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FEDERAL WAY LINK EXTENSION

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Phase II Environmental Site
Assessment
FL-209 Draft 4

Tax Parcel 2500600480



CENTRAL PUGET SOUND
REGIONAL TRANSIT AUTHORITY

**Phase II Environmental Site Assessment Report
Sound Transit – Federal Way Link Extension
Parcel FL-209
Former Southgate Oil
23428 Pacific Highway South
Kent, Washington 98032**

File No. 4082-039-01

September 21, 2018

Prepared for:

Sound Transit c/o HDR Engineering
401 South Jackson Street
Seattle, Washington 98104-2826
Attention: Mark Menard

Prepared by:

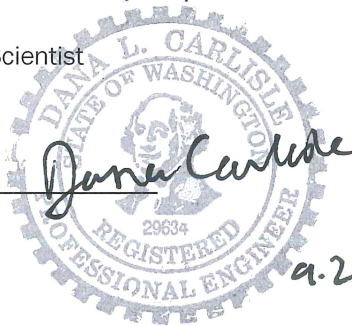
GeoEngineers, Inc.
1101 South Fawcett Avenue, Suite 200
Tacoma, Washington 98402
253.383.4940

Marsi M. Beeson

Marsi M. Beeson
Senior Environmental Scientist

Dana L. Carlisle, PE
Principal

JAR:DLC:ch



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RECORD OF REVISIONS



RECORD OF REVISIONS TO FEDERAL WAY LINK EXTENSION, PHASE 3 QUALITY MANAGEMENT PLAN

[illegible]

Acronyms and Abbreviations

AST	above-ground storage tank
ASTM	ASTM International
bgs	below ground surface
CLARC	Cleanup Levels and Risk Calculation
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
ESA	Environmental Site Assessment
FWLE	Federal Way Link Extension
GPR	ground penetrating radar
HREC	Historical Recognized Environmental Condition
mg/kg	milligrams per kilogram
mg/l	milligrams per liter
MTCA	Model Toxics Control Act
NAVD 88	North American Vertical Datum of 1988
NFA	no further action
PAH	polycyclic aromatic hydrocarbon
PCBs	polychlorinated biphenyls
PID	photoionization detector
ppm	parts per million
QC	quality control
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
TSP	Tacoma Smelter Plume
UST	underground storage tank
VOC	volatile organic compound
WAC	Washington Administrative Code

EXECUTIVE SUMMARY

This report summarizes the results of the Phase II Environmental Site Assessment (ESA) of the property at 23428 Pacific Highway South in Kent, Washington, King County Tax Parcel 2500600480, identified by Sound Transit as Federal Way parcel FL-209. The property is identified as “Southgate Oil” in Ecology’s database of contaminated sites. Southgate Oil previously operated on the subject property. The subject property is currently owned by Juan Castaneda and Adriana Rojas and is used for various auto repair and auto storage activities. This Phase II ESA was conducted to evaluate potential soil contamination associated with the Recognized Environmental Conditions (RECs) for the property as identified in the Phase I ESA prepared by GeoEngineers, Inc. dated March 2017.

Phase I ESA Summary

RECs identified for the subject property included on-site, areