backfilled with cuttings					**FILL** Moist, yellow-orange SAND (SP); trace coal, medium to coarse sand, fine to coarse gravel, no odor.	1
2				TP-10-1.8 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 0.0 Sheen= None			2
3							PVC pipe at 3.7 ft bgs.	3
4							Bottom of exploration at 3.7 ft. bgs. Note: Stopped excavation due to PVC pipe.	4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-10
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed		*Coordinates (Lat,Lon WGS84)* 47.349, -121.993 (est)	*Exploration Number* **TP-11**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/26/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
1		Backfilled with cuttings					**FILL** Moist, yellow-orange SAND (SP); trace coal fragmentation, medium to coarse, no odor.	1
2				TP-11-1.8 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 0.0 Sheen= Slight			2
3							**COAL TAILINGS** Moist, black coal	3
4							Bottom of exploration at 3.2 ft. bgs.	4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-11
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed		*Coordinates (Lat,Lon WGS84)* 47.349, -121.993 (est)	*Exploration Number* **TP-12**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/26/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Backfilled with cuttings					**FILL** Moist, brown, sandy GRAVEL (GP); medium to coarse sand, fine to coarse gravel (base course).	
1				TP-12-1.0 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 0.0 Sheen= None		**COAL TAILINGS** Moist, black coal	1
2							Bottom of exploration at 1.9 ft. bgs.	2
3								3
4								4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-12
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed		*Coordinates (Lat,Lon WGS84)* 47.349, -121.993 (est)	*Exploration Number* **TP-13**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/26/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
1		Backfilled with cuttings					**FILL** Moist, yellow-orange SAND (SP); fine to medium sand, no odor.	1
2				TP-13-1.8 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 0.0 Sheen= Slight			2
							COAL TAILINGS Moist, black coal	
3							Bottom of exploration at 2.8 ft. bgs.	3
4								4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-13
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed		*Coordinates (Lat,Lon WGS84)* 47.349, -121.993 (est)	*Exploration Number* **TP-14**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/26/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
1		Backfilled with cuttings		TP-14-1.0 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 0.0 Sheen= None		**FILL** Moist, yellow-orange, SAND (SP); fine to medium sand, no odor.	1
2							**COAL TAILINGS** Moist, black coal	2
3							Bottom of exploration at 2.4 ft. bgs.	3
4								4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-14
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed		*Coordinates (Lat,Lon WGS84)* 47.349, -121.993 (est)	*Exploration Number* **TP-15**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/27/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Backfilled with cuttings					**FILL** Moist, brown, sandy GRAVEL (GP); medium to coarse sand, fine to coarse gravel (base course).	
							Moist, yellow-orange SAND (SP); medium to coarse sand, no odor.	
1				TP-15-1.0 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 0.0 Sheen= Slight			1
							Moist, brown, concrete slurry mixed with SAND (SP); contains very hard sandstone clasts.	
2								2
					PID= 0.0 Sheen= None		Moist, orange-yellow SAND (SP); medium to coarse sand, no odor.	
3							**COAL TAILINGS** Moist, black coal Bottom of exploration at 3 ft. bgs.	3
4								4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-15
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed		*Coordinates (Lat,Lon WGS84)* 47.349, -121.993 (est)	*Exploration Number* **TP-16**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/27/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Backfilled with cuttings		TP-16-0.5 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 0.0 Sheen= Slight		**FILL** Moist, orange-yellow SAND (SP); medium to coarse sand, trace root fragments, no odor.	
1							**COAL TAILINGS** Moist, black coal	1
							Bottom of exploration at 1.3 ft. bgs.	
2								2
3								3
4								4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-16
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed		*Coordinates (Lat,Lon WGS84)* 47.349, -121.993 (est)	*Exploration Number* **TP-17**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/27/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
1		Backfilled with cuttings		TP-17-1.0 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 0.0 Sheen= None		**FILL** Moist, orange-yellow SAND (SP); medium to coarse sand, trace root fragments, no odor.	1
2								2
							COAL TAILINGS Moist, black coal	
							Bottom of exploration at 2.4 ft. bgs.	
3								3
4								4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-17
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed		*Coordinates (Lat,Lon WGS84)* 47.349, -121.993 (est)	*Exploration Number* **TP-18**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/27/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
1		Backfilled with cuttings		TP-18-0.8 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 0.0 Sheen= Slight		**FILL** Moist, yellow-orange SAND (SP); medium to coarse, no odor.	1
2							**COAL TAILINGS** Moist, black coal Bottom of exploration at 1.8 ft. bgs.	2
3								3
4								4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-18

Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed		*Coordinates (Lat,Lon WGS84)* 47.349, -121.993 (est)	*Exploration Number* **TP-19**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/27/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Backfilled with cuttings					**FILL** Moist, brown, sandy GRAVEL (GP); medium to coarse sand, fine to coarse gravel (base course).	
				TP-19-0.5 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 0.0 Sheen= None		Moist, yellow-orange SAND (SP); trace fine gravel, medium to coarse sand, no odor.	
1							**COAL TAILINGS** Moist, black coal	1
							Bottom of exploration at 1.1 ft. bgs.	
2								2
3								3
4								4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-19

Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location: 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, NW of plant UST		Coordinates (Lat,Lon WGS84): 47.349, -121.993 (est)	Exploration Number: **TP-20**
Contractor: N/A	Equipment: Excavator	Sampling Method: Grab	Ground Surface (GS) Elev.: NA	
Operator: Dean	Exploration Method(s): Test Pit	Work Start/Completion Dates: 2/27/2019	Top of Casing Elev.: NA	Depth to Water (Below GS): No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Backfilled with cuttings					**FILL** Black, Asphalt; including underlying gravelly base course.	
				TP-20-0.6 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 0.0 Sheen= Slight		Moist, yellow-orange, gravelly SAND (SP); fine gravel, medium to coarse sand, no odor.	
1							**COAL TAILINGS** Moist, black coal	1
							Bottom of exploration at 1.4 ft. bgs.	
2								2
3								3
4								4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-20
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed		*Coordinates (Lat,Lon WGS84)* 47.349, -121.993 (est)	*Exploration Number* **TP-21**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/27/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* 4' (ATD)

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
0		Backfilled with cuttings					**FILL** Moist, gray orange, gravelly SAND (SP); medium to coarse sand, fine gravel, with cobbles, petroleum-like odor.	
1							Moist, yellow-orange, gravelly SAND (SP); fine gravel, medium to coarse sand, petroleum-like odor, with gray mottling.	1
2				TP-21-2.0 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 0.0 Sheen			2
3								3
4		▽ 2/27/2019					Bottom of exploration at 4 ft. bgs. Note: Stopped excavation when groundwater encountered.	4

Legend

Sample Method: Grab sample

Water Level: ▽ Water Level ATD

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-21

Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed		*Coordinates (Lat,Lon WGS84)* 47.349, -121.993 (est)	*Exploration Number* **TP-22**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/27/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
1		Backfilled with cuttings			PID= 0.0 Sheen= Slight		**FILL** Moist to very moist, orange SAND (SP); trace coal fragments, no odor.	1
2				TP-22-1.8 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 0.0 Sheen= Slight		Moist to very moist, orange, silty SAND (SM); trace coal fragments, cobble-sized sandstone clasts.	2
3							**COAL TAILINGS** Moist, black coal	3
4							Bottom of exploration at 3.8 ft. bgs.	4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-22

Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed		*Coordinates (Lat,Lon WGS84)* 47.349, -121.993 (est)	*Exploration Number* **TP-23**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/27/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
		Backfilled with cuttings					**FILL** Black, Asphalt; including underlying gravelly base course.	
							Moist, yellow orange SAND (SP); trace fine gravel, trace coal, no odor.	
				TP-23-0.7 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 0.0 Sheen= Slight			
1							Moist, brown, gravelly, silty SAND (SM); fine to medium sand, fine to coarse gravel, no odor.	1
					PID= 0.0 Sheen= Slight			
							Red brick and coal Fill	
							COAL TAILINGS Moist, black coal	
							Bottom of exploration at 1.7 ft. bgs.	
2								2
3								3
4								4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-23
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed		*Coordinates (Lat,Lon WGS84)* 47.349, -121.993 (est)	*Exploration Number* **TP-24**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/27/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
1		Backfilled with cuttings			PID= 0.1 Sheen= slight		**FILL** Moist, yellow orange, gravelly, silty SAND (SM); fine to medium sand, fine to coarse gravel.	1
2				TP-24-2.0 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 20.8 Sheen= moderate		Moist, gray brown, gravelly, silty SAND (SM); trace coal fragments, fine to medium sand, with cobbles, petroleum-like odor.	2
3								3
4					PID= 0.0 Sheen= slight		Moist, yellow orange SAND (SP); medium sand, slight petroleum-like odor.	4
							Moist, black coal	
							Bottom of exploration at 4.7 ft. bgs.	

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-24

Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed		*Coordinates (Lat,Lon WGS84)* 47.349, -121.994 (est)	*Exploration Number* **TP-25**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/27/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
1		Backfilled with cuttings			PID= 1.7 Sheen= None		**FILL** Moist, orange, gravelly SAND (SP); coarse gravel, medium to coarse sand, petroleum-like odor.	1
2				TP-25-2.0 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 20.0 Sheen= Slight		Moist, gray brown, gravelly SAND (SP); medium to coarse sand, sandstone and concrete clasts, petroleum-like odor, gray interbeds.	2
3							**COAL TAILINGS** Moist, black coal	3
4							Bottom of exploration at 3 ft. bgs.	4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-25
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

Aspect CONSULTING	Reserve Silica--Ravensdale - 160315		Excavation Log	
	Project Address & Site Specific Location 28131 Ravensdale-Black Diamond Rd., Ravensdale, WA 98051, S side of shed		*Coordinates (Lat,Lon WGS84)* 47.349, -121.994 (est)	*Exploration Number* **TP-26**
Contractor N/A	*Equipment* Excavator	*Sampling Method* Grab	*Ground Surface (GS) Elev.* NA	
Operator Dean	*Exploration Method(s)* Test Pit	*Work Start/Completion Dates* 2/27/2019	*Top of Casing Elev.* NA	*Depth to Water (Below GS)* No Water Encountered

Depth (feet)	Elev. (feet)	Exploration Completion and Notes	Sample Type/ID	Analytical Sample Number & Lab Test(s)	Field Tests	Material Type	Description	Depth (ft)
1		Backfilled with cuttings		TP-26-1.5 BTEX, NWTPH-Dx, CPAHs, Naphth	PID= 0.0 Sheen= Slight		**FILL** Moist, yellow-orange, silty SAND (SM); trace fine to coarse gravel.	1
2								2
3								3
							COAL TAILINGS Moist, black coal	
4							Bottom of exploration at 4 ft. bgs.	4

Legend

Sample Method: Grab sample

Water Level: No Water Encountered

See Exploration Log Key for explanation of symbols

Logged by: KB
Approved by: ALC 3/22/2019

Exploration Log TP-26
Sheet 1 of 1

OLD STANDARD EXPLORATION LOG TEMPLATE P:\GINT\WPROJECTS\RESERVE SILICA- 160315.GPJ March 22, 2019

APPENDIX B

Photographs

Lower Haul Road

Photograph 1. ATP-1

Photograph 2. ATP-1 (2)

Photograph 3. ATP-1 (3)

Photograph 4. ATP-1 (4)

Photograph 5. ATP-1 (5)

Photograph 6. ATP-1 (6)

Photograph 7. ATP-2

Photograph 8. ATP-2 (2)

Photograph 9. ATP-2 (3)

Photograph 10. ATP-3

Photograph 11. ATP-3 (2)

Photograph 12. ATP-3 (3)

Photograph 13. ATP-4

Photograph 14. ATP-4 (2)

Photograph 15. ATP-4 (3)

Photograph 16. ATP-4 (4)

Plant Site – Hazardous Material Storage Area

Photograph 17. TP-1

Photograph 18. TP-1 (2)

Photograph 19. TP-1 (3)

Photograph 20. TP-1 (4)

Photograph 21. TP-2

Photograph 22. TP-2 (2)

Photograph 23. TP-2 (3)

Photograph 24. TP-2 (4)

Photograph 25. TP-3

Photograph 26. TP-3 (2)

Photograph 27. TP-4

Photograph 28. TP-4 (2)

Photograph 29. TP-4 (3)

Photograph 30. TP-4 (4)

Photograph 31. TP-4 (5)

Photograph 32. TP-5

Photograph 33. TP-5 (2)

Photograph 34. TP-5 (3)

Photograph 35. TP-6

Photograph 36. TP-6 (2)

Photograph 37. TP-6 (3)

Photograph 38. TP-6 (4)

Photograph 39. TP-7

Photograph 40. TP-7 (2)

Photograph 41. TP-7 (3)

Photograph 42. TP-8

Plant Site – Main Processing Area

Photograph 43. TP-9

Photograph 44. TP-10

Photograph 45. TP-10 (2)

Photograph 46. TP-10 (3)

Photograph 47. TP-10 (4)

Photograph 48. TP-11

Photograph 49. TP-11 (2)

Photograph 50. TP-11 (3)

Photograph 51. TP-12

Photograph 52. TP-12 (2)

Photograph 53. TP-12 (3)

Photograph 54. TP-13

Photograph 55. TP-13 (2)

Photograph 56. TP-13 (3)

Photograph 57. TP-13 (4)

Photograph 58. TP-13 (5)

Photograph 59. TP-14

Photograph 60. TP-14 (2)

Photograph 61. TP-14 (3)

Photograph 62. TP-14 (4)

Photograph 63. TP-15

Photograph 64. TP-15 (2)

Photograph 65. TP-15 (3)

Photograph 66. TP-15 (4)

Photograph 67. TP-16

Photograph 68. TP-16 (2)

Photograph 69. TP-16 (3)

Photograph 70. TP-16 (4)

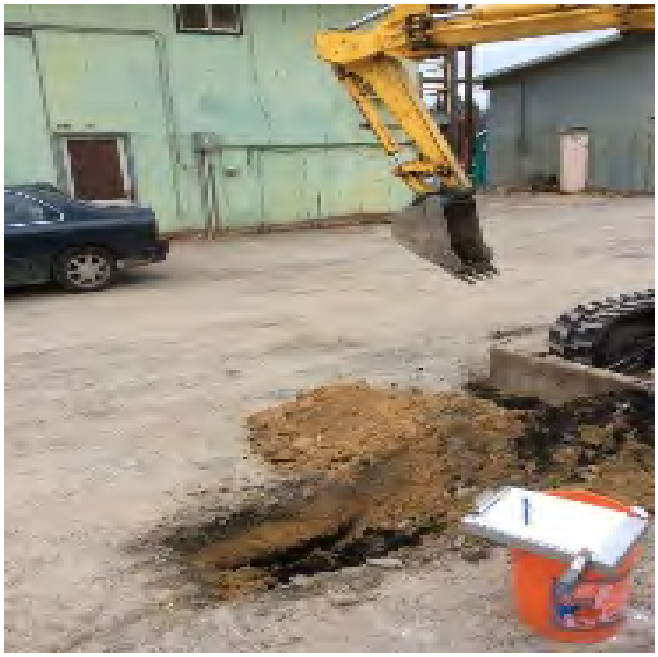
Photograph 71. TP-17

Photograph 72. TP-17 (2)

Photograph 73. TP-17 (3)

Photograph 74. TP-18

Photograph 75. TP-18 (2)



Photograph 76. TP-19

Photograph 77. TP-19 (2)

Photograph 78. TP-20

Photograph 79. TP-20 (2)

Photograph 80. TP-20 (3)

Photograph 81. TP-21

Photograph 82. TP-21 (2)

Photograph 83. TP-21 (3)

Photograph 84. TP-21 (4)

Photograph 85. TP-21 (5)

Photograph 86. TP-21 (6)

Photograph 87. TP-22

Photograph 88. TP-22 (2)

Photograph 89. TP-22 (3)

Photograph 90. TP-22 (4)

Photograph 91. TP-22 (5)

Photograph 92. TP-22 (6)

Photograph 93. TP-23

Photograph 94. TP-23 (2)

Photograph 95. TP-23 (3)

Photograph 96. TP-24

Photograph 97. TP-24 (2)

Photograph 98. TP-24 (3)

Photograph 99. TP-4 (4)

Photograph 100. TP-24 (5)

Photograph 101. TP-24 (6)

Photograph 102. TP-24 (7)

Photograph 103. TP-25

Photograph 104. TP-25 (2)

Photograph 105. TP-25 (3)

Photograph 106. TP-25 (4)

Photograph 107. TP-25 (5)

Photograph 108. TP-25 (6)

Photograph 109. TP-26

Photograph 110. TP-26 (2)

Photograph 111. TP-26 (3)

Photograph 112. TP-26 (4)

Photograph 113. TP-26 (5)

Photograph 114. TP-26 (6)

Photograph 115. TP-26 (7)

APPENDIX C

Laboratory Results

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

March 8, 2019

Carla Brock
Aspect Consulting
Dexter Horton Building
710 2nd Avenue, Suit 550
Seattle, WA 98104

Re: Analytical Data for Project 160315
Laboratory Reference No. 1902-177

Dear Carla:

Enclosed are the analytical results and associated quality control data for samples submitted on February 27, 2019.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

Case Narrative

Samples were collected on February 26 and 27, 2019 and received by the laboratory on February 27, 2019. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

PAHs EPA 8270D/SIM Analysis

Samples TP-24-2.0 and TP-25-2.0 each had one surrogate recovery out of control limits. This is within allowance of our standard operating procedure as long as the recovery is above 10%.

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

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

GASOLINE RANGE ORGANICS/BTEX
NWTPH-Gx/EPA 8021B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-1-1.0**					
Laboratory ID:	02-177-05					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	2-28-19	
Toluene	**ND**	0.064	EPA 8021B	2-28-19	2-28-19	
Ethyl Benzene	**ND**	0.064	EPA 8021B	2-28-19	2-28-19	
m,p-Xylene	**ND**	0.064	EPA 8021B	2-28-19	2-28-19	
o-Xylene	**ND**	0.064	EPA 8021B	2-28-19	2-28-19	
Gasoline	**ND**	6.4	NWTPH-Gx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*84*	*57-129*				
Client ID:	**TP-2-1.8**					
Laboratory ID:	02-177-06					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	2-28-19	
Toluene	**ND**	0.067	EPA 8021B	2-28-19	2-28-19	
Ethyl Benzene	**ND**	0.067	EPA 8021B	2-28-19	2-28-19	
m,p-Xylene	**ND**	0.067	EPA 8021B	2-28-19	2-28-19	
o-Xylene	**ND**	0.067	EPA 8021B	2-28-19	2-28-19	
Gasoline	**ND**	6.7	NWTPH-Gx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*57-129*				
Client ID:	**TP-3-1.3**					
Laboratory ID:	02-177-07					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	2-28-19	
Toluene	**ND**	0.066	EPA 8021B	2-28-19	2-28-19	
Ethyl Benzene	**ND**	0.066	EPA 8021B	2-28-19	2-28-19	
m,p-Xylene	**ND**	0.066	EPA 8021B	2-28-19	2-28-19	
o-Xylene	**ND**	0.066	EPA 8021B	2-28-19	2-28-19	
Gasoline	**ND**	6.6	NWTPH-Gx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*97*	*57-129*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

GASOLINE RANGE ORGANICS/BTEX
NWTPH-Gx/EPA 8021B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-4-1.0**					
Laboratory ID:	02-177-08					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	2-28-19	
Toluene	**ND**	0.064	EPA 8021B	2-28-19	2-28-19	
Ethyl Benzene	**ND**	0.064	EPA 8021B	2-28-19	2-28-19	
m,p-Xylene	**ND**	0.064	EPA 8021B	2-28-19	2-28-19	
o-Xylene	**ND**	0.064	EPA 8021B	2-28-19	2-28-19	
Gasoline	**ND**	6.4	NWTPH-Gx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*96*	*57-129*				
Client ID:	**TP-5-1.0**					
Laboratory ID:	02-177-09					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	2-28-19	
Toluene	**ND**	0.063	EPA 8021B	2-28-19	2-28-19	
Ethyl Benzene	**ND**	0.063	EPA 8021B	2-28-19	2-28-19	
m,p-Xylene	**ND**	0.063	EPA 8021B	2-28-19	2-28-19	
o-Xylene	**ND**	0.063	EPA 8021B	2-28-19	2-28-19	
Gasoline	**ND**	6.3	NWTPH-Gx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*57-129*				
Client ID:	**TP-6-1.0**					
Laboratory ID:	02-177-10					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	2-28-19	
Toluene	**ND**	0.061	EPA 8021B	2-28-19	2-28-19	
Ethyl Benzene	**ND**	0.061	EPA 8021B	2-28-19	2-28-19	
m,p-Xylene	**ND**	0.061	EPA 8021B	2-28-19	2-28-19	
o-Xylene	**ND**	0.061	EPA 8021B	2-28-19	2-28-19	
Gasoline	**ND**	6.1	NWTPH-Gx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*57-129*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

GASOLINE RANGE ORGANICS/BTEX
NWTPH-Gx/EPA 8021B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-7-1.0**					
Laboratory ID:	02-177-11					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	2-28-19	
Toluene	**ND**	0.075	EPA 8021B	2-28-19	2-28-19	
Ethyl Benzene	**ND**	0.075	EPA 8021B	2-28-19	2-28-19	
m,p-Xylene	**ND**	0.075	EPA 8021B	2-28-19	2-28-19	
o-Xylene	**ND**	0.075	EPA 8021B	2-28-19	2-28-19	
Gasoline	**ND**	7.5	NWTPH-Gx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*116*	*57-129*				
Client ID:	**TP-8-1.5**					
Laboratory ID:	02-177-12					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	2-28-19	
Toluene	**ND**	0.069	EPA 8021B	2-28-19	2-28-19	
Ethyl Benzene	**ND**	0.069	EPA 8021B	2-28-19	2-28-19	
m,p-Xylene	**ND**	0.069	EPA 8021B	2-28-19	2-28-19	
o-Xylene	**ND**	0.069	EPA 8021B	2-28-19	2-28-19	
Gasoline	**ND**	6.9	NWTPH-Gx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*57-129*				
Client ID:	**TP-9-3.0**					
Laboratory ID:	02-177-13					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	2-28-19	
Toluene	**ND**	0.065	EPA 8021B	2-28-19	2-28-19	
Ethyl Benzene	**ND**	0.065	EPA 8021B	2-28-19	2-28-19	
m,p-Xylene	**ND**	0.065	EPA 8021B	2-28-19	2-28-19	
o-Xylene	**ND**	0.065	EPA 8021B	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*96*	*57-129*				
Client ID:	**TP-10-1.8**					
Laboratory ID:	02-177-14					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	3-1-19	
Toluene	**ND**	0.066	EPA 8021B	2-28-19	3-1-19	
Ethyl Benzene	**ND**	0.066	EPA 8021B	2-28-19	3-1-19	
m,p-Xylene	**ND**	0.066	EPA 8021B	2-28-19	3-1-19	
o-Xylene	**ND**	0.066	EPA 8021B	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*57-129*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

BTEX
EPA 8021B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-11-1.8**					
Laboratory ID:	02-177-15					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	3-1-19	
Toluene	**ND**	0.069	EPA 8021B	2-28-19	3-1-19	
Ethyl Benzene	**ND**	0.069	EPA 8021B	2-28-19	3-1-19	
m,p-Xylene	**ND**	0.069	EPA 8021B	2-28-19	3-1-19	
o-Xylene	**ND**	0.069	EPA 8021B	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*57-129*				
Client ID:	**TP-12-1.0**					
Laboratory ID:	02-177-16					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	3-1-19	
Toluene	**ND**	0.068	EPA 8021B	2-28-19	3-1-19	
Ethyl Benzene	**ND**	0.068	EPA 8021B	2-28-19	3-1-19	
m,p-Xylene	**ND**	0.068	EPA 8021B	2-28-19	3-1-19	
o-Xylene	**ND**	0.068	EPA 8021B	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*57-129*				
Client ID:	**TP-13-1.8**					
Laboratory ID:	02-177-17					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	3-4-19	
Toluene	**ND**	0.066	EPA 8021B	2-28-19	3-4-19	
Ethyl Benzene	**ND**	0.066	EPA 8021B	2-28-19	3-4-19	
m,p-Xylene	**ND**	0.066	EPA 8021B	2-28-19	3-4-19	
o-Xylene	**ND**	0.066	EPA 8021B	2-28-19	3-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*57-129*				
Client ID:	**TP-14-1.0**					
Laboratory ID:	02-177-18					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	3-1-19	
Toluene	**ND**	0.061	EPA 8021B	2-28-19	3-1-19	
Ethyl Benzene	**ND**	0.061	EPA 8021B	2-28-19	3-1-19	
m,p-Xylene	**ND**	0.061	EPA 8021B	2-28-19	3-1-19	
o-Xylene	**ND**	0.061	EPA 8021B	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*84*	*57-129*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

BTEX
EPA 8021B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-15-1.0**					
Laboratory ID:	02-177-19					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	3-1-19	
Toluene	**ND**	0.064	EPA 8021B	2-28-19	3-1-19	
Ethyl Benzene	**ND**	0.064	EPA 8021B	2-28-19	3-1-19	
m,p-Xylene	**ND**	0.064	EPA 8021B	2-28-19	3-1-19	
o-Xylene	**ND**	0.064	EPA 8021B	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*57-129*				
Client ID:	**TP-16-0.5**					
Laboratory ID:	02-177-20					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	3-1-19	
Toluene	**ND**	0.062	EPA 8021B	2-28-19	3-1-19	
Ethyl Benzene	**ND**	0.062	EPA 8021B	2-28-19	3-1-19	
m,p-Xylene	**ND**	0.062	EPA 8021B	2-28-19	3-1-19	
o-Xylene	**ND**	0.062	EPA 8021B	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*76*	*57-129*				
Client ID:	**TP-17-1.0**					
Laboratory ID:	02-177-21					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	3-1-19	
Toluene	**ND**	0.079	EPA 8021B	2-28-19	3-1-19	
Ethyl Benzene	**ND**	0.079	EPA 8021B	2-28-19	3-1-19	
m,p-Xylene	**ND**	0.079	EPA 8021B	2-28-19	3-1-19	
o-Xylene	**ND**	0.079	EPA 8021B	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*57-129*				
Client ID:	**TP-18-0.8**					
Laboratory ID:	02-177-22					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	3-1-19	
Toluene	**ND**	0.070	EPA 8021B	2-28-19	3-1-19	
Ethyl Benzene	**ND**	0.070	EPA 8021B	2-28-19	3-1-19	
m,p-Xylene	**ND**	0.070	EPA 8021B	2-28-19	3-1-19	
o-Xylene	**ND**	0.070	EPA 8021B	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*95*	*57-129*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

BTEX
EPA 8021B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-19-0.5**					
Laboratory ID:	02-177-23					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	3-1-19	
Toluene	**ND**	0.058	EPA 8021B	2-28-19	3-1-19	
Ethyl Benzene	**ND**	0.058	EPA 8021B	2-28-19	3-1-19	
m,p-Xylene	**ND**	0.058	EPA 8021B	2-28-19	3-1-19	
o-Xylene	**ND**	0.058	EPA 8021B	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*57-129*				
Client ID:	**TP-20-0.6**					
Laboratory ID:	02-177-24					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	3-1-19	
Toluene	**ND**	0.058	EPA 8021B	2-28-19	3-1-19	
Ethyl Benzene	**ND**	0.058	EPA 8021B	2-28-19	3-1-19	
m,p-Xylene	**ND**	0.058	EPA 8021B	2-28-19	3-1-19	
o-Xylene	**ND**	0.058	EPA 8021B	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*89*	*57-129*				
Client ID:	**TP-21-2.0**					
Laboratory ID:	02-177-25					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	3-1-19	
Toluene	**ND**	0.079	EPA 8021B	2-28-19	3-1-19	
Ethyl Benzene	**ND**	0.079	EPA 8021B	2-28-19	3-1-19	
m,p-Xylene	**ND**	0.079	EPA 8021B	2-28-19	3-1-19	
o-Xylene	**ND**	0.079	EPA 8021B	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*57-129*				
Client ID:	**TP-22-1.8**					
Laboratory ID:	02-177-26					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	3-1-19	
Toluene	**ND**	0.083	EPA 8021B	2-28-19	3-1-19	
Ethyl Benzene	**ND**	0.083	EPA 8021B	2-28-19	3-1-19	
m,p-Xylene	**ND**	0.083	EPA 8021B	2-28-19	3-1-19	
o-Xylene	**ND**	0.083	EPA 8021B	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*100*	*57-129*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

BTEX
EPA 8021B

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-23-0.7**					
Laboratory ID:	02-177-27					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	3-1-19	
Toluene	**ND**	0.060	EPA 8021B	2-28-19	3-1-19	
Ethyl Benzene	**ND**	0.060	EPA 8021B	2-28-19	3-1-19	
m,p-Xylene	**ND**	0.060	EPA 8021B	2-28-19	3-1-19	
o-Xylene	**ND**	0.060	EPA 8021B	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*96*	*57-129*				
Client ID:	**TP-24-2.0**					
Laboratory ID:	02-177-28					
Benzene	**ND**	0.026	EPA 8021B	2-28-19	3-4-19	
Toluene	**ND**	0.13	EPA 8021B	2-28-19	3-4-19	
Ethyl Benzene	**ND**	0.13	EPA 8021B	2-28-19	3-4-19	
m,p-Xylene	**ND**	0.13	EPA 8021B	2-28-19	3-4-19	
o-Xylene	**ND**	0.13	EPA 8021B	2-28-19	3-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*57-129*				
Client ID:	**TP-25-2.0**					
Laboratory ID:	02-177-29					
Benzene	**ND**	0.023	EPA 8021B	2-28-19	3-4-19	
Toluene	**ND**	0.11	EPA 8021B	2-28-19	3-4-19	
Ethyl Benzene	**ND**	0.11	EPA 8021B	2-28-19	3-4-19	
m,p-Xylene	**0.31**	0.11	EPA 8021B	2-28-19	3-4-19	
o-Xylene	**0.15**	0.11	EPA 8021B	2-28-19	3-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*99*	*57-129*				
Client ID:	**TP-26-1.5**					
Laboratory ID:	02-177-30					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	3-1-19	
Toluene	**ND**	0.060	EPA 8021B	2-28-19	3-1-19	
Ethyl Benzene	**ND**	0.060	EPA 8021B	2-28-19	3-1-19	
m,p-Xylene	**ND**	0.060	EPA 8021B	2-28-19	3-1-19	
o-Xylene	**ND**	0.060	EPA 8021B	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*57-129*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

GASOLINE RANGE ORGANICS/BTEX
NWTPH-Gx/EPA 8021B
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0228S2					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	2-28-19	
Toluene	**ND**	0.050	EPA 8021B	2-28-19	2-28-19	
Ethyl Benzene	**ND**	0.050	EPA 8021B	2-28-19	2-28-19	
m,p-Xylene	**ND**	0.050	EPA 8021B	2-28-19	2-28-19	
o-Xylene	**ND**	0.050	EPA 8021B	2-28-19	2-28-19	
Gasoline	**ND**	5.0	NWTPH-Gx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*57-129*				
Laboratory ID:	MB0228S3					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	2-28-19	
Toluene	**ND**	0.050	EPA 8021B	2-28-19	2-28-19	
Ethyl Benzene	**ND**	0.050	EPA 8021B	2-28-19	2-28-19	
m,p-Xylene	**ND**	0.050	EPA 8021B	2-28-19	2-28-19	
o-Xylene	**ND**	0.050	EPA 8021B	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*57-129*				
Laboratory ID:	MB0228S4					
Benzene	**ND**	0.020	EPA 8021B	2-28-19	2-28-19	
Toluene	**ND**	0.050	EPA 8021B	2-28-19	2-28-19	
Ethyl Benzene	**ND**	0.050	EPA 8021B	2-28-19	2-28-19	
m,p-Xylene	**ND**	0.050	EPA 8021B	2-28-19	2-28-19	
o-Xylene	**ND**	0.050	EPA 8021B	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*57-129*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

GASOLINE RANGE ORGANICS/BTEX
NWTPH-Gx/EPA 8021B
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	02-175-04										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*96*	*96*	*57-129*			
DUPLICATE											
Laboratory ID:	02-175-05										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*98*	*96*	*57-129*			
SPIKE BLANKS											
Laboratory ID:	SB0228S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**0.975**	**0.978**	1.00	1.00		**98**	**98**	69-111	0	10	
Toluene	**1.11**	**1.07**	1.00	1.00		**111**	**107**	70-114	4	11	
Ethyl Benzene	**1.07**	**1.07**	1.00	1.00		**107**	**107**	70-115	0	10	
m,p-Xylene	**1.11**	**1.07**	1.00	1.00		**111**	**107**	72-115	4	10	
o-Xylene	**1.08**	**1.06**	1.00	1.00		**108**	**106**	71-115	2	11	
Surrogate:											
Fluorobenzene						*100*	*99*	*57-129*			
Laboratory ID:	SB0228S2										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**0.960**	**0.979**	1.00	1.00		**96**	**98**	69-111	2	10	
Toluene	**1.01**	**1.03**	1.00	1.00		**101**	**103**	70-114	2	11	
Ethyl Benzene	**1.01**	**1.04**	1.00	1.00		**101**	**104**	70-115	3	10	
m,p-Xylene	**0.991**	**1.02**	1.00	1.00		**99**	**102**	72-115	3	10	
o-Xylene	**1.00**	**1.03**	1.00	1.00		**100**	**103**	71-115	3	11	
Surrogate:											
Fluorobenzene						*97*	*99*	*57-129*			

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

GASOLINE RANGE ORGANICS/BTEX
NWTPH-Gx/EPA 8021B

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TRIP BLANK**					
Laboratory ID:	02-177-31					
Benzene	**ND**	1.0	EPA 8021B	2-28-19	2-28-19	
Toluene	**ND**	1.0	EPA 8021B	2-28-19	2-28-19	
Ethyl Benzene	**ND**	1.0	EPA 8021B	2-28-19	2-28-19	
m,p-Xylene	**ND**	1.0	EPA 8021B	2-28-19	2-28-19	
o-Xylene	**ND**	1.0	EPA 8021B	2-28-19	2-28-19	
Gasoline	**ND**	100	NWTPH-Gx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*66-117*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

GASOLINE RANGE ORGANICS/BTEX
NWTPH-Gx/EPA 8021B
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0228W1					
Benzene	**ND**	1.0	EPA 8021B	2-28-19	2-28-19	
Toluene	**ND**	1.0	EPA 8021B	2-28-19	2-28-19	
Ethyl Benzene	**ND**	1.0	EPA 8021B	2-28-19	2-28-19	
m,p-Xylene	**ND**	1.0	EPA 8021B	2-28-19	2-28-19	
o-Xylene	**ND**	1.0	EPA 8021B	2-28-19	2-28-19	
Gasoline	**ND**	100	NWTPH-Gx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*66-117*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	02-162-01										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*86*	*88*	*66-117*			
MATRIX SPIKES											
Laboratory ID:	02-162-01										
	MS	MSD	MS	MSD		MS	MSD				
Benzene	**46.6**	**46.8**	50.0	50.0	ND	**93**	**94**	82-122	0	11	
Toluene	**47.3**	**47.4**	50.0	50.0	ND	**95**	**95**	83-123	0	12	
Ethyl Benzene	**48.1**	**48.3**	50.0	50.0	ND	**96**	**97**	83-123	0	12	
m,p-Xylene	**46.6**	**46.8**	50.0	50.0	ND	**93**	**94**	83-123	0	12	
o-Xylene	**47.2**	**47.3**	50.0	50.0	ND	**94**	**95**	83-123	0	11	
Surrogate:											
Fluorobenzene						*99*	*100*	*66-117*			

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS-1**					
Laboratory ID:	02-177-01					
Mineral Oil	**ND**	27	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*84*	*50-150*				
Client ID:	**SS-2**					
Laboratory ID:	02-177-02					
Mineral Oil	**3400**	30	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*56*	*50-150*				
Client ID:	**SS-3**					
Laboratory ID:	02-177-03					
Mineral Oil	**ND**	31	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*96*	*50-150*				
Client ID:	**SS-4**					
Laboratory ID:	02-177-04					
Mineral Oil	**ND**	39	NWTPH-Dx	2-28-19	2-28-19	U1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				
Client ID:	**TP-1-1.0**					
Laboratory ID:	02-177-05					
Diesel Range Organics	**ND**	27	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil	**68**	55	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				
Client ID:	**TP-2-1.8**					
Laboratory ID:	02-177-06					
Diesel Range Organics	**ND**	27	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil Range Organics	**ND**	53	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-3-1.3**					
Laboratory ID:	02-177-07					
Diesel Range Organics	**ND**	28	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil	**74**	55	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				
Client ID:	**TP-4-1.0**					
Laboratory ID:	02-177-08					
Diesel Range Organics	**610**	140	NWTPH-Dx	2-28-19	3-1-19	N
Lube Oil Range Organics	**1200**	270	NWTPH-Dx	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**TP-5-1.0**					
Laboratory ID:	02-177-09					
Diesel Range Organics	**ND**	91	NWTPH-Dx	2-28-19	2-28-19	U1
Lube Oil	**850**	54	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				
Client ID:	**TP-6-1.0**					
Laboratory ID:	02-177-10					
Diesel Range Organics	**47**	28	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil Range Organics	**64**	55	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*85*	*50-150*				
Client ID:	**TP-7-1.0**					
Laboratory ID:	02-177-11					
Diesel Range Organics	**ND**	280	NWTPH-Dx	2-28-19	3-1-19	
Lube Oil	**2500**	570	NWTPH-Dx	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*---*	*50-150*				S
Client ID:	**TP-8-1.5**					
Laboratory ID:	02-177-12					
Diesel Range Organics	**ND**	29	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil	**66**	58	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-9-3.0**					
Laboratory ID:	02-177-13					
Diesel Range Organics	**ND**	27	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil	**72**	55	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*94*	*50-150*				
Client ID:	**TP-10-1.8**					
Laboratory ID:	02-177-14					
Diesel Range Organics	**ND**	28	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil	**79**	57	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*96*	*50-150*				
Client ID:	**TP-11-1.8**					
Laboratory ID:	02-177-15					
Diesel Range Organics	**ND**	29	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil	**59**	58	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				
Client ID:	**TP-12-1.0**					
Laboratory ID:	02-177-16					
Diesel Range Organics	**30**	28	NWTPH-Dx	2-28-19	2-28-19	N
Lube Oil	**73**	56	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**TP-13-1.8**					
Laboratory ID:	02-177-17					
Diesel Range Organics	**ND**	61	NWTPH-Dx	2-28-19	2-28-19	U1
Lube Oil	**560**	55	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*96*	*50-150*				
Client ID:	**TP-14-1.0**					
Laboratory ID:	02-177-18					
Diesel Range Organics	**45**	27	NWTPH-Dx	2-28-19	2-28-19	N
Lube Oil	**86**	54	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*96*	*50-150*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-15-1.0**					
Laboratory ID:	02-177-19					
Diesel Range Organics	**ND**	70	NWTPH-Dx	2-28-19	2-28-19	U1
Lube Oil	**720**	54	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*104*	*50-150*				
Client ID:	**TP-16-0.5**					
Laboratory ID:	02-177-20					
Diesel Range Organics	**ND**	29	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil	**120**	57	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				
Client ID:	**TP-17-1.0**					
Laboratory ID:	02-177-21					
Diesel Range Organics	**ND**	30	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil Range Organics	**ND**	60	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*89*	*50-150*				
Client ID:	**TP-18-0.8**					
Laboratory ID:	02-177-22					
Diesel Range Organics	**ND**	28	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil Range Organics	**ND**	57	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*101*	*50-150*				
Client ID:	**TP-19-0.5**					
Laboratory ID:	02-177-23					
Diesel Range Organics	**ND**	27	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil Range Organics	**ND**	54	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*85*	*50-150*				
Client ID:	**TP-20-0.6**					
Laboratory ID:	02-177-24					
Diesel Range Organics	**48**	28	NWTPH-Dx	2-28-19	2-28-19	N
Lube Oil	**200**	56	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-21-2.0**					
Laboratory ID:	02-177-25					
Diesel Range Organics	**1500**	270	NWTPH-Dx	2-28-19	3-1-19	
Lube Oil Range Organics	**2400**	540	NWTPH-Dx	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	---	*50-150*				S
Client ID:	**TP-22-1.8**					
Laboratory ID:	02-177-26					
Diesel Range Organics	**39**	32	NWTPH-Dx	2-28-19	2-28-19	N
Lube Oil	**99**	63	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				
Client ID:	**TP-23-0.7**					
Laboratory ID:	02-177-27					
Diesel Range Organics	**ND**	28	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil	**150**	56	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*110*	*50-150*				
Client ID:	**TP-24-2.0**					
Laboratory ID:	02-177-28					
Diesel Fuel #2	**3200**	27	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil Range Organics	**1000**	54	NWTPH-Dx	2-28-19	2-28-19	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				
Client ID:	**TP-25-2.0**					
Laboratory ID:	02-177-29					
Diesel Fuel #2	**8500**	270	NWTPH-Dx	2-28-19	3-1-19	
Lube Oil Range Organics	**1800**	540	NWTPH-Dx	2-28-19	3-1-19	N1
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	---	*50-150*				S
Client ID:	**TP-26-1.5**					
Laboratory ID:	02-177-30					
Diesel Range Organics	**ND**	27	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil	**83**	54	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

DIESEL AND HEAVY OIL RANGE ORGANICS
NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0228S1					
Diesel Range Organics	**ND**	25	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*103*	*50-150*				
Laboratory ID:	MB0228S4					
Diesel Range Organics	**ND**	25	NWTPH-Dx	2-28-19	2-28-19	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				
Laboratory ID:	MB0228S4					
Mineral Oil	**ND**	25	NWTPH-Dx	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	02-177-05									
	ORIG	DUP								
Diesel Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	
Lube Oil	**61.9**	**ND**	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						*102* *106*	*50-150*			
Laboratory ID:	02-177-12									
	ORIG	DUP								
Diesel Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	
Lube Oil	**57.2**	**ND**	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						*88* *91*	*50-150*			
Laboratory ID:	02-177-30									
	ORIG	DUP								
Diesel Range	**ND**	**ND**	NA	NA		NA	NA	NA	NA	
Lube Oil	**77.0**	**75.3**	NA	NA		NA	NA	2	NA	
Surrogate:										
o-Terphenyl						*102* *100*	*50-150*			

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS-1**					
Laboratory ID:	02-177-01					
Aroclor 1016	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1221	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1232	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1242	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1248	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1254	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1260	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*77*	*39-130*				
Client ID:	**SS-2**					
Laboratory ID:	02-177-02					
Aroclor 1016	**ND**	0.059	EPA 8082A	2-28-19	3-1-19	
Aroclor 1221	**ND**	0.059	EPA 8082A	2-28-19	3-1-19	
Aroclor 1232	**ND**	0.059	EPA 8082A	2-28-19	3-1-19	
Aroclor 1242	**ND**	0.059	EPA 8082A	2-28-19	3-1-19	
Aroclor 1248	**ND**	0.059	EPA 8082A	2-28-19	3-1-19	
Aroclor 1254	**ND**	0.059	EPA 8082A	2-28-19	3-1-19	
Aroclor 1260	**ND**	0.059	EPA 8082A	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*82*	*39-130*				
Client ID:	**SS-3**					
Laboratory ID:	02-177-03					
Aroclor 1016	**ND**	0.062	EPA 8082A	2-28-19	3-1-19	
Aroclor 1221	**ND**	0.062	EPA 8082A	2-28-19	3-1-19	
Aroclor 1232	**ND**	0.062	EPA 8082A	2-28-19	3-1-19	
Aroclor 1242	**ND**	0.062	EPA 8082A	2-28-19	3-1-19	
Aroclor 1248	**ND**	0.062	EPA 8082A	2-28-19	3-1-19	
Aroclor 1254	**ND**	0.062	EPA 8082A	2-28-19	3-1-19	
Aroclor 1260	**ND**	0.062	EPA 8082A	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*76*	*39-130*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**SS-4**					
Laboratory ID:	02-177-04					
Aroclor 1016	**ND**	0.060	EPA 8082A	2-28-19	3-1-19	
Aroclor 1221	**ND**	0.060	EPA 8082A	2-28-19	3-1-19	
Aroclor 1232	**ND**	0.060	EPA 8082A	2-28-19	3-1-19	
Aroclor 1242	**ND**	0.060	EPA 8082A	2-28-19	3-1-19	
Aroclor 1248	**ND**	0.060	EPA 8082A	2-28-19	3-1-19	
Aroclor 1254	**ND**	0.060	EPA 8082A	2-28-19	3-1-19	
Aroclor 1260	**ND**	0.060	EPA 8082A	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*75*	*39-130*				
Client ID:	**TP-1-1.0**					
Laboratory ID:	02-177-05					
Aroclor 1016	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1221	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1232	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1242	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1248	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1254	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1260	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*86*	*39-130*				
Client ID:	**TP-2-1.8**					
Laboratory ID:	02-177-06					
Aroclor 1016	**ND**	0.053	EPA 8082A	2-28-19	3-1-19	
Aroclor 1221	**ND**	0.053	EPA 8082A	2-28-19	3-1-19	
Aroclor 1232	**ND**	0.053	EPA 8082A	2-28-19	3-1-19	
Aroclor 1242	**ND**	0.053	EPA 8082A	2-28-19	3-1-19	
Aroclor 1248	**ND**	0.053	EPA 8082A	2-28-19	3-1-19	
Aroclor 1254	**ND**	0.053	EPA 8082A	2-28-19	3-1-19	
Aroclor 1260	**ND**	0.053	EPA 8082A	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*91*	*39-130*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-3-1.3**					
Laboratory ID:	02-177-07					
Aroclor 1016	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1221	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1232	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1242	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1248	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1254	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1260	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*88*	*39-130*				
Client ID:	**TP-4-1.0**					
Laboratory ID:	02-177-08					
Aroclor 1016	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1221	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1232	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1242	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1248	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1254	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1260	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*84*	*39-130*				
Client ID:	**TP-5-1.0**					
Laboratory ID:	02-177-09					
Aroclor 1016	**ND**	0.054	EPA 8082A	2-28-19	3-1-19	
Aroclor 1221	**ND**	0.054	EPA 8082A	2-28-19	3-1-19	
Aroclor 1232	**ND**	0.054	EPA 8082A	2-28-19	3-1-19	
Aroclor 1242	**ND**	0.054	EPA 8082A	2-28-19	3-1-19	
Aroclor 1248	**ND**	0.054	EPA 8082A	2-28-19	3-1-19	
Aroclor 1254	**ND**	0.054	EPA 8082A	2-28-19	3-1-19	
Aroclor 1260	**ND**	0.054	EPA 8082A	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*81*	*39-130*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PCBs EPA 8082A

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-6-1.0**					
Laboratory ID:	02-177-10					
Aroclor 1016	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1221	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1232	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1242	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1248	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1254	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Aroclor 1260	**ND**	0.055	EPA 8082A	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*86*	*39-130*				
Client ID:	**TP-7-1.0**					
Laboratory ID:	02-177-11					
Aroclor 1016	**ND**	0.057	EPA 8082A	2-28-19	3-1-19	
Aroclor 1221	**ND**	0.057	EPA 8082A	2-28-19	3-1-19	
Aroclor 1232	**ND**	0.057	EPA 8082A	2-28-19	3-1-19	
Aroclor 1242	**ND**	0.057	EPA 8082A	2-28-19	3-1-19	
Aroclor 1248	**ND**	0.057	EPA 8082A	2-28-19	3-1-19	
Aroclor 1254	**ND**	0.057	EPA 8082A	2-28-19	3-1-19	
Aroclor 1260	**ND**	0.057	EPA 8082A	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*87*	*39-130*				
Client ID:	**TP-8-1.5**					
Laboratory ID:	02-177-12					
Aroclor 1016	**ND**	0.058	EPA 8082A	2-28-19	3-1-19	
Aroclor 1221	**ND**	0.058	EPA 8082A	2-28-19	3-1-19	
Aroclor 1232	**ND**	0.058	EPA 8082A	2-28-19	3-1-19	
Aroclor 1242	**ND**	0.058	EPA 8082A	2-28-19	3-1-19	
Aroclor 1248	**ND**	0.058	EPA 8082A	2-28-19	3-1-19	
Aroclor 1254	**ND**	0.058	EPA 8082A	2-28-19	3-1-19	
Aroclor 1260	**ND**	0.058	EPA 8082A	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*81*	*39-130*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PCBs EPA 8082A
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0228S1					
Aroclor 1016	**ND**	0.050	EPA 8082A	2-28-19	3-1-19	
Aroclor 1221	**ND**	0.050	EPA 8082A	2-28-19	3-1-19	
Aroclor 1232	**ND**	0.050	EPA 8082A	2-28-19	3-1-19	
Aroclor 1242	**ND**	0.050	EPA 8082A	2-28-19	3-1-19	
Aroclor 1248	**ND**	0.050	EPA 8082A	2-28-19	3-1-19	
Aroclor 1254	**ND**	0.050	EPA 8082A	2-28-19	3-1-19	
Aroclor 1260	**ND**	0.050	EPA 8082A	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
DCB	*89*	*39-130*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	02-177-01										
	MS	MSD	MS	MSD		MS	MSD				
Aroclor 1260	**0.433**	**0.418**	0.500	0.500	ND	**87**	**84**	45-118	4	15	
Surrogate:											
DCB						*82*	*77*	*39-130*			

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-1-1.0**					
Laboratory ID:	02-177-05					
Naphthalene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
2-Methylnaphthalene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
1-Methylnaphthalene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]anthracene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Chrysene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[b]fluoranthene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo(j,k)fluoranthene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]pyrene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Dibenz[a,h]anthracene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*67*	*40 - 117*				
Pyrene-d10	*77*	*38 - 119*				
Terphenyl-d14	*82*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-2-1.8**					
Laboratory ID:	02-177-06					
Naphthalene	**ND**	0.0071	EPA 8270D/SIM	2-28-19	2-28-19	
2-Methylnaphthalene	**ND**	0.0071	EPA 8270D/SIM	2-28-19	2-28-19	
1-Methylnaphthalene	**ND**	0.0071	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]anthracene	**ND**	0.0071	EPA 8270D/SIM	2-28-19	2-28-19	
Chrysene	**ND**	0.0071	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[b]fluoranthene	**ND**	0.0071	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo(j,k)fluoranthene	**ND**	0.0071	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]pyrene	**ND**	0.0071	EPA 8270D/SIM	2-28-19	2-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0071	EPA 8270D/SIM	2-28-19	2-28-19	
Dibenz[a,h]anthracene	**ND**	0.0071	EPA 8270D/SIM	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*80*	*40 - 117*				
Pyrene-d10	*78*	*38 - 119*				
Terphenyl-d14	*80*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-3-1.3**					
Laboratory ID:	02-177-07					
Naphthalene	**0.023**	0.0074	EPA 8270D/SIM	2-28-19	3-1-19	
2-Methylnaphthalene	**0.021**	0.0074	EPA 8270D/SIM	2-28-19	3-1-19	
1-Methylnaphthalene	**0.017**	0.0074	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[a]anthracene	**0.039**	0.0074	EPA 8270D/SIM	2-28-19	3-1-19	
Chrysene	**0.048**	0.0074	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[b]fluoranthene	**0.068**	0.0074	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo(j,k)fluoranthene	**0.023**	0.0074	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[a]pyrene	**0.058**	0.0074	EPA 8270D/SIM	2-28-19	3-1-19	
Indeno(1,2,3-c,d)pyrene	**0.043**	0.0074	EPA 8270D/SIM	2-28-19	3-1-19	
Dibenz[a,h]anthracene	**0.0084**	0.0074	EPA 8270D/SIM	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*93*	*40 - 117*				
Pyrene-d10	*98*	*38 - 119*				
Terphenyl-d14	*96*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-4-1.0**					
Laboratory ID:	02-177-08					
Naphthalene	**0.14**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
2-Methylnaphthalene	**0.25**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
1-Methylnaphthalene	**0.19**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]anthracene	**0.030**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Chrysene	**0.039**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[b]fluoranthene	**0.038**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo(j,k)fluoranthene	**0.0099**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]pyrene	**0.030**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Indeno(1,2,3-c,d)pyrene	**0.022**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Dibenz[a,h]anthracene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*64*	*40 - 117*				
Pyrene-d10	*68*	*38 - 119*				
Terphenyl-d14	*70*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-5-1.0**					
Laboratory ID:	02-177-09					
Naphthalene	**0.0084**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
2-Methylnaphthalene	**0.016**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
1-Methylnaphthalene	**0.013**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[a]anthracene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
Chrysene	**0.012**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[b]fluoranthene	**0.016**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo(j,k)fluoranthene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[a]pyrene	**0.0083**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
Indeno(1,2,3-c,d)pyrene	**0.014**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
Dibenz[a,h]anthracene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*88*	*40 - 117*				
Pyrene-d10	*101*	*38 - 119*				
Terphenyl-d14	*93*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-6-1.0**					
Laboratory ID:	02-177-10					
Naphthalene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
2-Methylnaphthalene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
1-Methylnaphthalene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]anthracene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
Chrysene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[b]fluoranthene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo(j,k)fluoranthene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]pyrene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
Dibenz[a,h]anthracene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*69*	*40 - 117*				
Pyrene-d10	*78*	*38 - 119*				
Terphenyl-d14	*74*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-7-1.0**					
Laboratory ID:	02-177-11					
Naphthalene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
2-Methylnaphthalene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
1-Methylnaphthalene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[a]anthracene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Chrysene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[b]fluoranthene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo(j,k)fluoranthene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[a]pyrene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Dibenz[a,h]anthracene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*85*	*40 - 117*				
Pyrene-d10	*100*	*38 - 119*				
Terphenyl-d14	*95*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-8-1.5**					
Laboratory ID:	02-177-12					
Naphthalene	**0.050**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
2-Methylnaphthalene	**0.039**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
1-Methylnaphthalene	**0.022**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]anthracene	**ND**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
Chrysene	**ND**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[b]fluoranthene	**ND**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo(j,k)fluoranthene	**ND**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]pyrene	**ND**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
Dibenz[a,h]anthracene	**ND**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*68*	*40 - 117*				
Pyrene-d10	*77*	*38 - 119*				
Terphenyl-d14	*76*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-9-3.0**					
Laboratory ID:	02-177-13					
Naphthalene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
2-Methylnaphthalene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
1-Methylnaphthalene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]anthracene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Chrysene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[b]fluoranthene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo(j,k)fluoranthene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]pyrene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Dibenz[a,h]anthracene	**ND**	0.0073	EPA 8270D/SIM	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*67*	*40 - 117*				
Pyrene-d10	*74*	*38 - 119*				
Terphenyl-d14	*74*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-10-1.8**					
Laboratory ID:	02-177-14					
Naphthalene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
2-Methylnaphthalene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
1-Methylnaphthalene	**0.0081**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[a]anthracene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Chrysene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[b]fluoranthene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo(j,k)fluoranthene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[a]pyrene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Dibenz[a,h]anthracene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*92*	*40 - 117*				
Pyrene-d10	*100*	*38 - 119*				
Terphenyl-d14	*97*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-11-1.8**					
Laboratory ID:	02-177-15					
Naphthalene	**0.0088**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
2-Methylnaphthalene	**ND**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
1-Methylnaphthalene	**ND**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]anthracene	**ND**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
Chrysene	**ND**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[b]fluoranthene	**ND**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo(j,k)fluoranthene	**ND**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]pyrene	**ND**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
Dibenz[a,h]anthracene	**ND**	0.0077	EPA 8270D/SIM	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*66*	*40 - 117*				
Pyrene-d10	*74*	*38 - 119*				
Terphenyl-d14	*73*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-12-1.0**					
Laboratory ID:	02-177-16					
Naphthalene	**0.045**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
2-Methylnaphthalene	**0.071**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
1-Methylnaphthalene	**0.073**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[a]anthracene	**0.014**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
Chrysene	**0.015**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[b]fluoranthene	**0.014**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo(j,k)fluoranthene	**ND**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[a]pyrene	**0.0090**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
Indeno(1,2,3-c,d)pyrene	**0.0089**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
Dibenz[a,h]anthracene	**ND**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*79*	*40 - 117*				
Pyrene-d10	*93*	*38 - 119*				
Terphenyl-d14	*92*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-13-1.8**					
Laboratory ID:	02-177-17					
Naphthalene	**0.010**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
2-Methylnaphthalene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
1-Methylnaphthalene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]anthracene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
Chrysene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[b]fluoranthene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo(j,k)fluoranthene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]pyrene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
Dibenz[a,h]anthracene	**ND**	0.0074	EPA 8270D/SIM	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*70*	*40 - 117*				
Pyrene-d10	*76*	*38 - 119*				
Terphenyl-d14	*73*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-14-1.0**					
Laboratory ID:	02-177-18					
Naphthalene	**0.0077**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
2-Methylnaphthalene	**0.013**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
1-Methylnaphthalene	**0.015**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]anthracene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
Chrysene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[b]fluoranthene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo(j,k)fluoranthene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]pyrene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
Dibenz[a,h]anthracene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*68*	*40 - 117*				
Pyrene-d10	*75*	*38 - 119*				
Terphenyl-d14	*75*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-15-1.0**					
Laboratory ID:	02-177-19					
Naphthalene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
2-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
1-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[a]anthracene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
Chrysene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[b]fluoranthene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo(j,k)fluoranthene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[a]pyrene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
Dibenz[a,h]anthracene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*91*	*40 - 117*				
Pyrene-d10	*107*	*38 - 119*				
Terphenyl-d14	*100*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-16-0.5**					
Laboratory ID:	02-177-20					
Naphthalene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
2-Methylnaphthalene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
1-Methylnaphthalene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[a]anthracene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Chrysene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[b]fluoranthene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo(j,k)fluoranthene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Benzo[a]pyrene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Dibenz[a,h]anthracene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*92*	*40 - 117*				
Pyrene-d10	*96*	*38 - 119*				
Terphenyl-d14	*95*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-17-1.0**					
Laboratory ID:	02-177-21					
Naphthalene	**ND**	0.0079	EPA 8270D/SIM	2-28-19	2-28-19	
2-Methylnaphthalene	**ND**	0.0079	EPA 8270D/SIM	2-28-19	2-28-19	
1-Methylnaphthalene	**ND**	0.0079	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]anthracene	**ND**	0.0079	EPA 8270D/SIM	2-28-19	2-28-19	
Chrysene	**ND**	0.0079	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[b]fluoranthene	**ND**	0.0079	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo(j,k)fluoranthene	**ND**	0.0079	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]pyrene	**ND**	0.0079	EPA 8270D/SIM	2-28-19	2-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0079	EPA 8270D/SIM	2-28-19	2-28-19	
Dibenz[a,h]anthracene	**ND**	0.0079	EPA 8270D/SIM	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*67*	*40 - 117*				
Pyrene-d10	*76*	*38 - 119*				
Terphenyl-d14	*76*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-18-0.8**					
Laboratory ID:	02-177-22					
Naphthalene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	2-28-19	
2-Methylnaphthalene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	2-28-19	
1-Methylnaphthalene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]anthracene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	2-28-19	
Chrysene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[b]fluoranthene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo(j,k)fluoranthene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]pyrene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	2-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	2-28-19	
Dibenz[a,h]anthracene	**ND**	0.0076	EPA 8270D/SIM	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*70*	*40 - 117*				
Pyrene-d10	*78*	*38 - 119*				
Terphenyl-d14	*78*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-19-0.5**					
Laboratory ID:	02-177-23					
Naphthalene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
2-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
1-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]anthracene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
Chrysene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[b]fluoranthene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo(j,k)fluoranthene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]pyrene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
Dibenz[a,h]anthracene	**ND**	0.0072	EPA 8270D/SIM	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*68*	*40 - 117*				
Pyrene-d10	*74*	*38 - 119*				
Terphenyl-d14	*74*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-20-0.6**					
Laboratory ID:	02-177-24					
Naphthalene	**ND**	0.0075	EPA 8270D/SIM	2-28-19	2-28-19	
2-Methylnaphthalene	**0.014**	0.0075	EPA 8270D/SIM	2-28-19	2-28-19	
1-Methylnaphthalene	**0.016**	0.0075	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]anthracene	**ND**	0.0075	EPA 8270D/SIM	2-28-19	2-28-19	
Chrysene	**ND**	0.0075	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[b]fluoranthene	**ND**	0.0075	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo(j,k)fluoranthene	**ND**	0.0075	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]pyrene	**ND**	0.0075	EPA 8270D/SIM	2-28-19	2-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0075	EPA 8270D/SIM	2-28-19	2-28-19	
Dibenz[a,h]anthracene	**ND**	0.0075	EPA 8270D/SIM	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*70*	*40 - 117*				
Pyrene-d10	*73*	*38 - 119*				
Terphenyl-d14	*74*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-21-2.0**					
Laboratory ID:	02-177-25					
Naphthalene	**ND**	0.0080	EPA 8270D/SIM	3-1-19	3-4-19	
2-Methylnaphthalene	**0.0099**	0.0080	EPA 8270D/SIM	3-1-19	3-4-19	
1-Methylnaphthalene	**ND**	0.0080	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[a]anthracene	**0.014**	0.0080	EPA 8270D/SIM	3-1-19	3-4-19	
Chrysene	**0.037**	0.0080	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[b]fluoranthene	**0.0092**	0.0080	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo(j,k)fluoranthene	**ND**	0.0080	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[a]pyrene	**ND**	0.0080	EPA 8270D/SIM	3-1-19	3-4-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0080	EPA 8270D/SIM	3-1-19	3-4-19	
Dibenz[a,h]anthracene	**ND**	0.0080	EPA 8270D/SIM	3-1-19	3-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*82*	*40 - 117*				
Pyrene-d10	*101*	*38 - 119*				
Terphenyl-d14	*100*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-22-1.8**					
Laboratory ID:	02-177-26					
Naphthalene	**ND**	0.0084	EPA 8270D/SIM	3-1-19	3-4-19	
2-Methylnaphthalene	**ND**	0.0084	EPA 8270D/SIM	3-1-19	3-4-19	
1-Methylnaphthalene	**ND**	0.0084	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[a]anthracene	**ND**	0.0084	EPA 8270D/SIM	3-1-19	3-4-19	
Chrysene	**ND**	0.0084	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[b]fluoranthene	**ND**	0.0084	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo(j,k)fluoranthene	**ND**	0.0084	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[a]pyrene	**ND**	0.0084	EPA 8270D/SIM	3-1-19	3-4-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0084	EPA 8270D/SIM	3-1-19	3-4-19	
Dibenz[a,h]anthracene	**ND**	0.0084	EPA 8270D/SIM	3-1-19	3-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*91*	*40 - 117*				
Pyrene-d10	*94*	*38 - 119*				
Terphenyl-d14	*93*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-23-0.7**					
Laboratory ID:	02-177-27					
Naphthalene	**ND**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
2-Methylnaphthalene	**0.013**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
1-Methylnaphthalene	**0.012**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[a]anthracene	**ND**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
Chrysene	**ND**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[b]fluoranthene	**ND**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo(j,k)fluoranthene	**ND**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[a]pyrene	**ND**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
Dibenz[a,h]anthracene	**ND**	0.0074	EPA 8270D/SIM	3-1-19	3-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*93*	*40 - 117*				
Pyrene-d10	*99*	*38 - 119*				
Terphenyl-d14	*98*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-24-2.0**					
Laboratory ID:	02-177-28					
Naphthalene	**0.68**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
2-Methylnaphthalene	**2.9**	0.072	EPA 8270D/SIM	3-1-19	3-4-19	
1-Methylnaphthalene	**2.7**	0.072	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[a]anthracene	**0.011**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
Chrysene	**0.037**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[b]fluoranthene	**ND**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo(j,k)fluoranthene	**ND**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[a]pyrene	**ND**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
Dibenz[a,h]anthracene	**ND**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*85*	*40 - 117*				
Pyrene-d10	*123*	*38 - 119*				Q
Terphenyl-d14	*125*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-25-2.0**					
Laboratory ID:	02-177-29					
Naphthalene	**3.2**	0.14	EPA 8270D/SIM	3-1-19	3-4-19	
2-Methylnaphthalene	**23**	0.36	EPA 8270D/SIM	3-1-19	3-5-19	
1-Methylnaphthalene	**15**	0.14	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[a]anthracene	**0.014**	0.0071	EPA 8270D/SIM	3-1-19	3-4-19	
Chrysene	**0.074**	0.0071	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[b]fluoranthene	**0.0086**	0.0071	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo(j,k)fluoranthene	**ND**	0.0071	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[a]pyrene	**ND**	0.0071	EPA 8270D/SIM	3-1-19	3-4-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0071	EPA 8270D/SIM	3-1-19	3-4-19	
Dibenz[a,h]anthracene	**ND**	0.0071	EPA 8270D/SIM	3-1-19	3-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*100*	*40 - 117*				
Pyrene-d10	*144*	*38 - 119*				Q
Terphenyl-d14	*113*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-26-1.5**					
Laboratory ID:	02-177-30					
Naphthalene	**ND**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
2-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
1-Methylnaphthalene	**ND**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[a]anthracene	**ND**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
Chrysene	**ND**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[b]fluoranthene	**ND**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo(j,k)fluoranthene	**ND**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
Benzo[a]pyrene	**ND**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
Dibenz[a,h]anthracene	**ND**	0.0072	EPA 8270D/SIM	3-1-19	3-4-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*86*	*40 - 117*				
Pyrene-d10	*92*	*38 - 119*				
Terphenyl-d14	*95*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0228S2					
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	2-28-19	2-28-19	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	2-28-19	2-28-19	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	2-28-19	2-28-19	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	2-28-19	2-28-19	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	2-28-19	2-28-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270D/SIM	2-28-19	2-28-19	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*77*	*40 - 117*				
Pyrene-d10	*81*	*38 - 119*				
Terphenyl-d14	*85*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0301S2					
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	3-1-19	3-1-19	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	3-1-19	3-1-19	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	3-1-19	3-1-19	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	3-1-19	3-1-19	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	3-1-19	3-1-19	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-1-19	3-1-19	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	3-1-19	3-1-19	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	3-1-19	3-1-19	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270D/SIM	3-1-19	3-1-19	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	3-1-19	3-1-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*97*	*40 - 117*				
Pyrene-d10	*89*	*38 - 119*				
Terphenyl-d14	*88*	*47 - 135*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM
MS/MSD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	02-177-05										
	MS	MSD	MS	MSD		MS	MSD				
Naphthalene	**0.0695**	**0.0732**	0.0833	0.0833	ND	83	88	45 - 114	5	21	
Benzo[a]anthracene	**0.0721**	**0.0771**	0.0833	0.0833	ND	87	93	55 - 132	7	20	
Chrysene	**0.0698**	**0.0707**	0.0833	0.0833	ND	84	85	51 - 126	1	20	
Benzo[b]fluoranthene	**0.0703**	**0.0730**	0.0833	0.0833	ND	84	88	45 - 133	4	21	
Benzo(j,k)fluoranthene	**0.0696**	**0.0720**	0.0833	0.0833	ND	84	86	49 - 131	3	24	
Benzo[a]pyrene	**0.0714**	**0.0745**	0.0833	0.0833	ND	86	89	50 - 127	4	21	
Indeno(1,2,3-c,d)pyrene	**0.0726**	**0.0765**	0.0833	0.0833	ND	87	92	45 - 133	5	22	
Dibenz[a,h]anthracene	**0.0686**	**0.0719**	0.0833	0.0833	ND	82	86	46 - 132	5	20	
Surrogate:											
2-Fluorobiphenyl						*69*	*70*	*40 - 117*			
Pyrene-d10						*73*	*76*	*38 - 119*			
Terphenyl-d14						*78*	*81*	*47 - 135*			

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

PAHs EPA 8270D/SIM
MS/MSD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	02-175-04										
	MS	MSD	MS	MSD		MS	MSD				
Naphthalene	**0.0829**	**0.0898**	0.0833	0.0833	0.00992	88	96	45 - 114	8	21	
Benzo[a]anthracene	**0.0932**	**0.0909**	0.0833	0.0833	ND	112	109	55 - 132	2	20	
Chrysene	**0.0872**	**0.0894**	0.0833	0.0833	ND	105	107	51 - 126	2	20	
Benzo[b]fluoranthene	**0.0983**	**0.0971**	0.0833	0.0833	ND	118	117	45 - 133	1	21	
Benzo(j,k)fluoranthene	**0.0896**	**0.0841**	0.0833	0.0833	ND	108	101	49 - 131	6	24	
Benzo[a]pyrene	**0.0921**	**0.0913**	0.0833	0.0833	ND	111	110	50 - 127	1	21	
Indeno(1,2,3-c,d)pyrene	**0.0944**	**0.0937**	0.0833	0.0833	ND	113	112	45 - 133	1	22	
Dibenz[a,h]anthracene	**0.0898**	**0.0881**	0.0833	0.0833	ND	108	106	46 - 132	2	20	
Surrogate:											
2-Fluorobiphenyl						*104*	*102*	*40 - 117*			
Pyrene-d10						*96*	*94*	*38 - 119*			
Terphenyl-d14						*97*	*94*	*47 - 135*			

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-1-1.0**					
Laboratory ID:	02-177-05					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Chloromethane	ND	0.0068	EPA 8260C	2-28-19	2-28-19	
Vinyl Chloride	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Bromomethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Chloroethane	ND	0.0068	EPA 8260C	2-28-19	2-28-19	
Trichlorofluoromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Iodomethane	ND	0.0068	EPA 8260C	2-28-19	2-28-19	
Methylene Chloride	ND	0.0068	EPA 8260C	2-28-19	2-28-19	
(trans) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Methyl t-Butyl Ether	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
2,2-Dichloropropane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
(cis) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Bromochloromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Chloroform	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1,1-Trichloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Carbon Tetrachloride	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloropropene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Trichloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloropropane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Dibromomethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Bromodichloromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
2-Chloroethyl Vinyl Ether	ND	0.0096	EPA 8260C	2-28-19	2-28-19	
(cis) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
(trans) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-1-1.0**					
Laboratory ID:	02-177-05					
1,1,2-Trichloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Tetrachloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,3-Dichloropropane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Dibromochloromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromoethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Chlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1,1,2-Tetrachloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Bromoform	ND	0.0068	EPA 8260C	2-28-19	2-28-19	
Bromobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1,2,2-Tetrachloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichloropropane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
2-Chlorotoluene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
4-Chlorotoluene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,3-Dichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,4-Dichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromo-3-chloropropane	ND	0.0068	EPA 8260C	2-28-19	2-28-19	
1,2,4-Trichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Hexachlorobutadiene	ND	0.0068	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*107*	*68-139*				
Toluene-d8	*99*	*79-128*				
4-Bromofluorobenzene	*98*	*71-132*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-2-1.8**					
Laboratory ID:	02-177-06					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Chloromethane	ND	0.0069	EPA 8260C	2-28-19	2-28-19	
Vinyl Chloride	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Bromomethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Chloroethane	ND	0.0069	EPA 8260C	2-28-19	2-28-19	
Trichlorofluoromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Iodomethane	ND	0.0069	EPA 8260C	2-28-19	2-28-19	
Methylene Chloride	ND	0.0069	EPA 8260C	2-28-19	2-28-19	
(trans) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Methyl t-Butyl Ether	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
2,2-Dichloropropane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
(cis) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Bromochloromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Chloroform	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1,1-Trichloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Carbon Tetrachloride	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloropropene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Trichloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloropropane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Dibromomethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Bromodichloromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
2-Chloroethyl Vinyl Ether	ND	0.0098	EPA 8260C	2-28-19	2-28-19	
(cis) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
(trans) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-2-1.8**					
Laboratory ID:	02-177-06					
1,1,2-Trichloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Tetrachloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,3-Dichloropropane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Dibromochloromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromoethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Chlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1,1,2-Tetrachloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Bromoform	ND	0.0069	EPA 8260C	2-28-19	2-28-19	
Bromobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1,2,2-Tetrachloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichloropropane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
2-Chlorotoluene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
4-Chlorotoluene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,3-Dichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,4-Dichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromo-3-chloropropane	ND	0.0069	EPA 8260C	2-28-19	2-28-19	
1,2,4-Trichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Hexachlorobutadiene	ND	0.0069	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*103*	*68-139*				
Toluene-d8	*99*	*79-128*				
4-Bromofluorobenzene	*102*	*71-132*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-3-1.3**					
Laboratory ID:	02-177-07					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Chloromethane	ND	0.0062	EPA 8260C	2-28-19	2-28-19	
Vinyl Chloride	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Bromomethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Chloroethane	ND	0.0062	EPA 8260C	2-28-19	2-28-19	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Iodomethane	ND	0.0062	EPA 8260C	2-28-19	2-28-19	
Methylene Chloride	ND	0.0062	EPA 8260C	2-28-19	2-28-19	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Bromochloromethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Chloroform	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Trichloroethene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Dibromomethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Bromodichloromethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
2-Chloroethyl Vinyl Ether	ND	0.0088	EPA 8260C	2-28-19	2-28-19	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-3-1.3**					
Laboratory ID:	02-177-07					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Tetrachloroethene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Dibromochloromethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Chlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Bromoform	ND	0.0062	EPA 8260C	2-28-19	2-28-19	
Bromobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
2-Chlorotoluene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
4-Chlorotoluene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromo-3-chloropropane	ND	0.0062	EPA 8260C	2-28-19	2-28-19	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Hexachlorobutadiene	ND	0.0062	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*68-139*				
Toluene-d8	*99*	*79-128*				
4-Bromofluorobenzene	*102*	*71-132*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-4-1.0**					
Laboratory ID:	02-177-08					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Chloromethane	ND	0.0065	EPA 8260C	2-28-19	2-28-19	
Vinyl Chloride	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Bromomethane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Chloroethane	ND	0.0065	EPA 8260C	2-28-19	2-28-19	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Iodomethane	ND	0.0065	EPA 8260C	2-28-19	2-28-19	
Methylene Chloride	ND	0.0065	EPA 8260C	2-28-19	2-28-19	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Methyl t-Butyl Ether	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Bromochloromethane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Chloroform	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Trichloroethene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Dibromomethane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Bromodichloromethane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
2-Chloroethyl Vinyl Ether	ND	0.0092	EPA 8260C	2-28-19	2-28-19	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-4-1.0**					
Laboratory ID:	02-177-08					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Tetrachloroethene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Dibromochloromethane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Chlorobenzene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Bromoform	ND	0.0065	EPA 8260C	2-28-19	2-28-19	
Bromobenzene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
2-Chlorotoluene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
4-Chlorotoluene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromo-3-chloropropane	ND	0.0065	EPA 8260C	2-28-19	2-28-19	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Hexachlorobutadiene	ND	0.0065	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*68-139*				
Toluene-d8	*95*	*79-128*				
4-Bromofluorobenzene	*97*	*71-132*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-5-1.0**					
Laboratory ID:	02-177-09					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Chloromethane	ND	0.0058	EPA 8260C	2-28-19	2-28-19	
Vinyl Chloride	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Bromomethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Chloroethane	ND	0.0058	EPA 8260C	2-28-19	2-28-19	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Iodomethane	ND	0.0058	EPA 8260C	2-28-19	2-28-19	
Methylene Chloride	ND	0.0058	EPA 8260C	2-28-19	2-28-19	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Bromochloromethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Chloroform	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Trichloroethene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Dibromomethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Bromodichloromethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
2-Chloroethyl Vinyl Ether	ND	0.0082	EPA 8260C	2-28-19	2-28-19	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-5-1.0**					
Laboratory ID:	02-177-09					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Tetrachloroethene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Dibromochloromethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Chlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Bromoform	ND	0.0058	EPA 8260C	2-28-19	2-28-19	
Bromobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
2-Chlorotoluene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
4-Chlorotoluene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromo-3-chloropropane	ND	0.0058	EPA 8260C	2-28-19	2-28-19	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Hexachlorobutadiene	ND	0.0058	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*110*	*68-139*				
Toluene-d8	*97*	*79-128*				
4-Bromofluorobenzene	*97*	*71-132*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-6-1.0**					
Laboratory ID:	02-177-10					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Chloromethane	ND	0.0068	EPA 8260C	2-28-19	2-28-19	
Vinyl Chloride	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Bromomethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Chloroethane	ND	0.0068	EPA 8260C	2-28-19	2-28-19	
Trichlorofluoromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Iodomethane	ND	0.0068	EPA 8260C	2-28-19	2-28-19	
Methylene Chloride	ND	0.0068	EPA 8260C	2-28-19	2-28-19	
(trans) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Methyl t-Butyl Ether	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
2,2-Dichloropropane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
(cis) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Bromochloromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Chloroform	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1,1-Trichloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Carbon Tetrachloride	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloropropene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Trichloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloropropane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Dibromomethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Bromodichloromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
2-Chloroethyl Vinyl Ether	ND	0.0097	EPA 8260C	2-28-19	2-28-19	
(cis) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
(trans) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-6-1.0**					
Laboratory ID:	02-177-10					
1,1,2-Trichloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Tetrachloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,3-Dichloropropane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Dibromochloromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromoethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Chlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1,1,2-Tetrachloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Bromoform	ND	0.0068	EPA 8260C	2-28-19	2-28-19	
Bromobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1,2,2-Tetrachloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichloropropane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
2-Chlorotoluene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
4-Chlorotoluene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,3-Dichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,4-Dichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromo-3-chloropropane	ND	0.0068	EPA 8260C	2-28-19	2-28-19	
1,2,4-Trichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Hexachlorobutadiene	ND	0.0068	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*68-139*				
Toluene-d8	*101*	*79-128*				
4-Bromofluorobenzene	*106*	*71-132*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-7-1.0**					
Laboratory ID:	02-177-11					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Chloromethane	ND	0.0071	EPA 8260C	2-28-19	2-28-19	
Vinyl Chloride	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Bromomethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Chloroethane	ND	0.0071	EPA 8260C	2-28-19	2-28-19	
Trichlorofluoromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Iodomethane	ND	0.0071	EPA 8260C	2-28-19	2-28-19	
Methylene Chloride	ND	0.0071	EPA 8260C	2-28-19	2-28-19	
(trans) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Methyl t-Butyl Ether	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
2,2-Dichloropropane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
(cis) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Bromochloromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Chloroform	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1,1-Trichloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Carbon Tetrachloride	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloropropene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Trichloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloropropane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Dibromomethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Bromodichloromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
2-Chloroethyl Vinyl Ether	ND	0.010	EPA 8260C	2-28-19	2-28-19	
(cis) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
(trans) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-7-1.0**					
Laboratory ID:	02-177-11					
1,1,2-Trichloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Tetrachloroethene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,3-Dichloropropane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Dibromochloromethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromoethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Chlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1,1,2-Tetrachloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Bromoform	ND	0.0071	EPA 8260C	2-28-19	2-28-19	
Bromobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,1,2,2-Tetrachloroethane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichloropropane	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
2-Chlorotoluene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
4-Chlorotoluene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,3-Dichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,4-Dichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromo-3-chloropropane	ND	0.0071	EPA 8260C	2-28-19	2-28-19	
1,2,4-Trichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Hexachlorobutadiene	ND	0.0071	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichlorobenzene	ND	0.0014	EPA 8260C	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*108*	*68-139*				
Toluene-d8	*100*	*79-128*				
4-Bromofluorobenzene	*100*	*71-132*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-8-1.5**					
Laboratory ID:	02-177-12					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Chloromethane	ND	0.0062	EPA 8260C	2-28-19	2-28-19	
Vinyl Chloride	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Bromomethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Chloroethane	ND	0.0062	EPA 8260C	2-28-19	2-28-19	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Iodomethane	ND	0.0062	EPA 8260C	2-28-19	2-28-19	
Methylene Chloride	ND	0.0062	EPA 8260C	2-28-19	2-28-19	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Bromochloromethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Chloroform	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Trichloroethene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Dibromomethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Bromodichloromethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
2-Chloroethyl Vinyl Ether	ND	0.0088	EPA 8260C	2-28-19	2-28-19	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-8-1.5**					
Laboratory ID:	02-177-12					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Tetrachloroethene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Dibromochloromethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Chlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Bromoform	ND	0.0062	EPA 8260C	2-28-19	2-28-19	
Bromobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
2-Chlorotoluene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
4-Chlorotoluene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromo-3-chloropropane	ND	0.0062	EPA 8260C	2-28-19	2-28-19	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Hexachlorobutadiene	ND	0.0062	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*113*	*68-139*				
Toluene-d8	*98*	*79-128*				
4-Bromofluorobenzene	*100*	*71-132*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0228S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Chloromethane	ND	0.0050	EPA 8260C	2-28-19	2-28-19	
Vinyl Chloride	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Bromomethane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Chloroethane	ND	0.0050	EPA 8260C	2-28-19	2-28-19	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Iodomethane	ND	0.0050	EPA 8260C	2-28-19	2-28-19	
Methylene Chloride	ND	0.0050	EPA 8260C	2-28-19	2-28-19	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Bromochloromethane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Chloroform	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Trichloroethene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Dibromomethane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Bromodichloromethane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
2-Chloroethyl Vinyl Ether	ND	0.0071	EPA 8260C	2-28-19	2-28-19	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0228S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Tetrachloroethene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Dibromochloromethane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Chlorobenzene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Bromoform	ND	0.0050	EPA 8260C	2-28-19	2-28-19	
Bromobenzene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
2-Chlorotoluene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
4-Chlorotoluene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	2-28-19	2-28-19	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	2-28-19	2-28-19	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	2-28-19	2-28-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*107*	*68-139*				
Toluene-d8	*85*	*79-128*				
4-Bromofluorobenzene	*104*	*71-132*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0228S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0542**	**0.0489**	0.0500	0.0500	108	98	53-141	10	17	
Benzene	**0.0431**	**0.0403**	0.0500	0.0500	86	81	70-130	7	15	
Trichloroethene	**0.0483**	**0.0454**	0.0500	0.0500	97	91	74-122	6	16	
Toluene	**0.0475**	**0.0435**	0.0500	0.0500	95	87	76-130	9	15	
Chlorobenzene	**0.0496**	**0.0461**	0.0500	0.0500	99	92	75-120	7	14	
Surrogate:										
Dibromofluoromethane					*103*	*108*	*68-139*			
Toluene-d8					*95*	*98*	*79-128*			
4-Bromofluorobenzene					*106*	*108*	*71-132*			

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TRIP BLANK**					
Laboratory ID:	02-177-31					
Dichlorodifluoromethane	ND	0.29	EPA 8260C	3-6-19	3-6-19	
Chloromethane	ND	1.3	EPA 8260C	3-6-19	3-6-19	
Vinyl Chloride	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Bromomethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Chloroethane	ND	1.0	EPA 8260C	3-6-19	3-6-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Iodomethane	ND	1.3	EPA 8260C	3-6-19	3-6-19	
Methylene Chloride	ND	1.0	EPA 8260C	3-6-19	3-6-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Bromochloromethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Chloroform	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Trichloroethene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Dibromomethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Bromodichloromethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-6-19	3-6-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-6-19	3-6-19	

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TRIP BLANK**					
Laboratory ID:	02-177-31					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Tetrachloroethene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Dibromochloromethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Chlorobenzene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Bromoform	ND	1.0	EPA 8260C	3-6-19	3-6-19	
Bromobenzene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-6-19	3-6-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	3-6-19	3-6-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*94*	*75-127*				
Toluene-d8	*104*	*80-127*				
4-Bromofluorobenzene	*101*	*78-125*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0306W1					
Dichlorodifluoromethane	ND	0.29	EPA 8260C	3-6-19	3-6-19	
Chloromethane	ND	1.3	EPA 8260C	3-6-19	3-6-19	
Vinyl Chloride	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Bromomethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Chloroethane	ND	1.0	EPA 8260C	3-6-19	3-6-19	
Trichlorofluoromethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,1-Dichloroethene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Iodomethane	ND	1.3	EPA 8260C	3-6-19	3-6-19	
Methylene Chloride	ND	1.0	EPA 8260C	3-6-19	3-6-19	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,1-Dichloroethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
2,2-Dichloropropane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Bromochloromethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Chloroform	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Carbon Tetrachloride	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,1-Dichloropropene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,2-Dichloroethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Trichloroethene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,2-Dichloropropane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Dibromomethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Bromodichloromethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
2-Chloroethyl Vinyl Ether	ND	1.0	EPA 8260C	3-6-19	3-6-19	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	3-6-19	3-6-19	

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0306W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Tetrachloroethene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,3-Dichloropropane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Dibromochloromethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,2-Dibromoethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Chlorobenzene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Bromoform	ND	1.0	EPA 8260C	3-6-19	3-6-19	
Bromobenzene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	3-6-19	3-6-19	
2-Chlorotoluene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
4-Chlorotoluene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	3-6-19	3-6-19	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Hexachlorobutadiene	ND	1.0	EPA 8260C	3-6-19	3-6-19	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	3-6-19	3-6-19	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*96*	*75-127*				
Toluene-d8	*104*	*80-127*				
4-Bromofluorobenzene	*100*	*78-125*				

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

VOLATILE ORGANICS EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0306W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**8.02**	**8.12**	10.0	10.0	80	81	62-129	1	15	
Benzene	**8.90**	**8.85**	10.0	10.0	89	89	77-127	1	15	
Trichloroethene	**10.1**	**9.96**	10.0	10.0	101	100	70-120	1	15	
Toluene	**9.71**	**9.63**	10.0	10.0	97	96	82-123	1	15	
Chlorobenzene	**9.48**	**9.29**	10.0	10.0	95	93	79-120	2	15	
Surrogate:										
Dibromofluoromethane					*91*	*96*	*75-127*			
Toluene-d8					*102*	*105*	*80-127*			
4-Bromofluorobenzene					*98*	*103*	*78-125*			

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

TOTAL LEAD
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**TP-1-1.0**					
Laboratory ID:	02-177-05					
Lead	**ND**	5.5	EPA 6010D	2-28-19	2-28-19	
Client ID:	**TP-2-1.8**					
Laboratory ID:	02-177-06					
Lead	**ND**	5.3	EPA 6010D	2-28-19	2-28-19	
Client ID:	**TP-3-1.3**					
Laboratory ID:	02-177-07					
Lead	**150**	5.5	EPA 6010D	2-28-19	2-28-19	
Client ID:	**TP-4-1.0**					
Laboratory ID:	02-177-08					
Lead	**31**	5.5	EPA 6010D	2-28-19	2-28-19	
Client ID:	**TP-5-1.0**					
Laboratory ID:	02-177-09					
Lead	**42**	5.4	EPA 6010D	2-28-19	2-28-19	
Client ID:	**TP-6-1.0**					
Laboratory ID:	02-177-10					
Lead	**8.1**	5.5	EPA 6010D	2-28-19	2-28-19	
Client ID:	**TP-7-1.0**					
Laboratory ID:	02-177-11					
Lead	**8.7**	5.7	EPA 6010D	2-28-19	2-28-19	
Client ID:	**TP-8-1.5**					
Laboratory ID:	02-177-12					
Lead	**ND**	5.8	EPA 6010D	2-28-19	2-28-19	

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

TOTAL LEAD
EPA 6010D
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0228SM2					
Lead	**ND**	5.0	EPA 6010D	2-28-19	2-28-19	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	02-177-05										
	ORIG	DUP									
Lead	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	02-177-05										
	MS	MSD	MS	MSD		MS	MSD				
Lead	**241**	**240**	250	250	ND	**96**	**96**	75-125	0	20	
SPIKE BLANK											
Laboratory ID:	SB0228SM2										
Lead	**236**		250		N/A	**94**		80-120			

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

% MOISTURE

Date Analyzed: 2-28-19

Client ID	Lab ID	% Moisture
SS-1	02-177-01	8
SS-2	02-177-02	16
SS-3	02-177-03	19
SS-4	02-177-04	16
TP-1-1.0	02-177-05	9
TP-2-1.8	02-177-06	6
TP-3-1.3	02-177-07	10
TP-4-1.0	02-177-08	9
TP-5-1.0	02-177-09	7
TP-6-1.0	02-177-10	10
TP-7-1.0	02-177-11	12
TP-8-1.5	02-177-12	13
TP-9-3.0	02-177-13	8
TP-10-1.8	02-177-14	12
TP-11-1.8	02-177-15	14
TP-12-1.0	02-177-16	10
TP-13-1.8	02-177-17	10
TP-14-1.0	02-177-18	7
TP-15-1.0	02-177-19	7
TP-16-0.5	02-177-20	13
TP-17-1.0	02-177-21	16
TP-18-0.8	02-177-22	12
TP-19-0.5	02-177-23	8
TP-20-0.6	02-177-24	11
TP-21-2.0	02-177-25	17
TP-22-1.8	02-177-26	21
TP-23-0.7	02-177-27	10

Date of Report: March 8, 2019
Samples Submitted: February 27, 2019
Laboratory Reference: 1902-177
Project: 160315

% MOISTURE

Date Analyzed: 2-28-19

Client ID	Lab ID	% Moisture
TP-24-2.0	02-177-28	8
TP-25-2.0	02-177-29	7
TP-26-1.5	02-177-30	7

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

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

Z -

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

Chain of Custody

Page 1 of 3

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

Company: Aspect Consulting
Project Number: 160315
Project Name: Reserve Silica
Project Manager: Carla Brock
Sampled by: Kristin Beck

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

Laboratory Number: 02-177

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX 8021	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up) *TPH as mineral oil	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	cPAHs & naphthalene	HVOCs & EDB	EDC & MTBE	Lead	% Moisture
1	SS-1	2/26/19	1510	soil	1				*X						X												X
2	SS-2		1520		1				*X						X												
3	SS-3		1530		1				*X						X												
4	SS-4		1540		1				*X						X												
5	TP-1-1.0		~~0908~~ 0908		5		X		X						X								X	X	X	X	
6	TP-2-1.8		0937		5		X		X						X								X	X	X	X	
7	TP-3-1.3		1010		5		X		X						X								X	X	X	X	
8	TP-4-1.0		1042		5		X		X						X								X	X	X	X	
9	TP-5-1.0		1123		5		X		X						X								X	X	X	X	
10	TP-6-1.0		1150		5		X		X						X								X	X	X	X	

	Signature	Company	Date	Time
Relinquished	KatBeck	Aspect	2/27/19	1413
Received	Helen Liseen	OSE	2/27/19	1413
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

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

Chain of Custody

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

Company: Aspect Consulting
Project Number: 160315
Project Name: Reserve Silica
Project Manager: Carla Brock
Sampled by: Kristin Beck

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

Laboratory Number: 02-177

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	~~NWTPH-Gx (BTEX)~~ by 8260 8021	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	cPAHs & naphthalene	HVOCs & EDB	EDC & MTBE	Lead	% Moisture
11	TP-7-1.0	2/26/19	1215	Soil	5		X	X	X						X								X	X	X	X	X
12	TP-8-1.5		1246		5		X	X	X						X								X	X	X	X	
13	TP-9-3.0		1320		2		*X		X														X				
14	TP-10-1.8		1351		2		*X		X														X				
15	TP-11-1.8		1410		2		*X		X														X				
16	TP-12-1.0		1420		2		*X		X														X				
17	TP-13-1.8		1436		2		*X		X														X				
18	TP-14-1.0		1450		2		*X		X														X				
19	TP-15-1.0	2/27/19	0735		2		*X		X														X				
20	TP-~~16~~16-0.5		0745		2		*X		X														X				

	Signature	Company	Date	Time
Relinquished	Kst Beck	Aspect	2/27/19	1413
Received	Robert Lowe	OSE	2/27/19	1413
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

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

Chain of Custody

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

Company: Aspect Consulting
Project Number: 160315
Project Name: Reserve Silica
Project Manager: Carla Brock
Sampled by: Kristin Beck

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

Laboratory Number: 02-177

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx (BTEX) by 8260-8021	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	cPAHs & Naphthalene	HVOCs + MTBE 8260		% Moisture
21	TP-17-1.0	2/27/19	0755	soil	2		X		X														X			X
22	TP-18-0.8		0807		2		X		X														X			
23	TP-19-0.5		0815		2		X		X														X			
24	TP-20-0.6		0825		2		X		X														X			
25	TP-21-2.0		1055		2		X		X														X			
26	TP-22-1.8		1115		2		X		X														X			
27	TP-23-0.7		1134		2		X		X														X			
28	TP-24-2.0		1212		2		X		X														X			
29	TP-25-2.0		1235		2		X		X														X			
30	TP-26-1.5		1244		2		X		X														X			
31	TRIP BLANK	2/27		W	5		X		X														X			

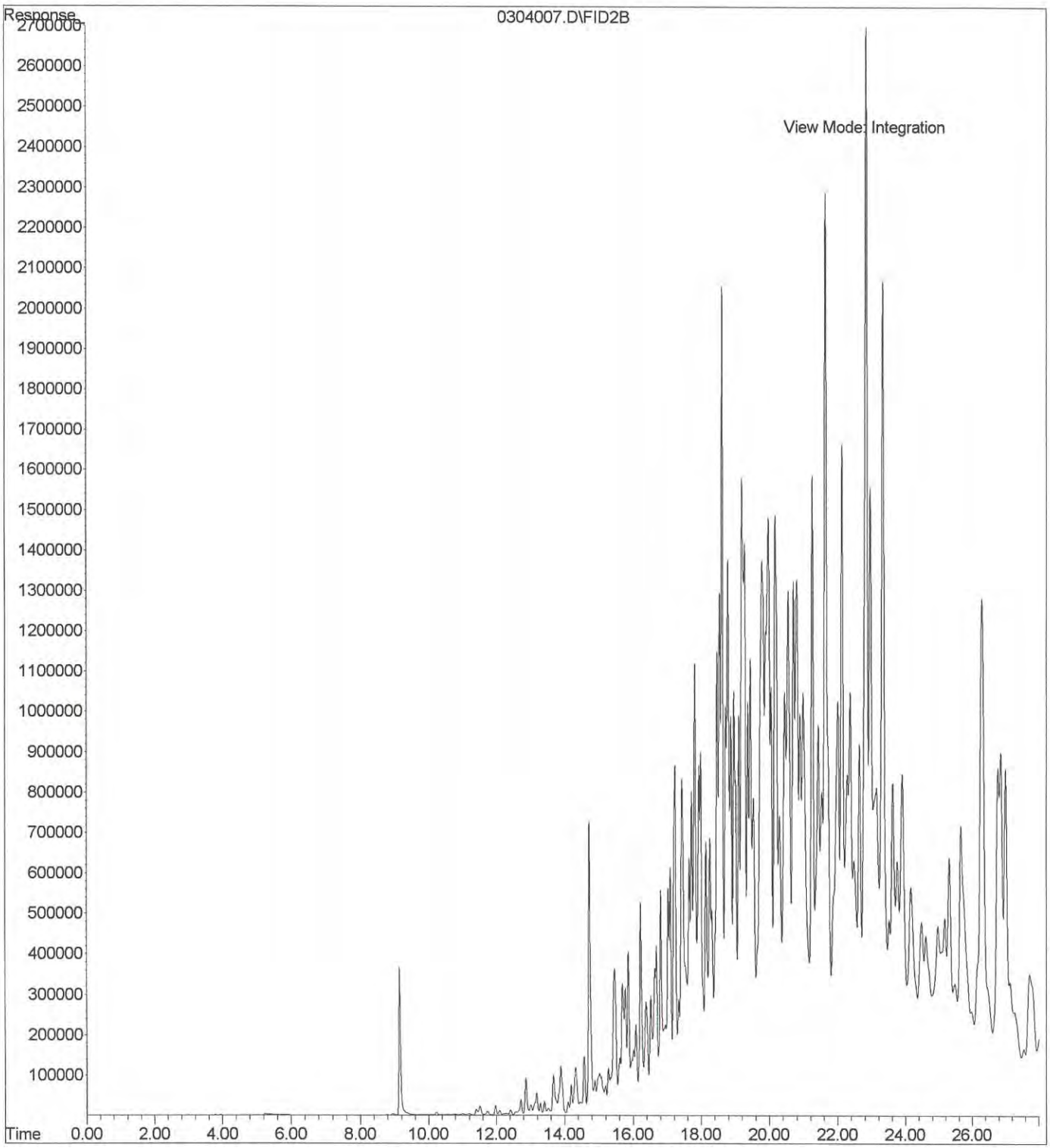
	Signature	Company	Date	Time
Relinquished	KstBeck	Aspect	2/27/19	1413
Received	Drew Lzw	OSE	2/27/19	1413
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

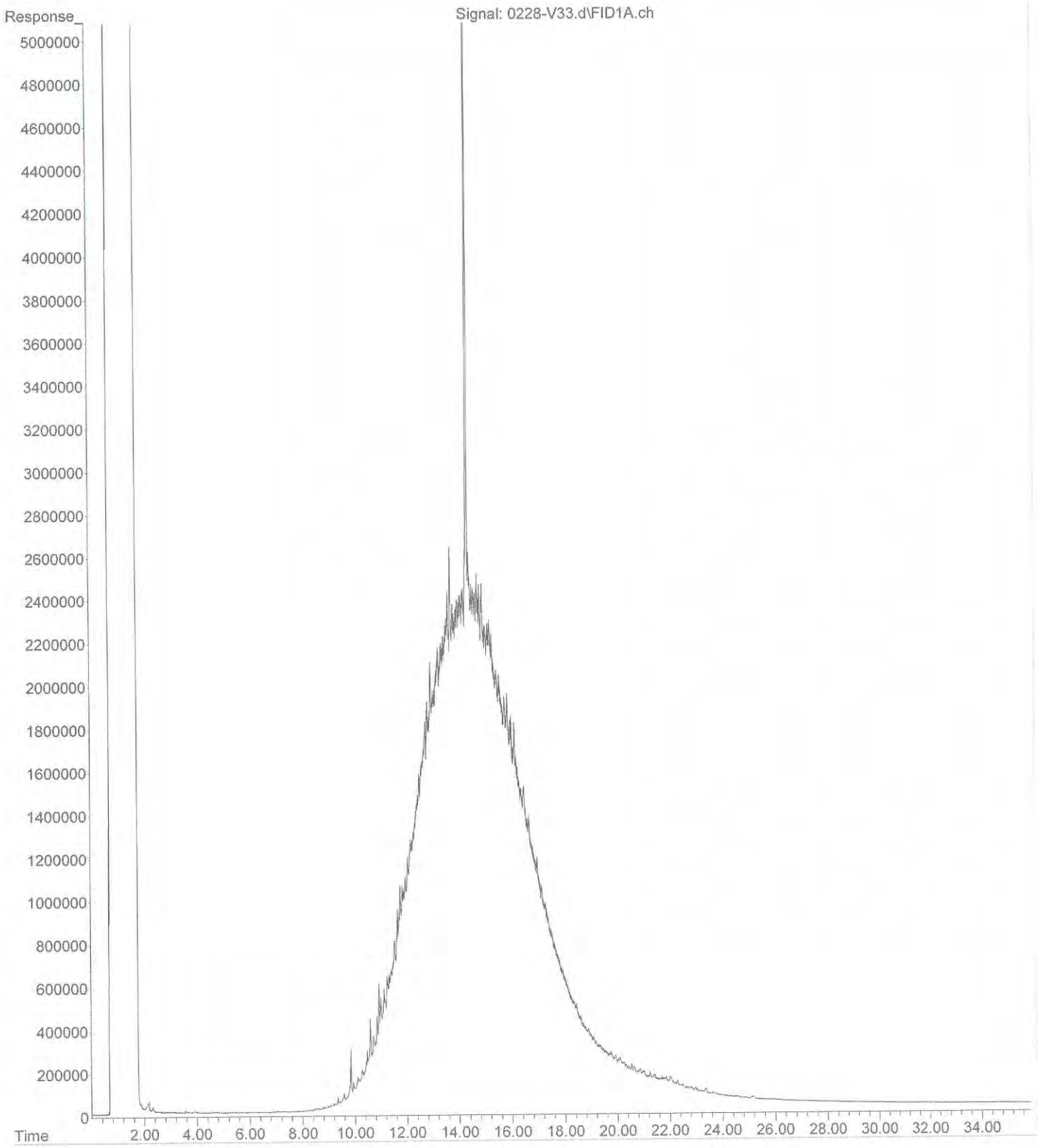
Data Package: Standard ☐ Level III ☐ Level IV ☐

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

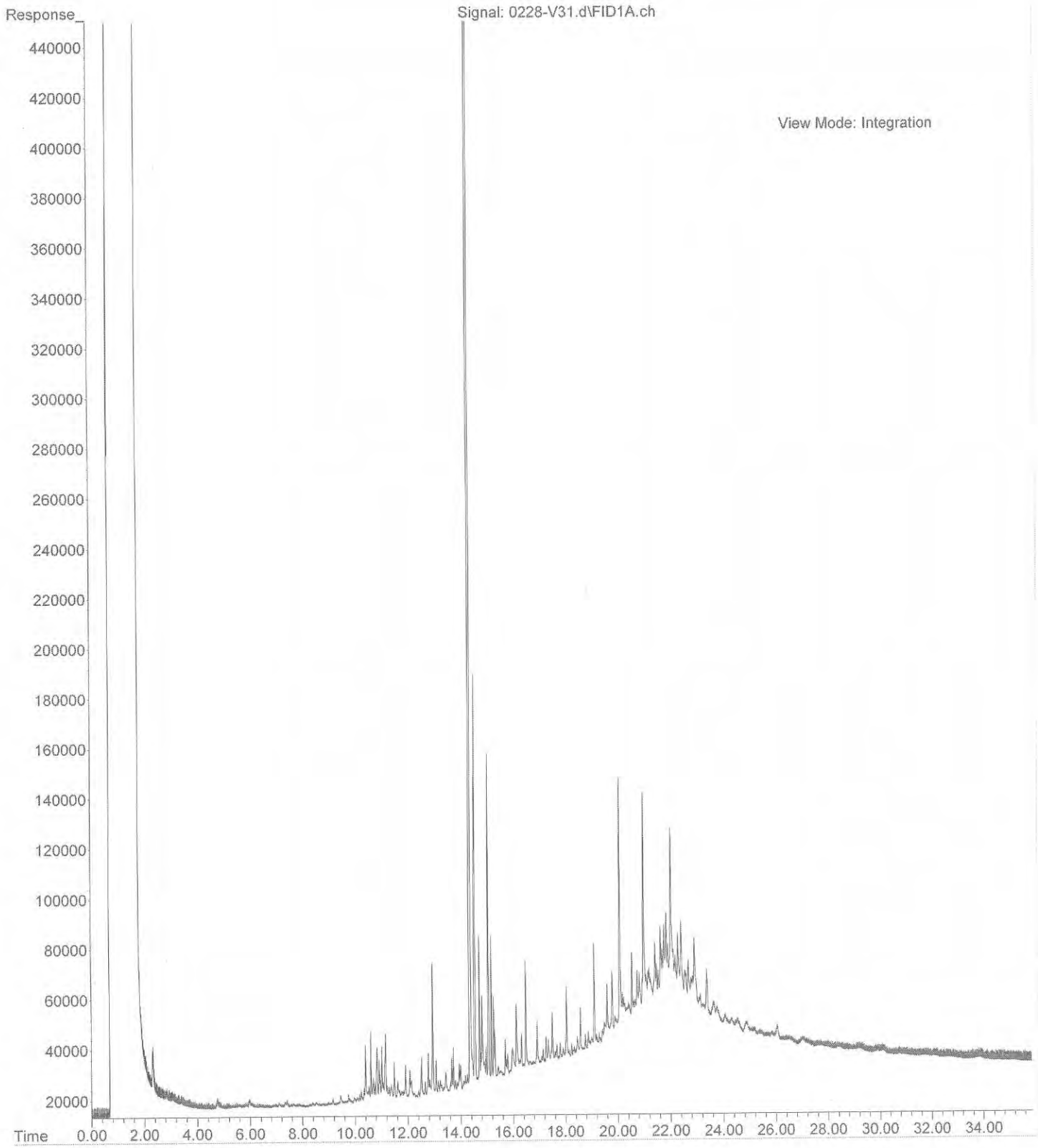
File : X:\BTEX\HOPE\DATA\H190304\0304007.D
Operator :
Acquired : 4 Mar 2019 20:26 using AcqMethod 190205G.M
Instrument : Hope
Sample Name: 02-177-29s RR 1:100
Misc Info :
Vial Number: 7



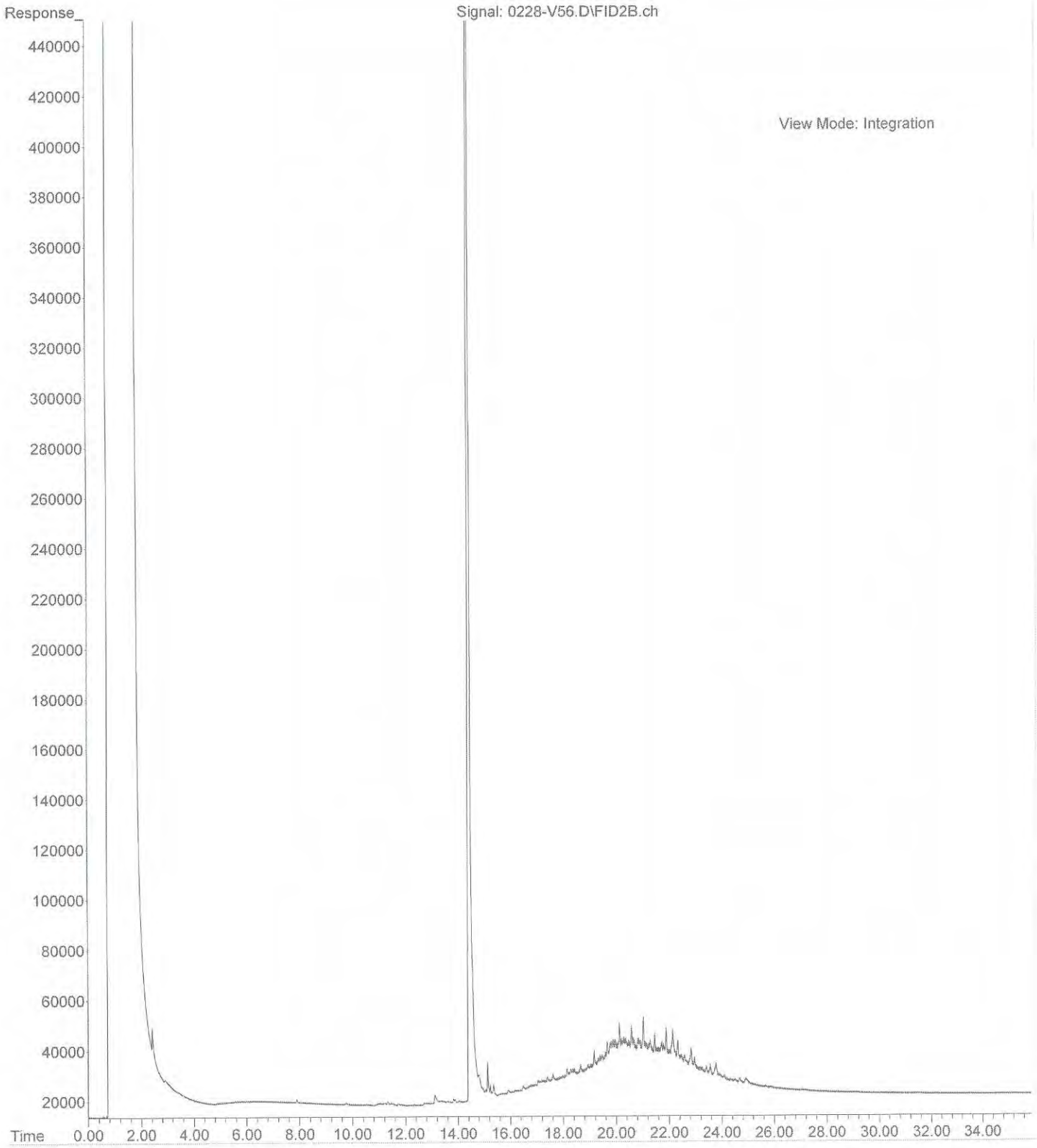
File : X:\DIESELS\VIGO\DATA\V190228\0228-V33.d
Operator : JT
Acquired : 1 Mar 2019 4:33 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-02
Misc Info :
Vial Number: 33



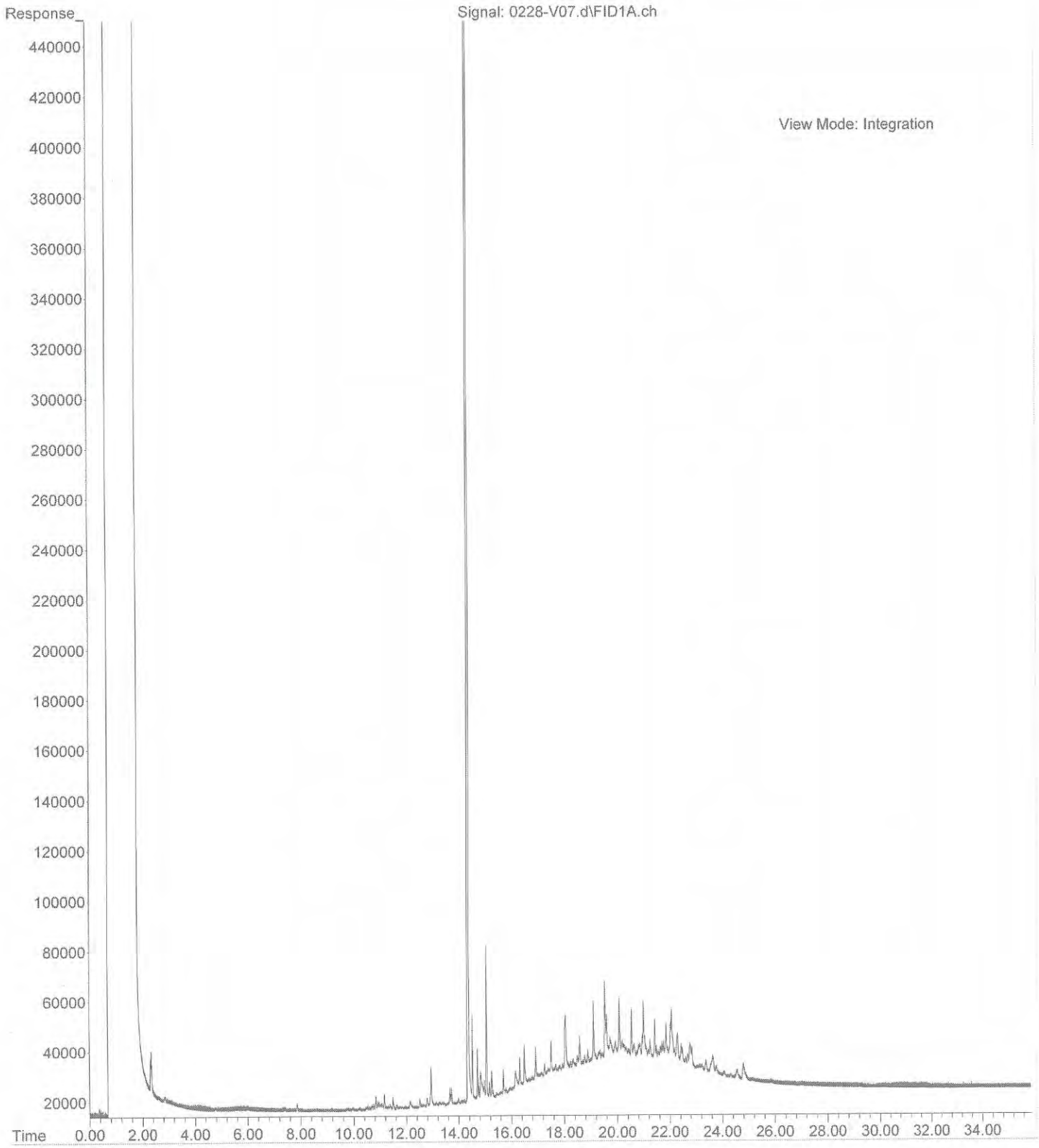
File :X:\DIESELS\VIGO\DATA\V190228\0228-V31.d
Operator : JT
Acquired : 1 Mar 2019 3:12 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-04
Misc Info :
Vial Number: 31



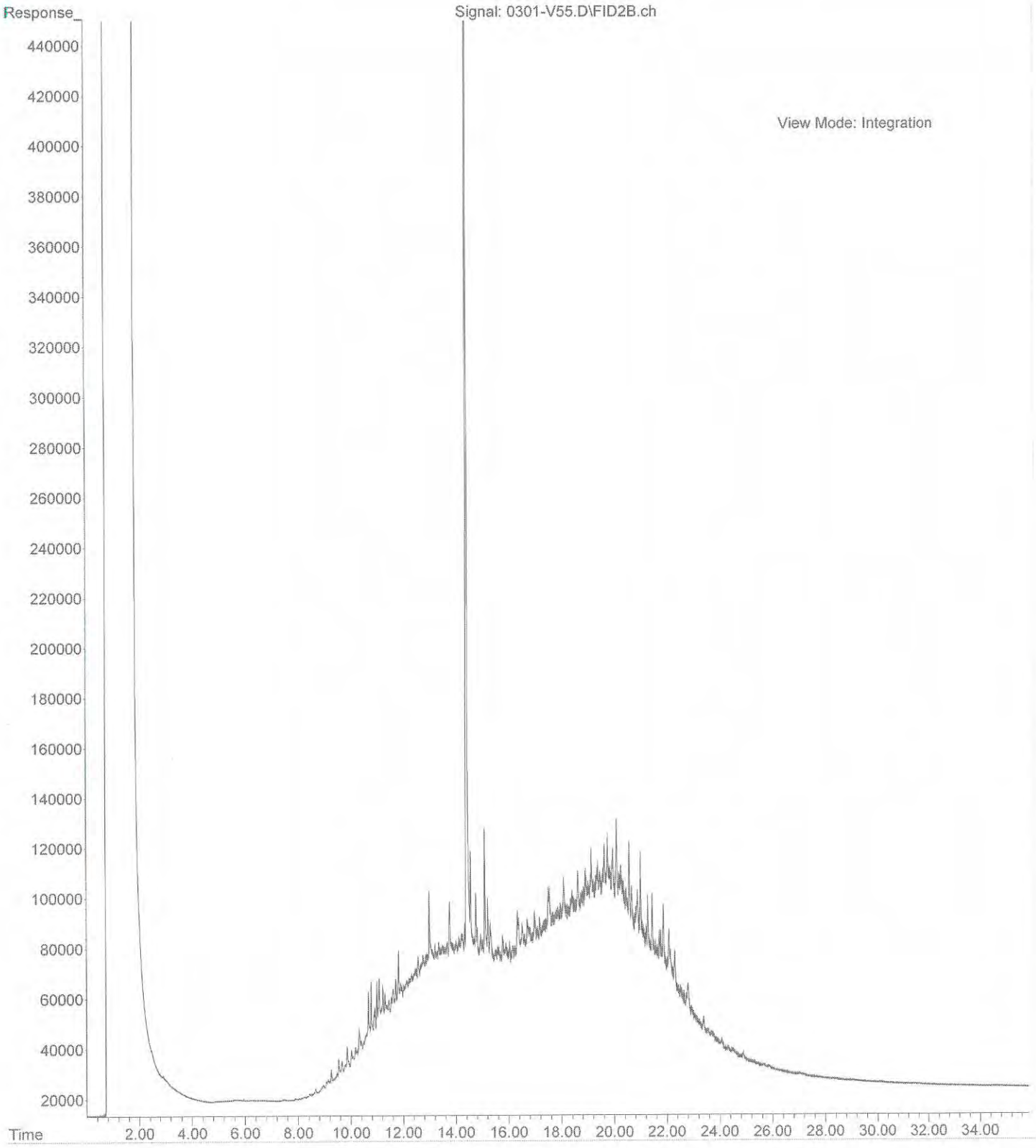
File :X:\DIESELS\VIGO\DATA\V190228.SEC\0228-V56.D
Operator : JT
Acquired : 28 Feb 2019 10:25 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-05
Misc Info :
Vial Number: 56



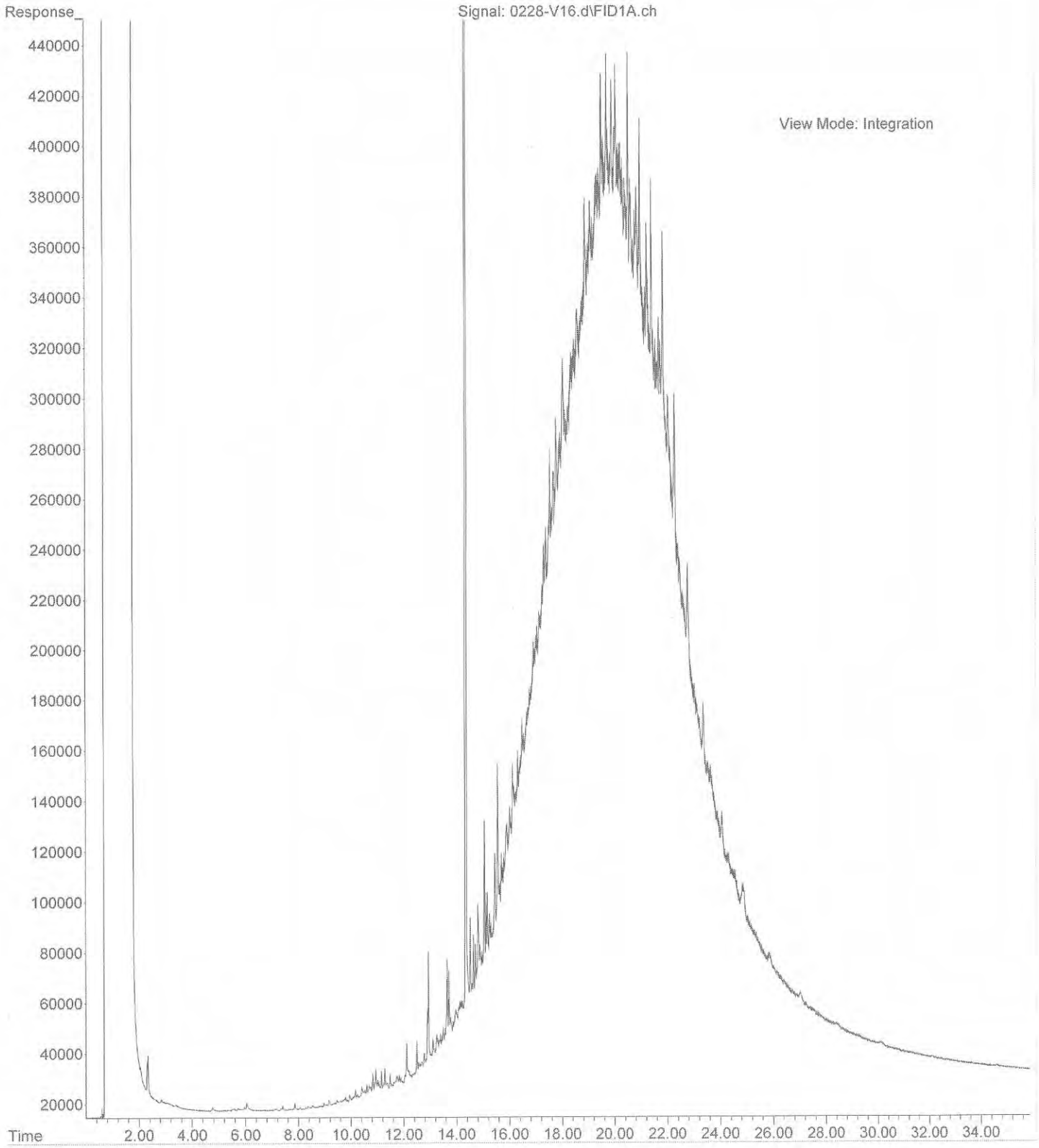
File : X:\DIESELS\VIGO\DATA\V190228\0228-V07.d
Operator : JT
Acquired : 28 Feb 2019 11:06 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-07
Misc Info :
Vial Number: 7



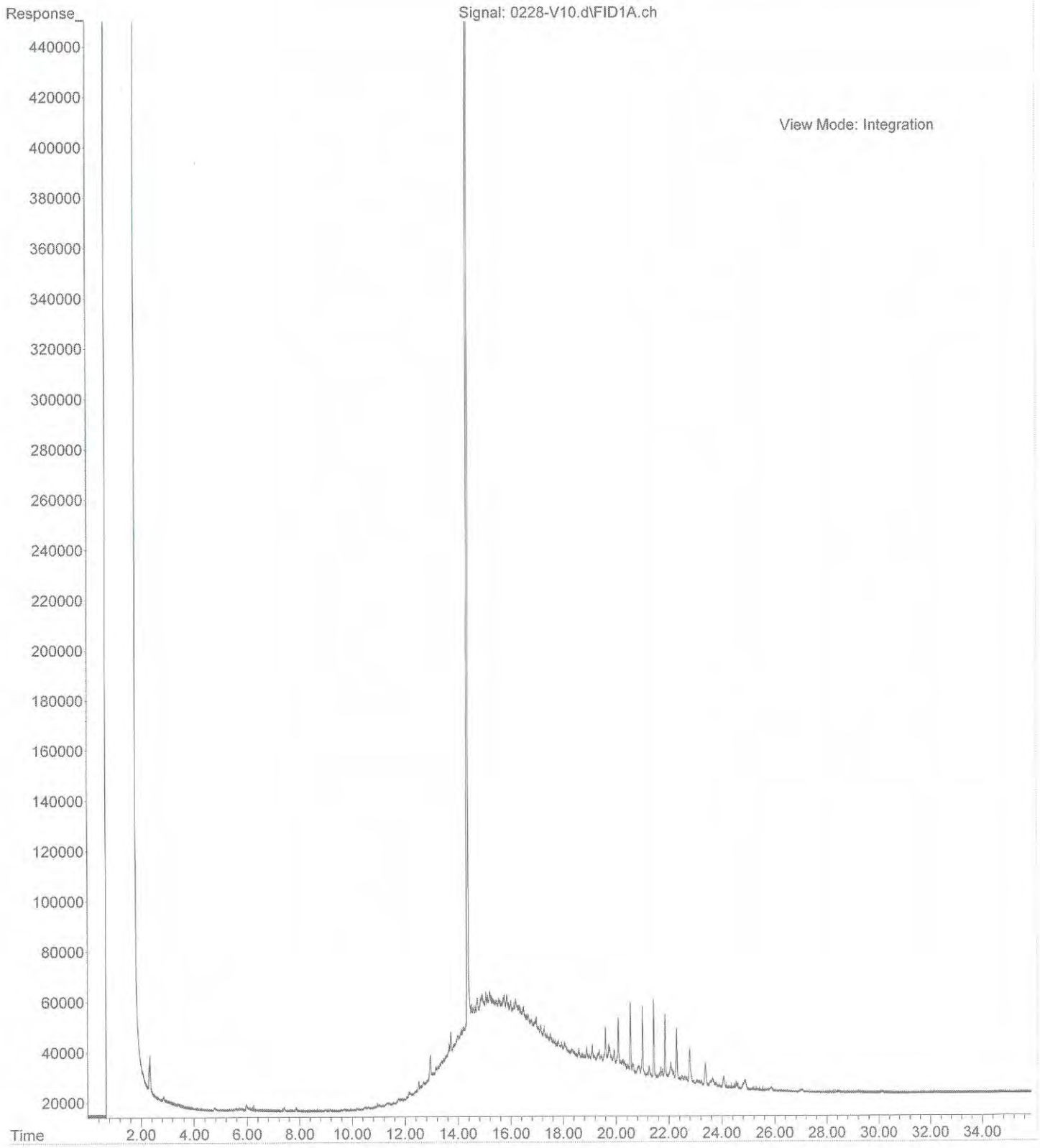
File : X:\DIESELS\VIGO\DATA\V190301.SEC\0301-V55.D
Operator : JT
Acquired : 1 Mar 2019 10:04 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-08 5X
Misc Info :
Vial Number: 55



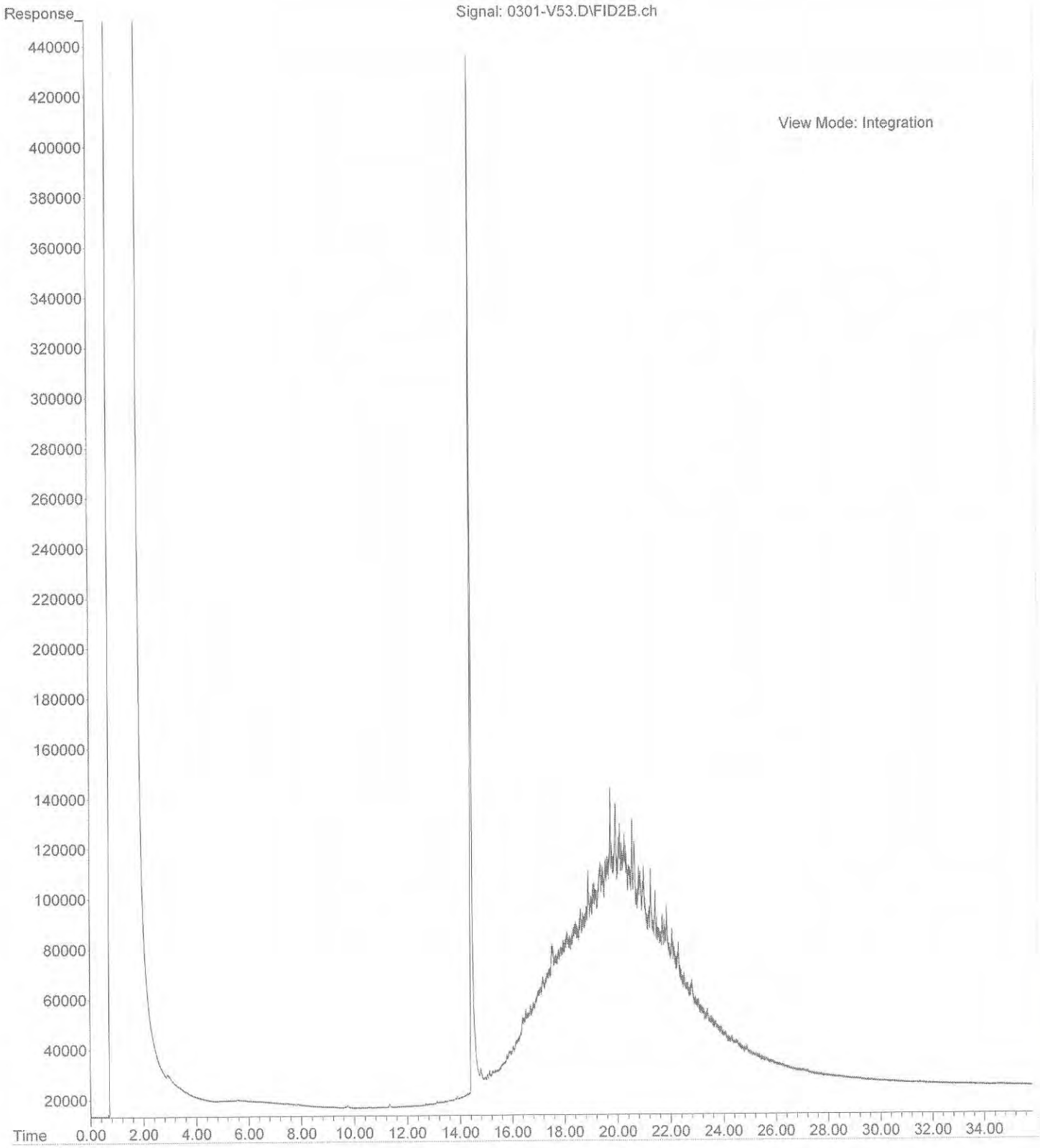
File : X:\DIESELS\VIGO\DATA\V190228\0228-V16.d
Operator : JT
Acquired : 28 Feb 2019 17:07 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-09
Misc Info :
Vial Number: 16



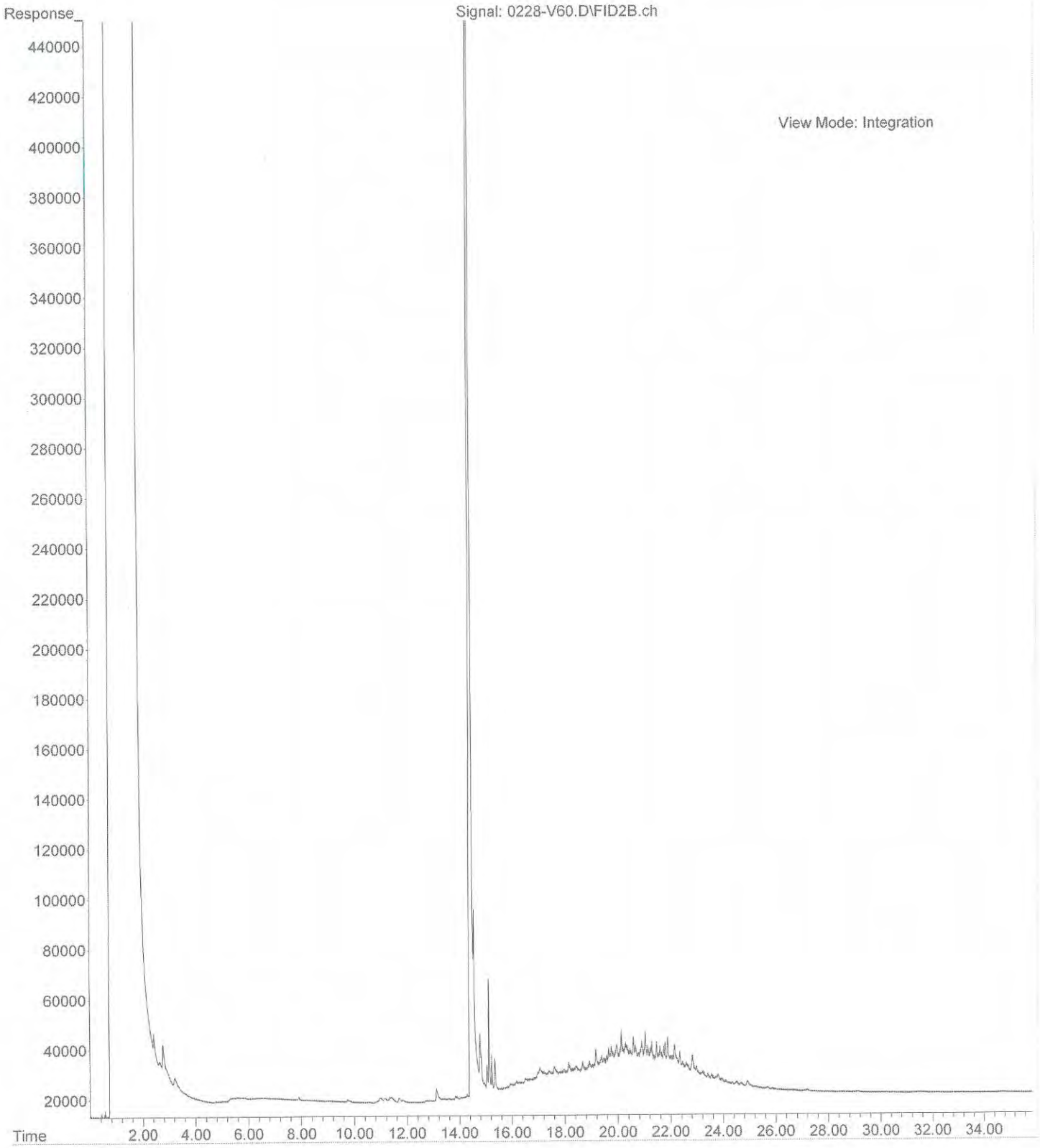
File : X:\DIESELS\VIGO\DATA\V190228\0228-V10.d
Operator : JT
Acquired : 28 Feb 2019 13:07 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-10
Misc Info :
Vial Number: 10



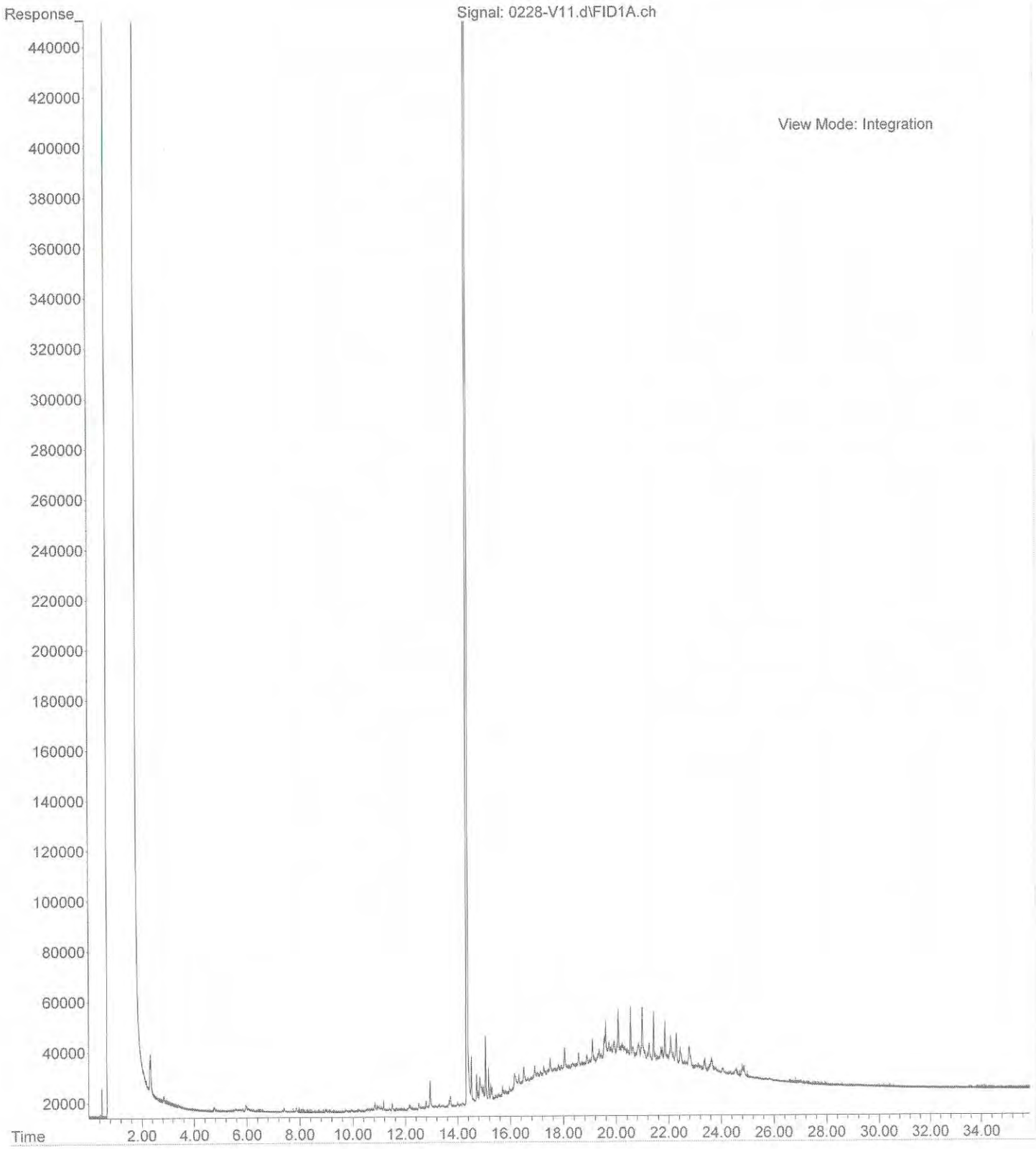
File :X:\DIESELS\VIGO\DATA\V190301.SEC\0301-V53.D
Operator : JT
Acquired : 1 Mar 2019 8:44 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-11 10X
Misc Info :
Vial Number: 53



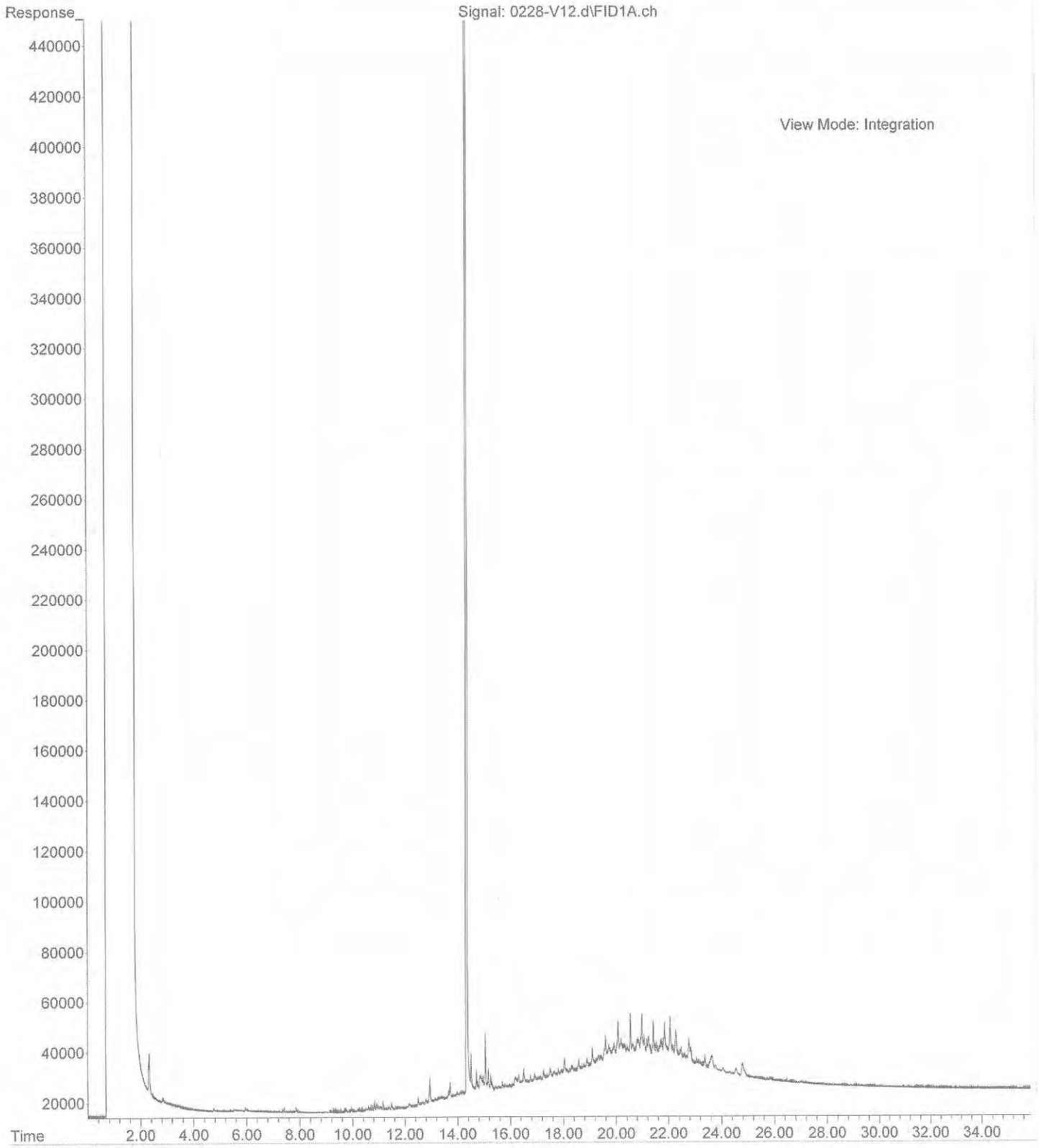
File :X:\DIESELS\VIGO\DATA\V190228.SEC\0228-V60.D
Operator : JT
Acquired : 28 Feb 2019 13:07 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-12
Misc Info :
Vial Number: 60



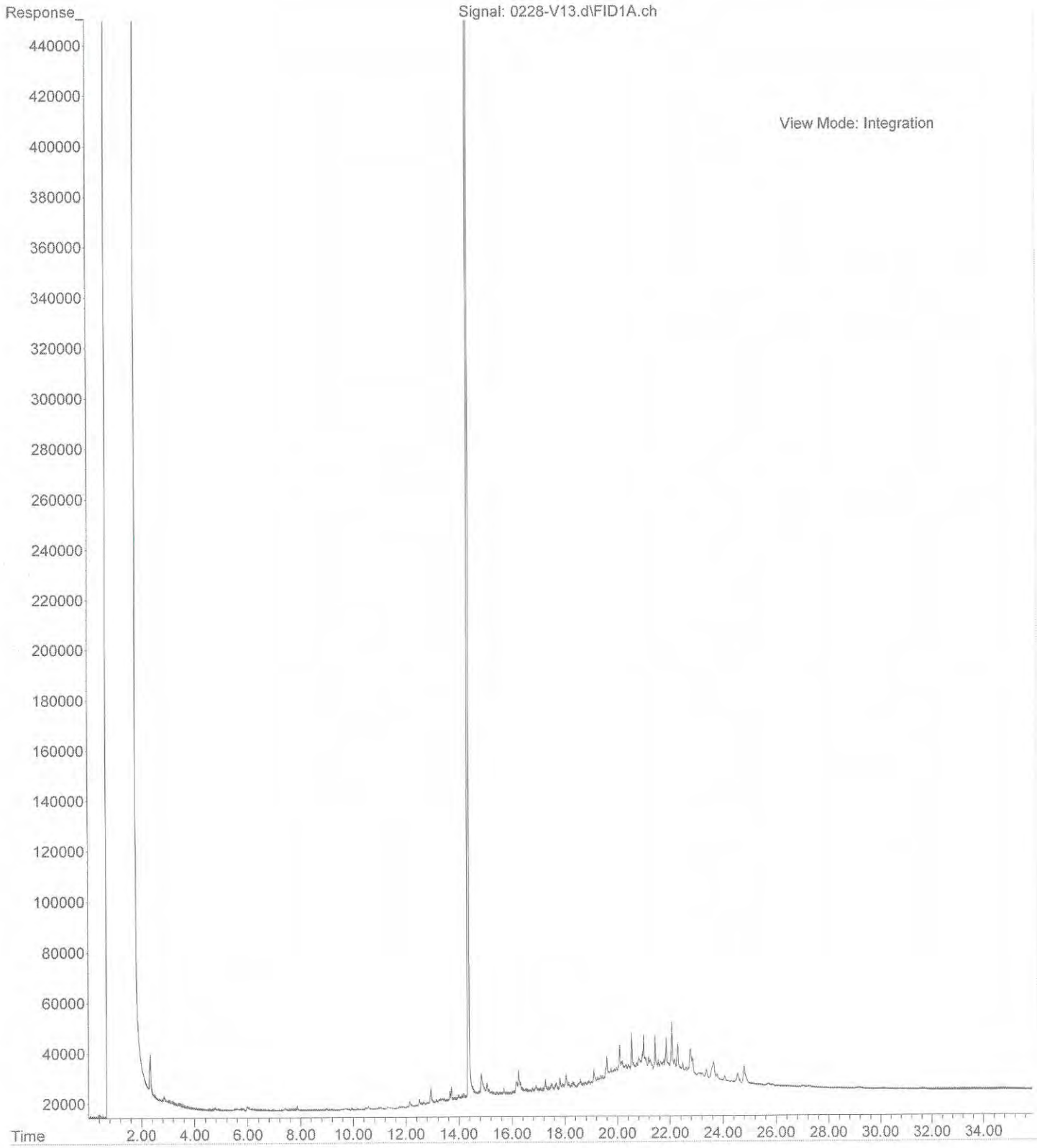
File : X:\DIESELS\VIGO\DATA\V190228\0228-V11.d
Operator : JT
Acquired : 28 Feb 2019 13:47 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-13
Misc Info :
Vial Number: 11



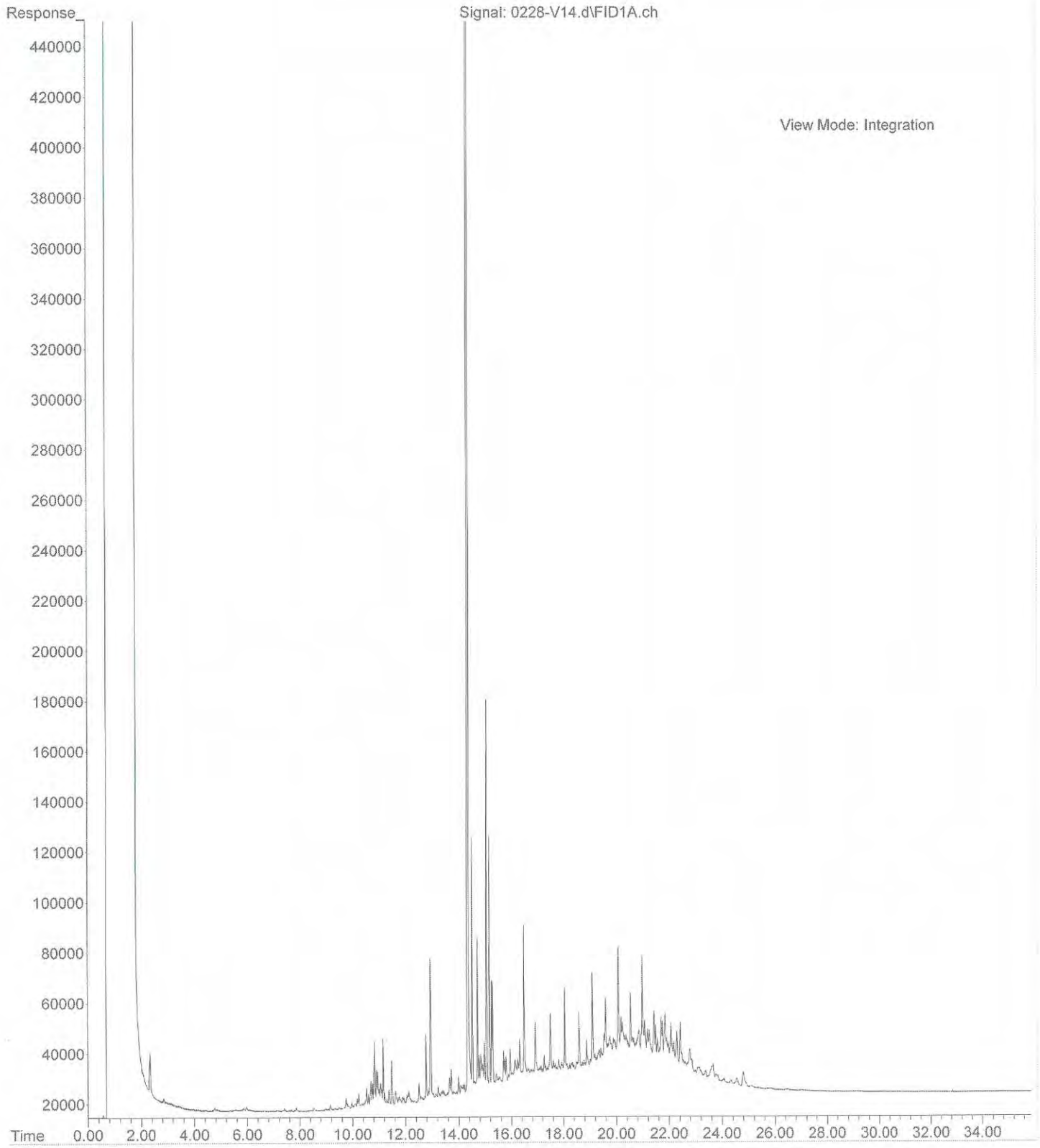
File :X:\DIESELS\VIGO\DATA\V190228\0228-V12.d
Operator : JT
Acquired : 28 Feb 2019 14:27 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-14
Misc Info :
Vial Number: 12



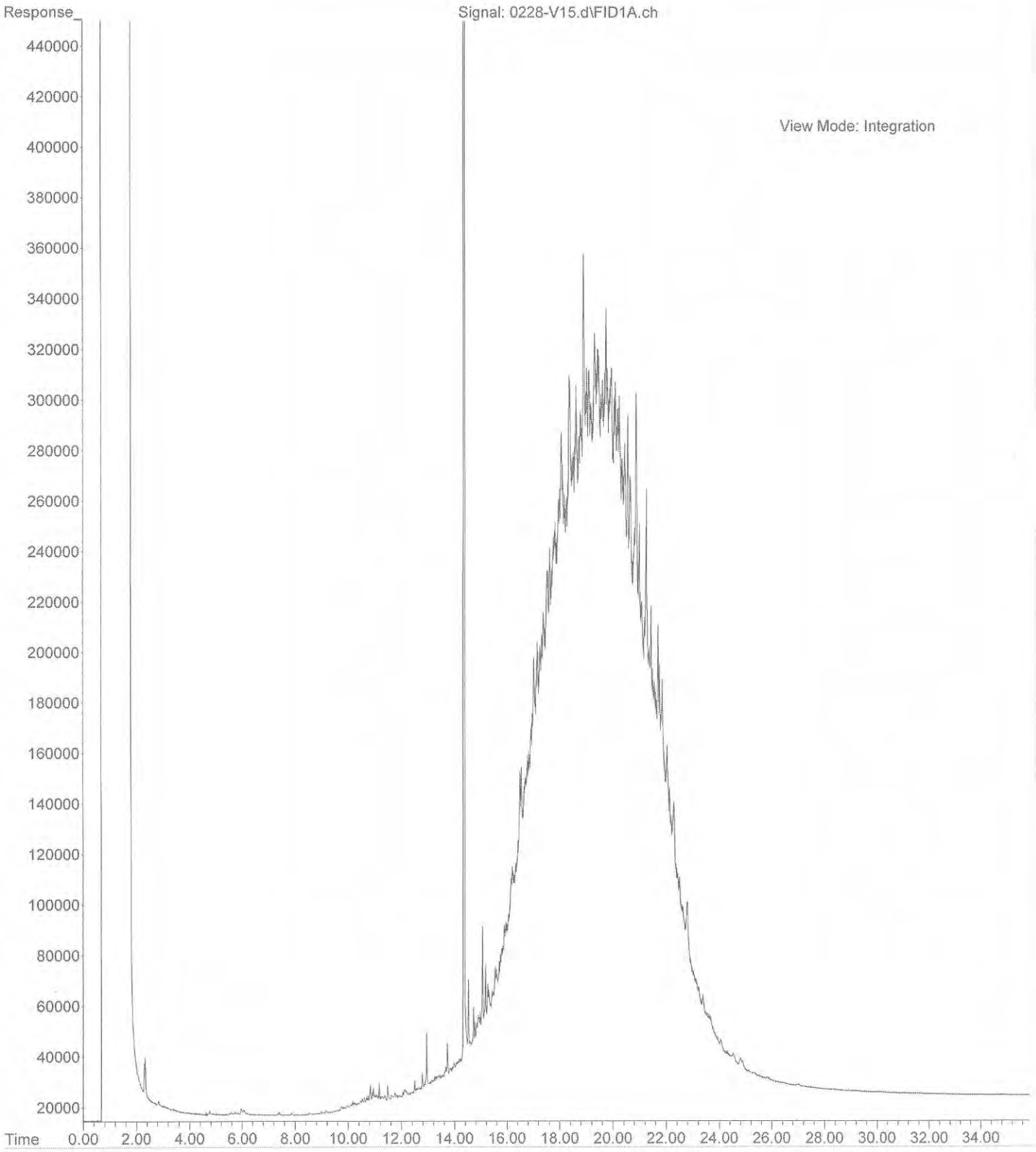
File : X:\DIESELS\VIGO\DATA\V190228\0228-V13.d
Operator : JT
Acquired : 28 Feb 2019 15:07 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-15
Misc Info :
Vial Number: 13



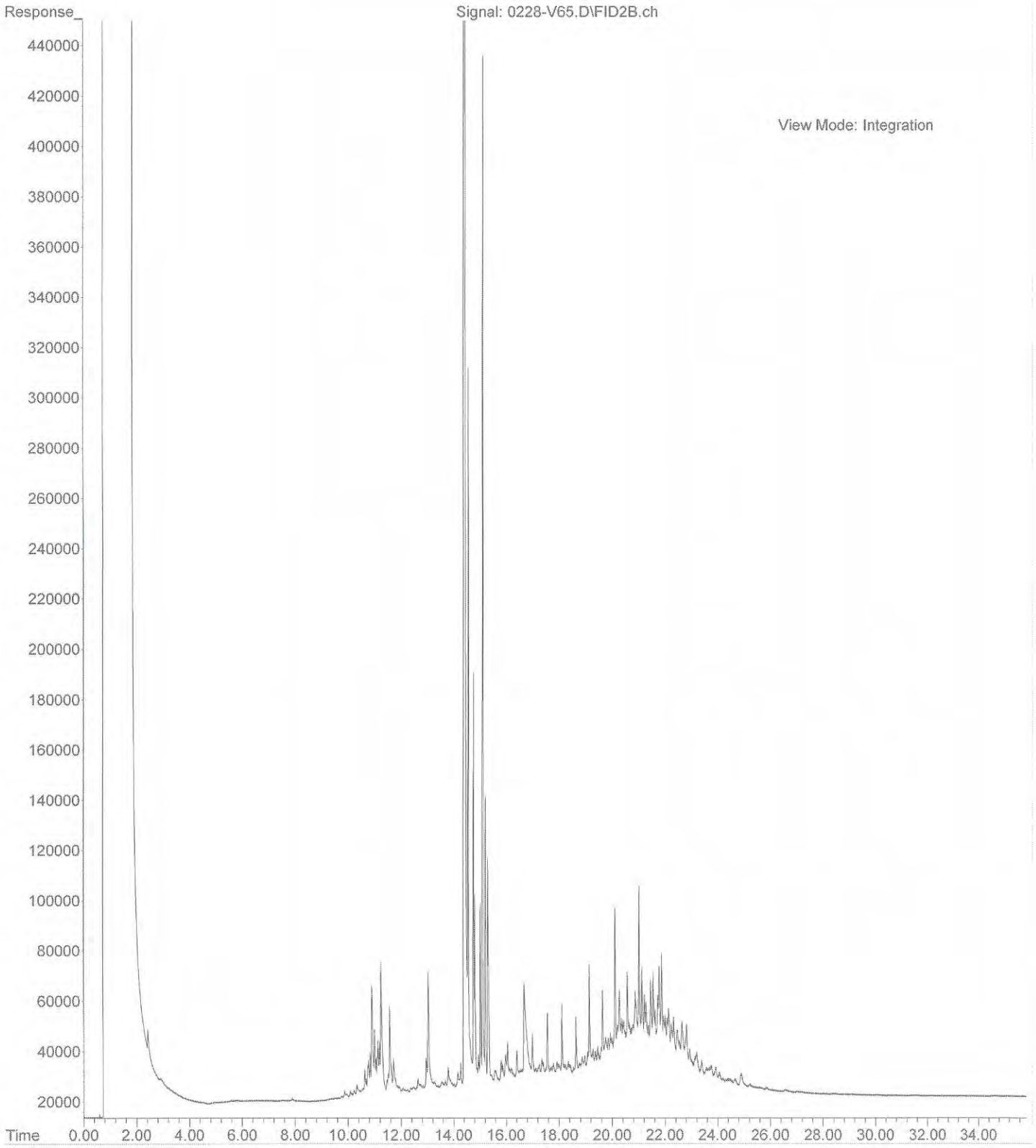
File : X:\DIESELS\VIGO\DATA\V190228\0228-V14.d
Operator : JT
Acquired : 28 Feb 2019 15:47 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-16
Misc Info :
Vial Number: 14



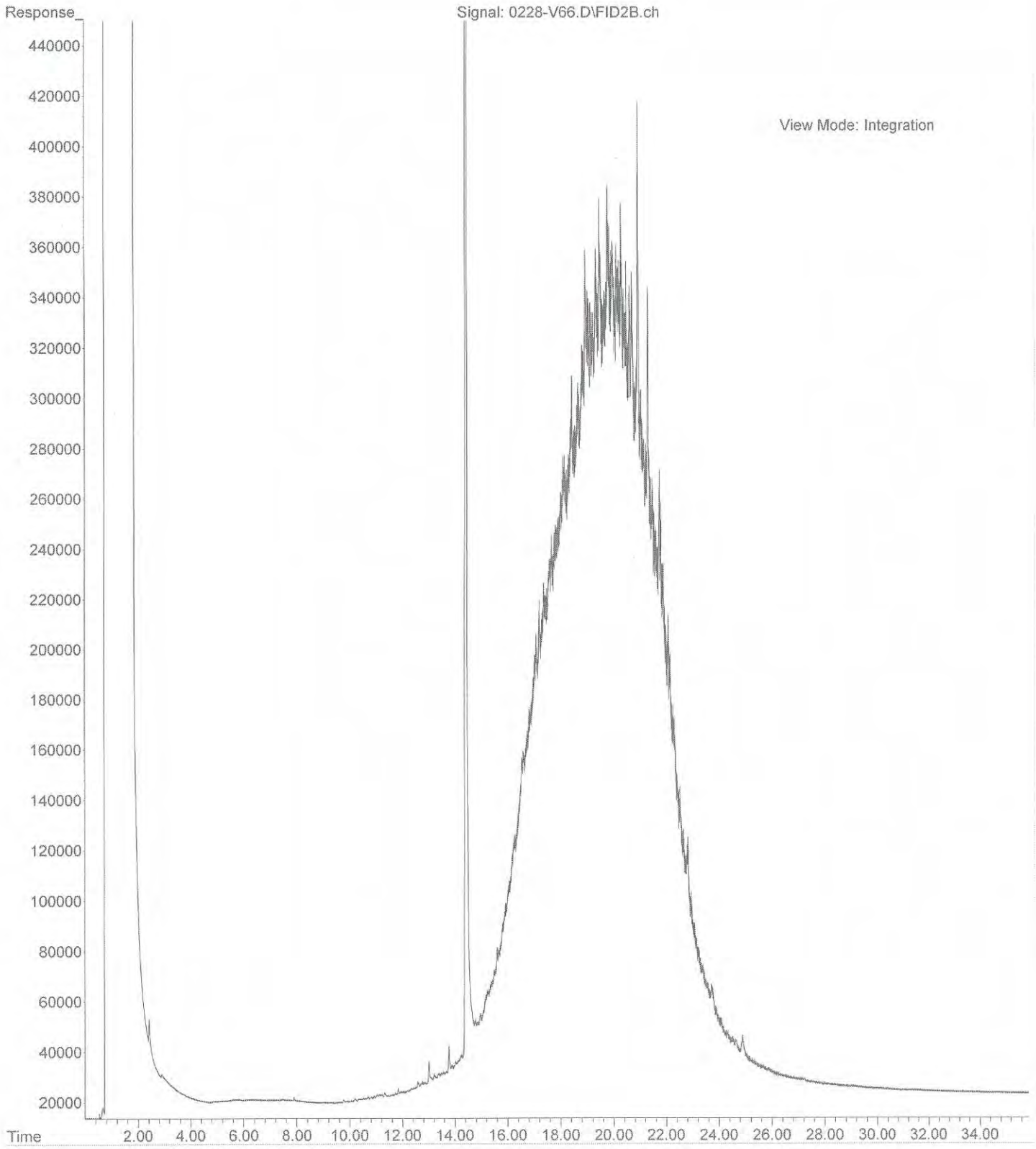
File :X:\DIESELS\VIGO\DATA\V190228\0228-V15.d
Operator : JT
Acquired : 28 Feb 2019 16:27 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-17
Misc Info :
Vial Number: 15



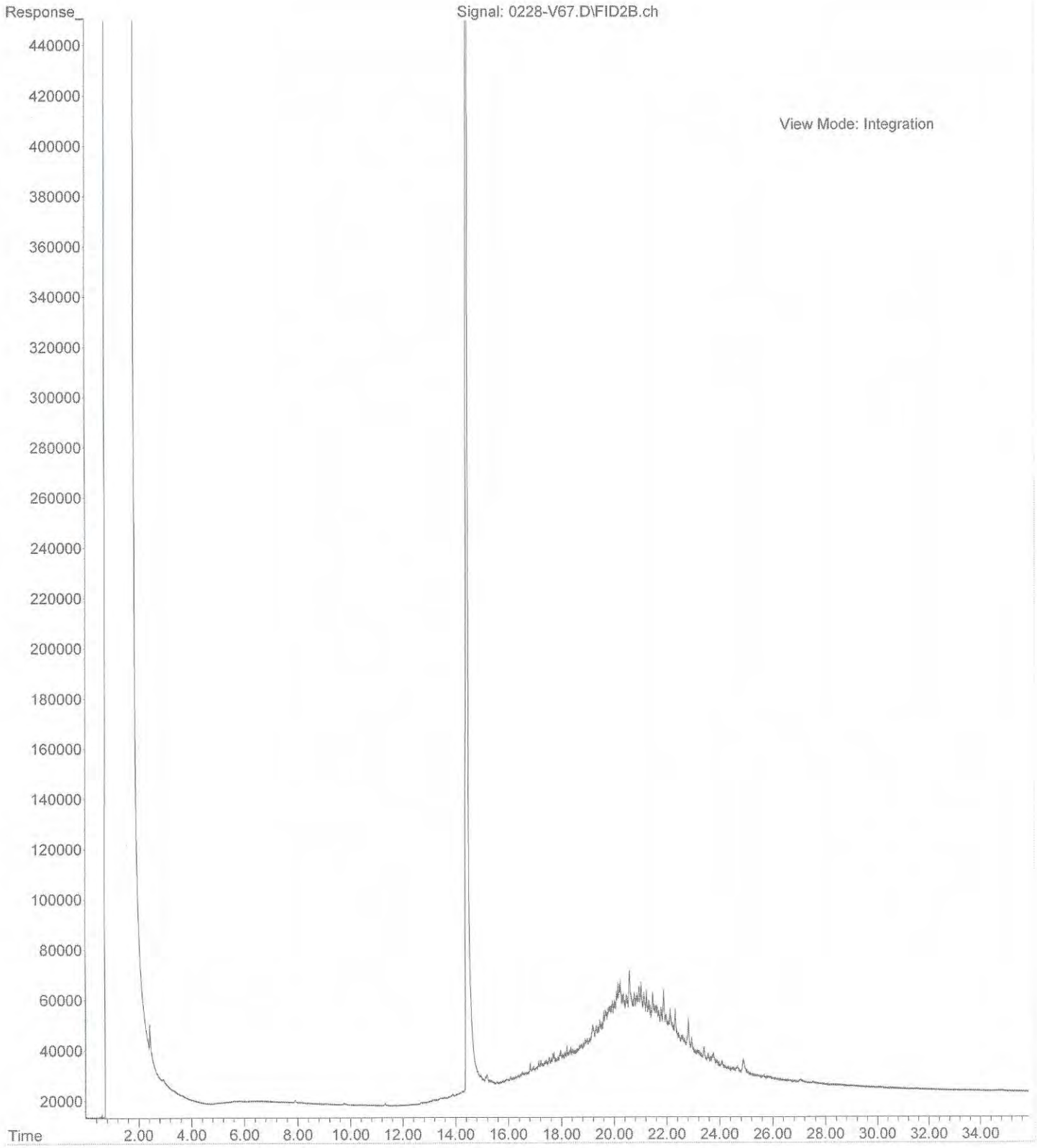
File :X:\DIESELS\VIGO\DATA\V190228.SEC\0228-V65.D
Operator : JT
Acquired : 28 Feb 2019 16:27 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-18
Misc Info :
Vial Number: 65



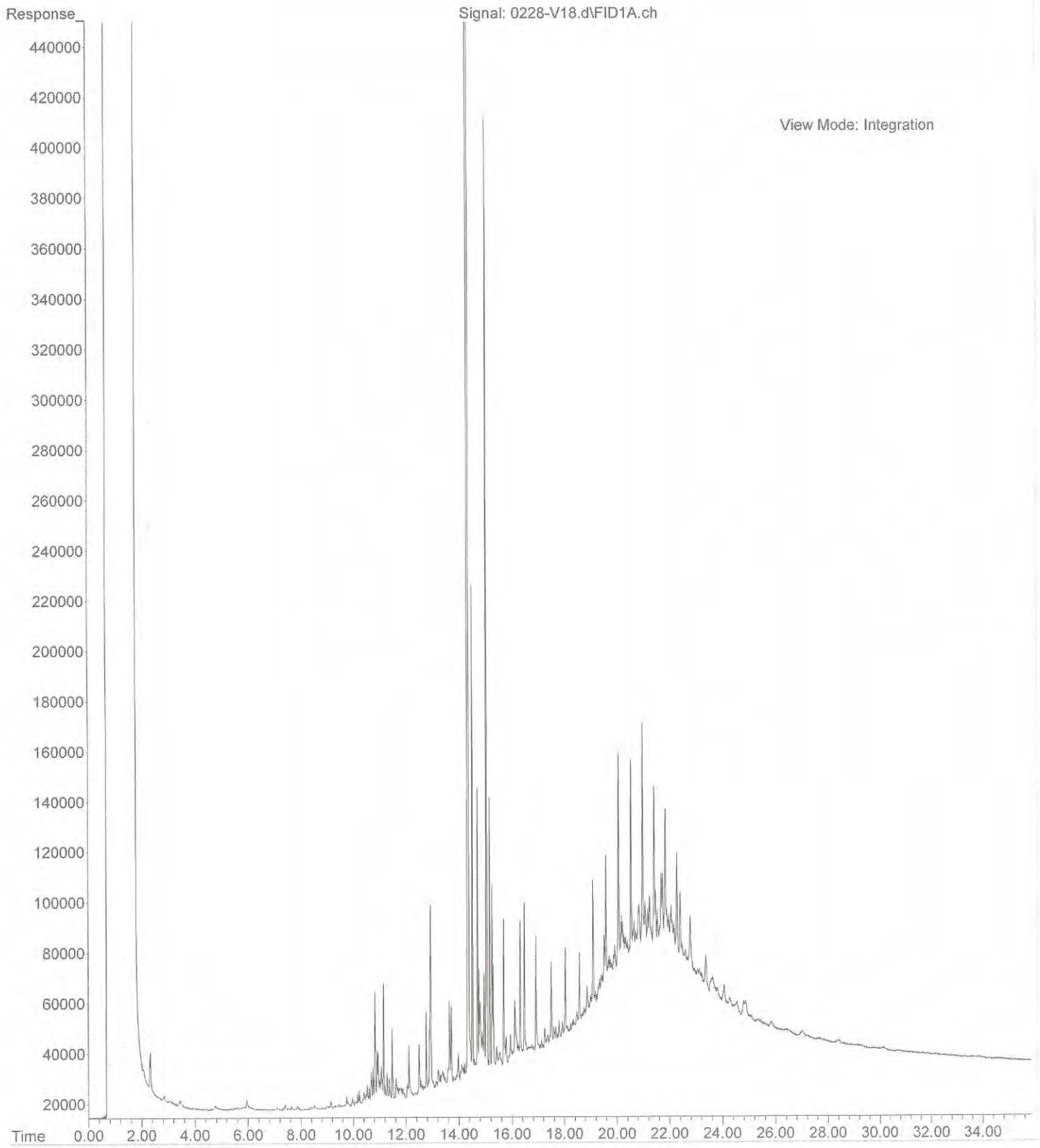
File :X:\DIESELS\VIGO\DATA\V190228.SEC\0228-V66.D
Operator : JT
Acquired : 28 Feb 2019 17:07 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-19
Misc Info :
Vial Number: 66



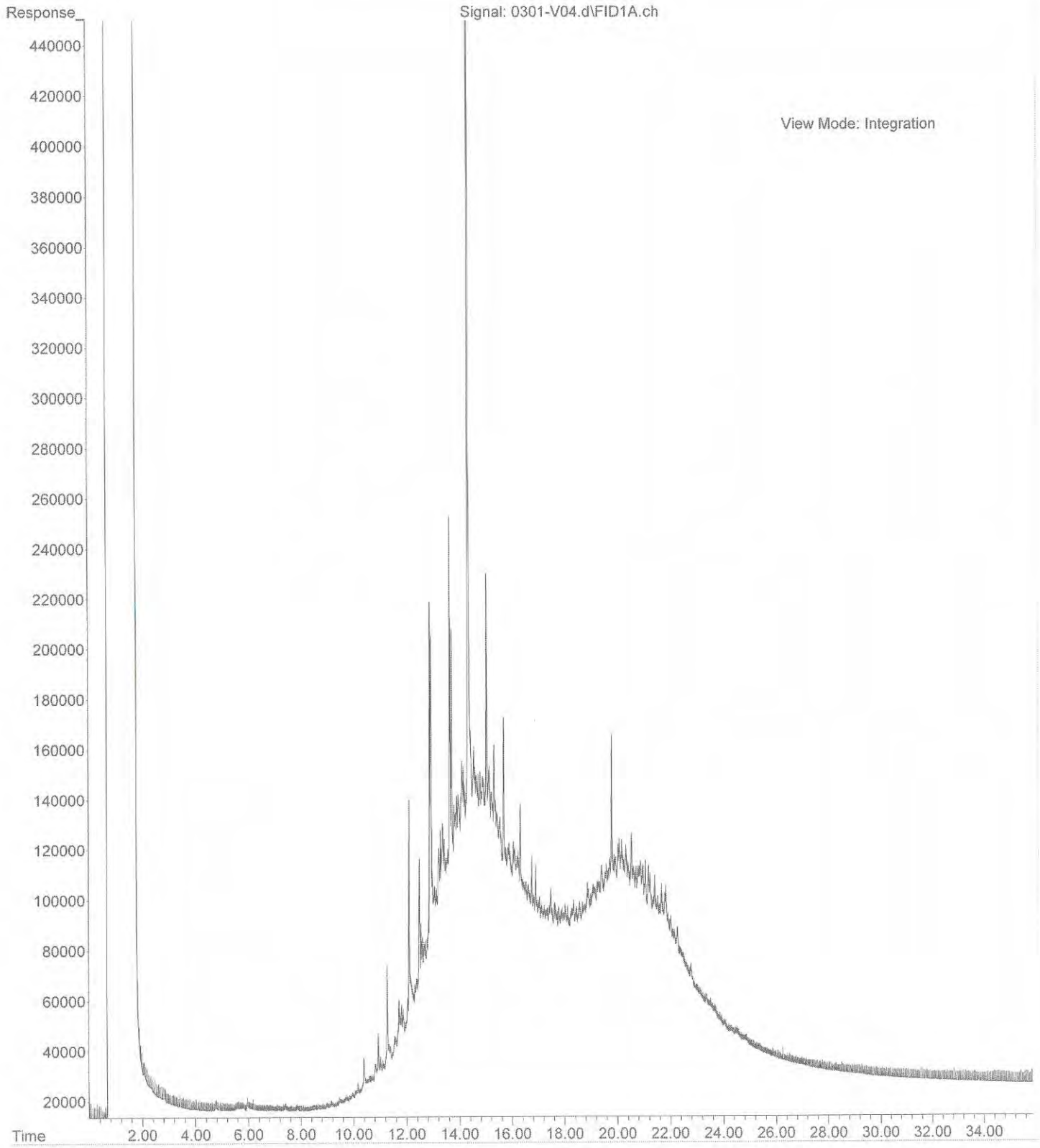
File :X:\DIESELS\VIGO\DATA\V190228.SEC\0228-V67.D
Operator : JT
Acquired : 28 Feb 2019 17:47 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-20
Misc Info :
Vial Number: 67



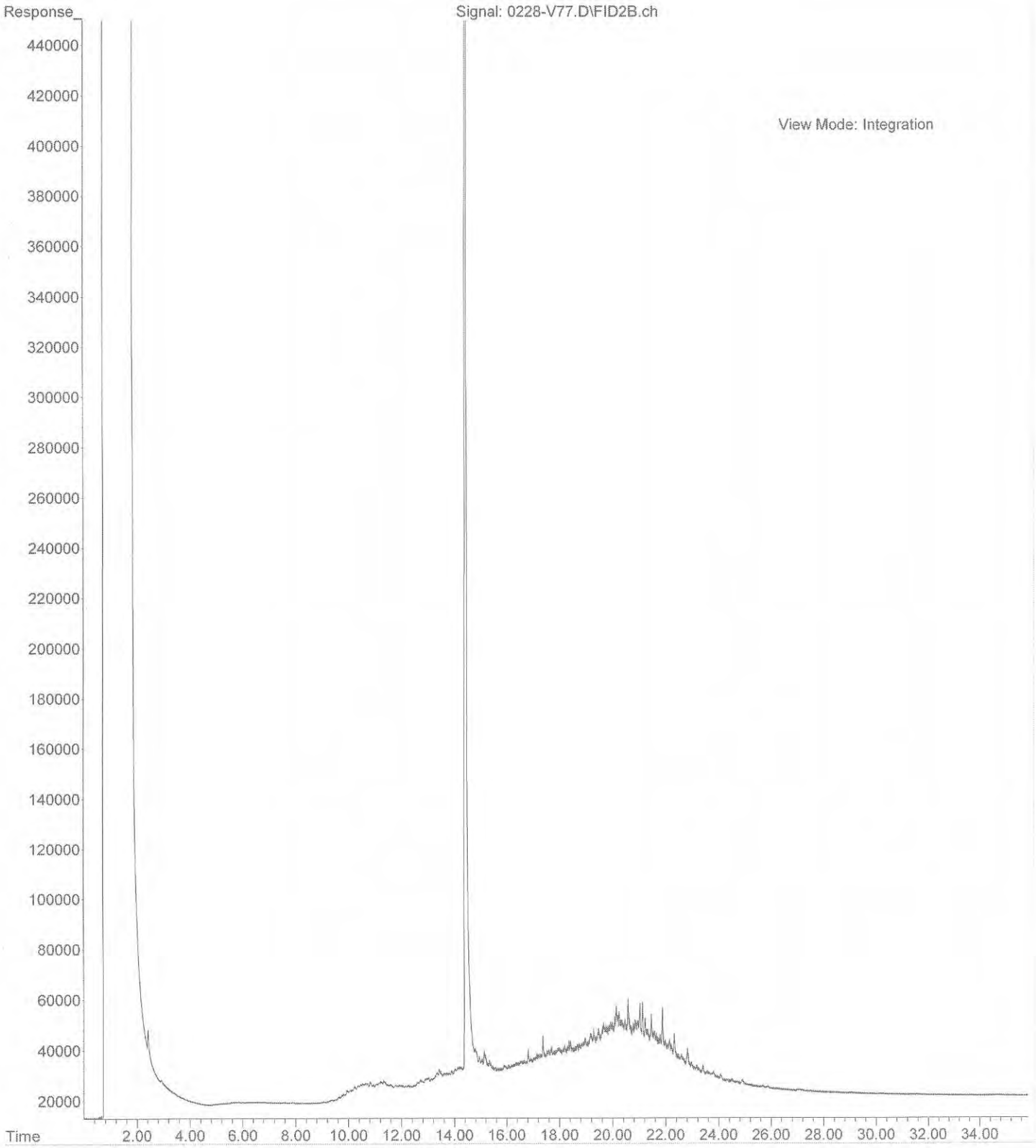
File :X:\DIESELS\VIGO\DATA\V190228\0228-V18.d
Operator : JT
Acquired : 28 Feb 2019 18:28 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-24
Misc Info :
Vial Number: 18



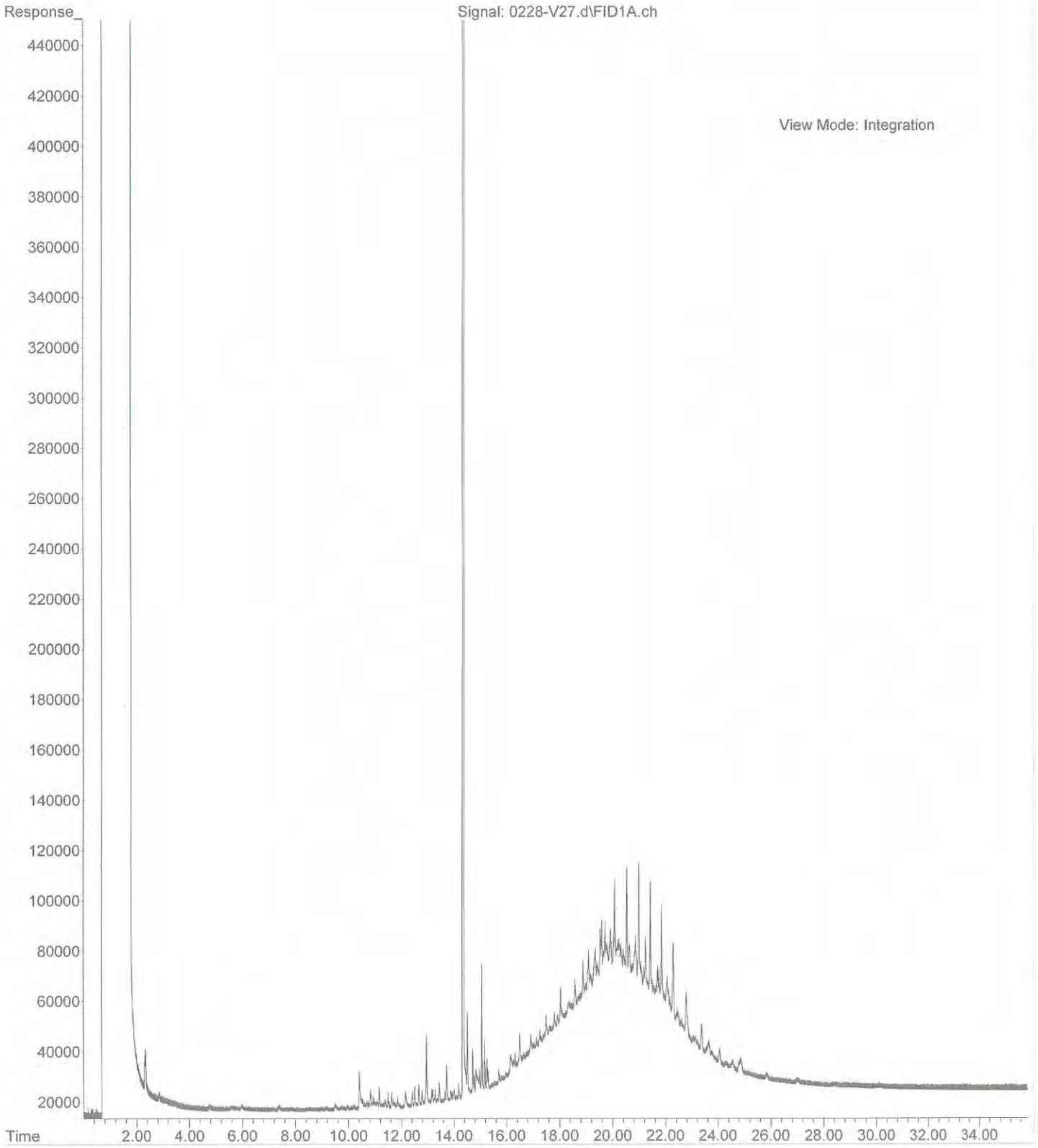
File :X:\DIESELS\VIGO\DATA\V190301\0301-V04.d
Operator : JT
Acquired : 1 Mar 2019 9:24 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-25 10X
Misc Info :
Vial Number: 4



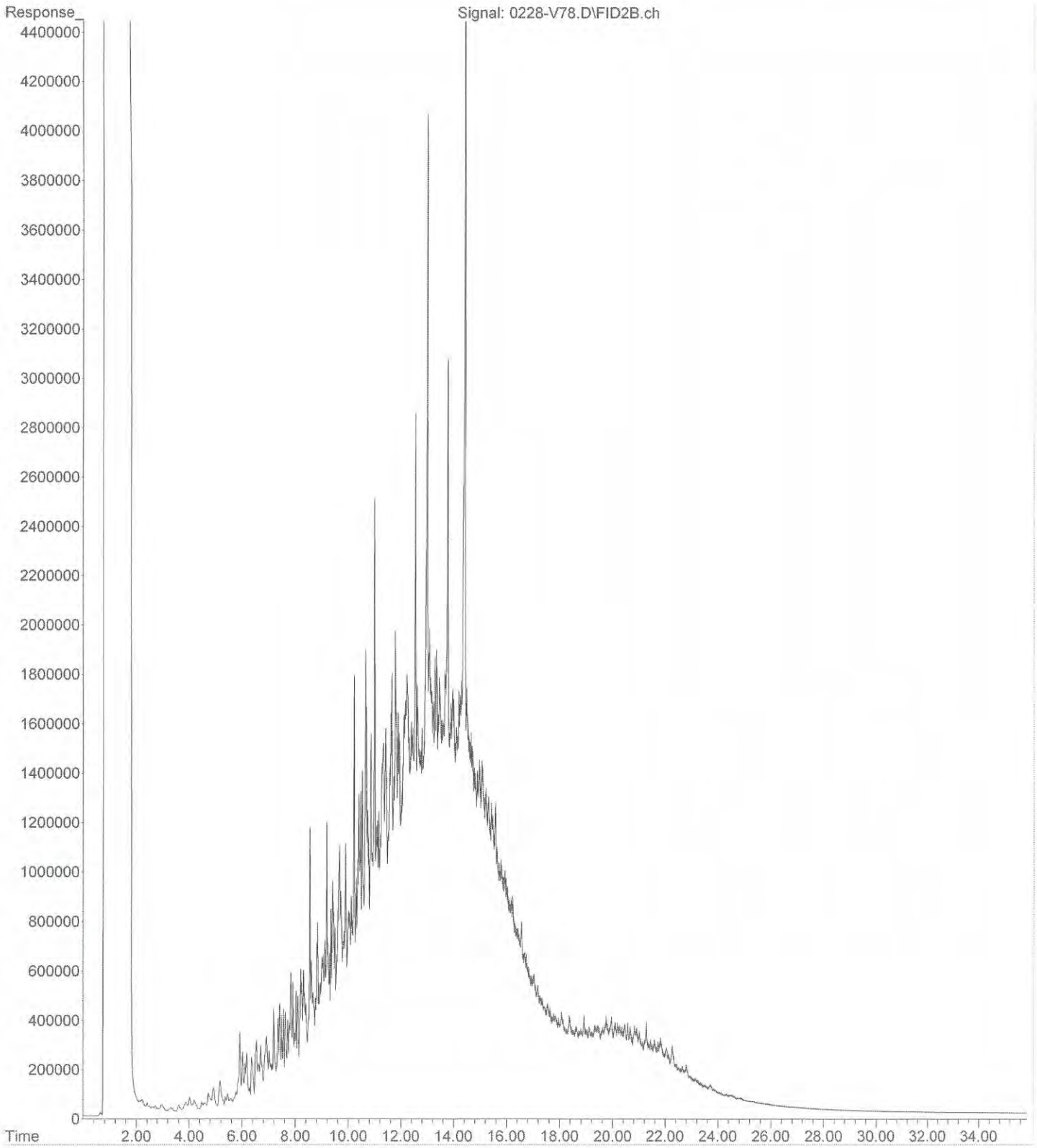
File :X:\DIESELS\VIGO\DATA\V190228.SEC\0228-V77.D
Operator : JT
Acquired : 1 Mar 2019 00:31 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-26
Misc Info :
Vial Number: 77



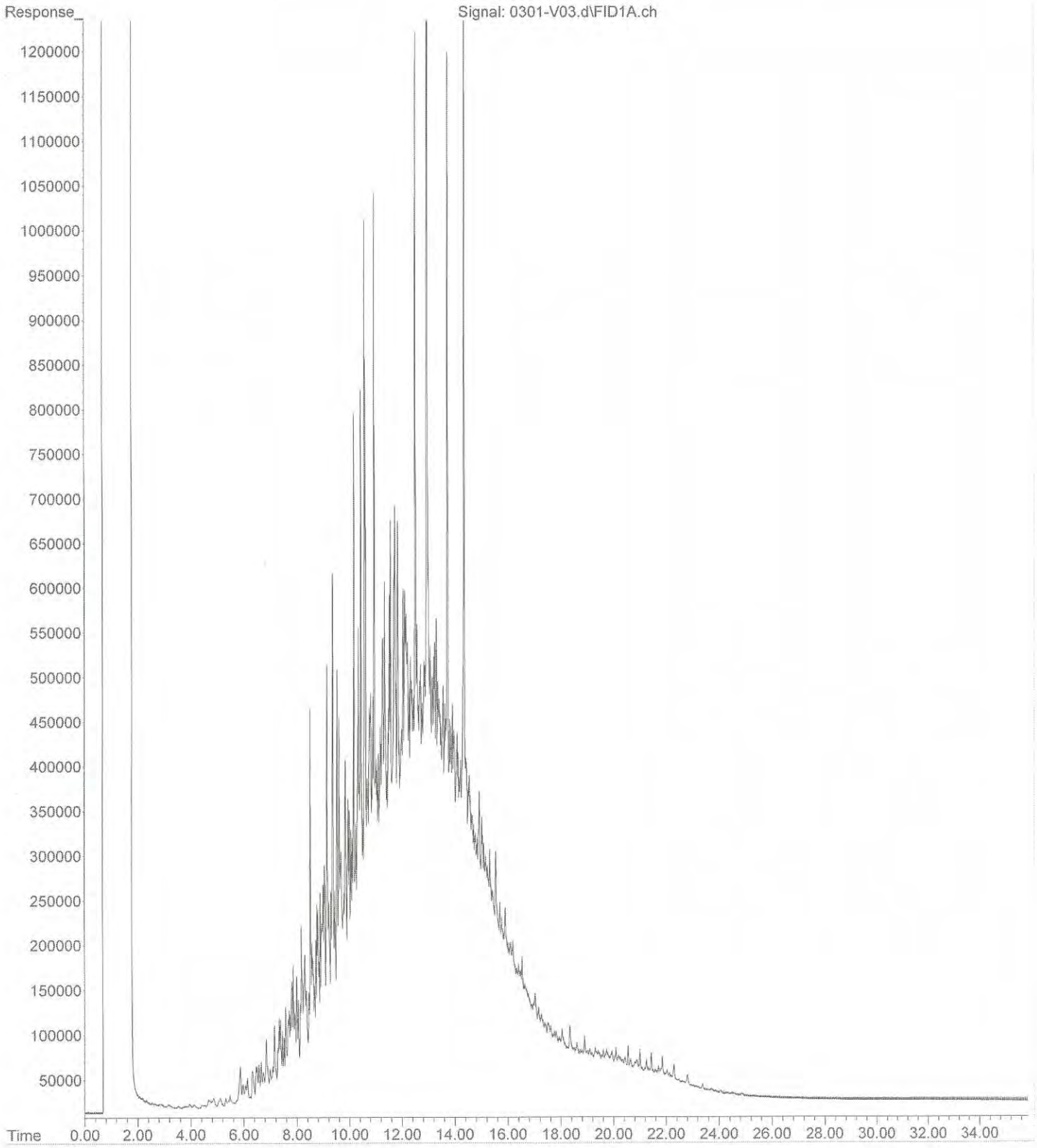
File :X:\DIESELS\VIGO\DATA\V190228\0228-V27.d
Operator : JT
Acquired : 1 Mar 2019 00:31 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-27
Misc Info :
Vial Number: 27



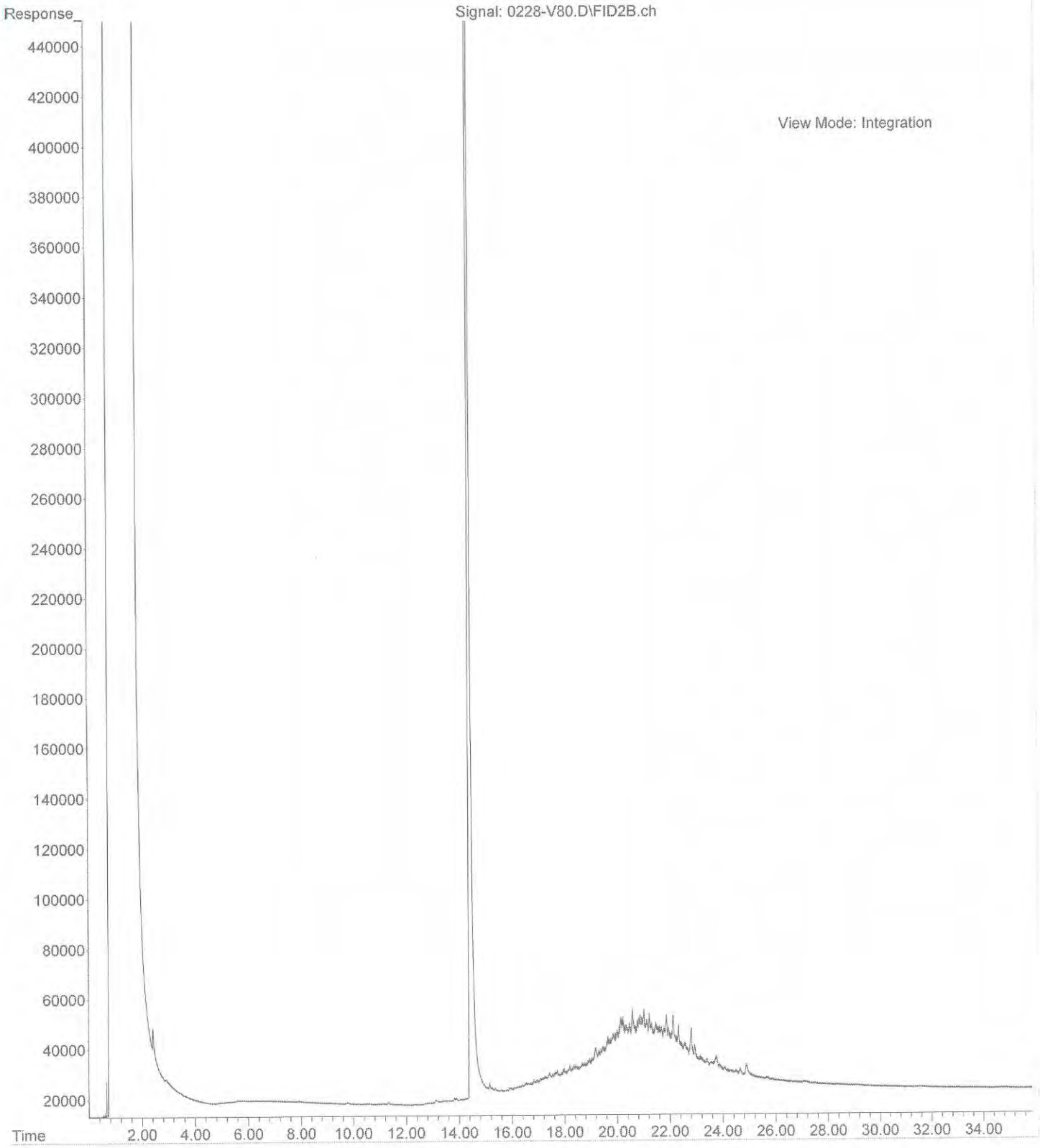
File : X:\DIESELS\VIGO\DATA\V190228.SEC\0228-V78.D
Operator : JT
Acquired : 1 Mar 2019 1:11 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-28
Misc Info :
Vial Number: 78



File :X:\DIESELS\VIGO\DATA\V190301\0301-V03.d
Operator : JT
Acquired : 1 Mar 2019 8:44 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-29 10X
Misc Info :
Vial Number: 3



File :X:\DIESELS\VIGO\DATA\V190228.SEC\0228-V80.D
Operator : JT
Acquired : 1 Mar 2019 2:32 using AcqMethod V180601F.M
Instrument : Vigo
Sample Name: 02-177-30
Misc Info :
Vial Number: 80



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

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

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

May 2, 2018

Carla Brock, Project Manager
Aspect Consulting, LLC
401 2nd Ave S, Suite 201
Seattle, WA 98104

Dear Ms Brock:

Included are the results from the testing of material submitted on April 6, 2018 from the Reserve Silica 160315, F&BI 804118 project. There are 14 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
c: data@aspectconsulting.com, Kristin Beck
ASP0502R.DOC

CASE NARRATIVE

This case narrative encompasses samples received on April 6, 2018 by Friedman & Bruya, Inc. from the Aspect Consulting, LLC Reserve Silica 160315, F&BI 804118 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Aspect Consulting, LLC
804118 -01	ATP-1-bulk
804118 -02	ATP-1-slag
804118 -03	ATP-2-bulk
804118 -04	ATP-2-slag
804118 -05	ATP-3-bulk
804118 -06	ATP-3-slag
804118 -07	ATP-4-bulk
804118 -08	ATP-4-slag

The samples were tumbled in deionized water adjusted to pH 12 with sodium hydroxide. After tumbling, the pH was checked and confirmed to still be 12.

All quality control requirements were acceptable.

Analysis for High pH Leachable Metals By EPA Method 6020A and 1311 Mod

Client ID:	ATP-1-bulk	Client:	Aspect Consulting, LLC
Date Received:	04/06/18	Project:	Reserve Silica 160315, F&BI 804118
Date Extracted:	04/11/18	Lab ID:	804118-01
Date Analyzed:	04/12/18	Data File:	804118-01.029
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)
Arsenic	5.07
Iron	6.75
Manganese	<1
Lead	<1

Analysis for High pH Leachable Metals By EPA Method 6020A and 1311 Mod

Client ID:	ATP-1-slag	Client:	Aspect Consulting, LLC
Date Received:	04/06/18	Project:	Reserve Silica 160315, F&BI 804118
Date Extracted:	04/11/18	Lab ID:	804118-02
Date Analyzed:	04/12/18	Data File:	804118-02.030
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)
Arsenic	<1
Iron	<5
Manganese	<1
Lead	<1

Analysis for High pH Leachable Metals By EPA Method 6020A and 1311 Mod

Client ID:	ATP-2-bulk	Client:	Aspect Consulting, LLC
Date Received:	04/06/18	Project:	Reserve Silica 160315, F&BI 804118
Date Extracted:	04/12/18	Lab ID:	804118-03
Date Analyzed:	04/13/18	Data File:	804118-03.058
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)
Arsenic	<1
Lead	<1

Analysis for High pH Leachable Metals By EPA Method 6020A and 1311 Mod

Client ID:	ATP-2-slag	Client:	Aspect Consulting, LLC
Date Received:	04/06/18	Project:	Reserve Silica 160315, F&BI 804118
Date Extracted:	04/12/18	Lab ID:	804118-04
Date Analyzed:	04/13/18	Data File:	804118-04.061
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)	TCLP Limit
Arsenic	<1	5.0
Lead	<1	5.0

Analysis for High pH Leachable Metals By EPA Method 6020A and 1311 Mod

Client ID:	ATP-3-bulk	Client:	Aspect Consulting, LLC
Date Received:	04/06/18	Project:	Reserve Silica 160315, F&BI 804118
Date Extracted:	04/12/18	Lab ID:	804118-05
Date Analyzed:	04/13/18	Data File:	804118-05.072
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)
Arsenic	<1
Iron	9.44
Lead	<1
Manganese	<1

Analysis for High pH Leachable Metals By EPA Method 6020A and 1311 Mod

Client ID:	ATP-3-slag	Client:	Aspect Consulting, LLC
Date Received:	04/06/18	Project:	Reserve Silica 160315, F&BI 804118
Date Extracted:	04/12/18	Lab ID:	804118-06
Date Analyzed:	04/13/18	Data File:	804118-06.073
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)
Arsenic	1.70
Iron	18.8
Lead	<1
Manganese	<1

Analysis for High pH Leachable Metals By EPA Method 6020A and 1311 Mod

Client ID:	ATP-4-bulk	Client:	Aspect Consulting, LLC
Date Received:	04/06/18	Project:	Reserve Silica 160315, F&BI 804118
Date Extracted:	04/12/18	Lab ID:	804118-07
Date Analyzed:	04/13/18	Data File:	804118-07.074
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)
Arsenic	<1
Lead	<1

Analysis for High pH Leachable Metals By EPA Method 6020A and 1311 Mod

Client ID:	ATP-4-slag	Client:	Aspect Consulting, LLC
Date Received:	04/06/18	Project:	Reserve Silica 160315, F&BI 804118
Date Extracted:	04/12/18	Lab ID:	804118-08
Date Analyzed:	04/13/18	Data File:	804118-08.075
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)
Arsenic	<1
Lead	<1

Analysis for High pH Leachable Metals By EPA Method 6020A and 1311 Mod

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Reserve Silica 160315, F&BI 804118
Date Extracted:	04/11/18	Lab ID:	I8-225 mb
Date Analyzed:	04/12/18	Data File:	I8-225 mb.027
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)
Arsenic	<1
Iron	<5
Manganese	<1
Lead	<1

Analysis for High pH Leachable Metals By EPA Method 6020A and 1311 Mod

Client ID:	Method Blank	Client:	Aspect Consulting, LLC
Date Received:	Not Applicable	Project:	Reserve Silica 160315, F&BI 804118
Date Extracted:	04/12/18	Lab ID:	I8-232 mb
Date Analyzed:	04/13/18	Data File:	I8-232 mb.028
Matrix:	Soil/Solid	Instrument:	ICPMS2
Units:	mg/L (ppm)	Operator:	SP

Analyte:	Concentration mg/L (ppm)
Arsenic	<1
Iron	<5
Lead	<1
Manganese	<1

Date of Report: 05/02/18
Date Received: 04/06/18
Project: Reserve Silica 160315, F&BI 804118

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL/SOLID SAMPLES FOR HIGH PH LEACHABLE METALS USING EPA METHODS 6020A AND 1311 MOD

Laboratory Code: 804118-02 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/L (ppm)	1.0	<1	96	109	75-125	13
Iron	mg/L (ppm)	10	<5	94	99	75-125	5
Lead	mg/L (ppm)	1.0	<1	93	96	75-125	3
Manganese	mg/L (ppm)	2.0	<1	92	95	75-125	3

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/L (ppm)	1.0	103	80-120
Iron	mg/L (ppm)	10	94	80-120
Lead	mg/L (ppm)	1.0	97	80-120
Manganese	mg/L (ppm)	2.0	95	80-120

Date of Report: 05/02/18
Date Received: 04/06/18
Project: Reserve Silica 160315, F&BI 804118

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF SOIL/SOLID SAMPLES FOR HIGH PH LEACHABLE METALS USING EPA METHODS 6020A AND 1311 MOD

Laboratory Code: 804118-03 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent Recovery MS	Percent Recovery MSD	Acceptance Criteria	RPD (Limit 20)
Arsenic	mg/L (ppm)	1.0	<1	103	99	75-125	4
Iron	mg/L (ppm)	10	<5	92	94	75-125	2
Lead	mg/L (ppm)	1.0	<1	94	92	75-125	2
Manganese	mg/L (ppm)	2.0	<1	94	96	75-125	2

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Arsenic	mg/L (ppm)	1.0	105	80-120
Iron	mg/L (ppm)	10	95	80-120
Lead	mg/L (ppm)	1.0	99	80-120
Manganese	mg/L (ppm)	2.0	95	80-120

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

804118

SAMPLE CHAIN OF CUSTODY

ME 04-06-18

Page # 1 of 1 BTY

Report To Carla Brock & Kristin Beck
Company Aspect Consulting
Address ~~801~~ 401 2nd Ave S. Suite 201
City, State, ZIP Seattle, WA 98104
Phone _____ Email _____

SAMPLERS (signature) Kat Beck

PROJECT NAME: Reserve Silica
PO #: 160315

REMARKS

INVOICE TO: Accts Payable

TURNAROUND TIME
X Standard Turnaround
☐ RUSH _____
Rush charges authorized by: _____

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

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of Jars	ANALYSES REQUESTED: TPH-HCID	TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260C	SVOCs by 8270D	PAHs 8270D SIM	High pH leachability Lead	High pH leachability Arsenic	High pH leachability Iron	High pH leachability Manganese	Notes
ATP-1-bulk	01 A B	4/6/18	1420		2								X	X	X	X	
ATP-1-slag	02		1425		1								X	X	X	X	
ATP-2-bulk	03 A B		1305		2								X	X			
ATP-2-slag	04		1300		1								X	X			
ATP-3-bulk	05 A B		1200		2								X	X	X	X	
ATP-3-slag	06		1205		1								X	X	X	X	
ATP-4-bulk	07 A B		1105		2								X	X			
ATP-4-slag	08		1110		1								X	X			

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
Relinquished by: Kat Beck	Kristin Beck	Aspect	4/6/18	
Received by:	Jay Shimazu	FBI	4/6/18	15:51
Relinquished by:				
Received by:		Samples received at 20 °C		

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

APPENDIX D

Report Limitations and Guidelines for Use

REPORT LIMITATIONS AND USE GUIDELINES

Reliance Conditions for Third Parties

This report was prepared for the exclusive use of the Client. No other party may rely on this report or the product of our services without the express written consent of Aspect Consulting, LLC (Aspect). This limitation is to provide our firm with reasonable protection against liability claims by third parties with whom there would otherwise be no contractual conditions or limitations and guidelines governing their use of the report. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and recognized standards of professionals in the same locality and involving similar conditions.

Services for Specific Purposes, Persons and Projects

Aspect has performed the services in general accordance with the scope and limitations of our Agreement. This report has been prepared for the exclusive use of the Client and their authorized third parties, approved in writing by Aspect. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

This report is not, and should not, be construed as a warranty or guarantee regarding the presence or absence of hazardous substances or petroleum products that may affect the subject property. The report is not intended to make any representation concerning title or ownership to the subject property. If real property records were reviewed, they were reviewed for the sole purpose of determining the subject property's historical uses. All findings, conclusions, and recommendations stated in this report are based on the data and information provided to Aspect, current use of the subject property, and observations and conditions that existed on the date and time of the report.

Aspect structures its services to meet the specific needs of our clients. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and subject property. This report should not be applied for any purpose or project except the purpose described in the Agreement.

This Report Is Project-Specific

Aspect considered a number of unique, project-specific factors when establishing the Scope of Work for this project and report. You should not rely on this report if it was:

- Not prepared for you
- Not prepared for the specific purpose identified in the Agreement
- Not prepared for the specific real property assessed
- Completed before important changes occurred concerning the subject property, project or governmental regulatory actions

If changes are made to the project or subject property after the date of this report, Aspect should be retained to assess the impact of the changes with respect to the conclusions contained in the report.

Geoscience Interpretations

The geoscience practices (geotechnical engineering, geology, and environmental science) require interpretation of spatial information that can make them less exact than other engineering and natural science disciplines. It is important to recognize this limitation in evaluating the content of the report. If you are unclear how these "Report Limitations and Use Guidelines" apply to your project or site, you should contact Aspect.

Discipline-Specific Reports Are Not Interchangeable

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 address 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 the subject property.

Environmental Regulations Are Not Static

Some hazardous substances or petroleum products may be present near the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or petroleum products or do not otherwise present potential liability. Changes may occur in the standards for appropriate inquiry or regulatory definitions of hazardous substance and petroleum products; therefore, this report has a limited useful life.

Property Conditions Change Over Time

This 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 (for example, Phase I ESA reports are applicable for 180 days), by events such as a change in property use or occupancy, or by natural events, such as floods, earthquakes, slope failure or groundwater fluctuations. If more than six months have passed since issuance of our report, or if any of the described events may have occurred following the issuance of the report, you should contact Aspect so that we may evaluate whether changed conditions affect the continued reliability or applicability of our conclusions and recommendations.

Phase I ESAs – Uncertainty Remains After Completion

Aspect has performed the services in general accordance with the scope and limitations of our Agreement and the current version of the “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process”, ASTM E1527, and U.S. Environmental Protection Agency (EPA)'s Federal Standard 40 CFR Part 312 "Innocent Landowners, Standards for Conducting All Appropriate Inquiries".

No ESA can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with subject property. Performance of an ESA study is intended to reduce, but not eliminate, uncertainty regarding the potential for environmental conditions affecting the subject property. There is always a potential that areas with contamination that were not identified during this ESA exist at the subject property or in the study area. Further evaluation of such potential would require additional research, subsurface exploration, sampling and/or testing.

Historical Information Provided by Others

Aspect has relied upon information provided by others in our description of historical conditions and in our review of regulatory databases and files. The available data does not provide definitive information with regard to all past uses, operations or incidents affecting the subject property or adjacent properties. Aspect makes no warranties or guarantees regarding the accuracy or completeness of information provided or compiled by others.

Exclusion of Mold, Fungus, Radon, Lead, and HBM

Aspect’s services do not include the investigation, detection, prevention or assessment of the presence of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Accordingly, this report does not include any interpretations, recommendations, findings, or conclusions regarding the detection, assessment, prevention or abatement of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Aspect’s services also do not include the investigation or assessment of hazardous building materials (HBM) such as asbestos, polychlorinated biphenyls (PCBs) in light ballasts, lead based paint, asbestos-containing building materials, urea-formaldehyde insulation in on-site structures or debris or any other HBMs. Aspect’s services do not include an evaluation of radon or lead in drinking water, unless specifically requested.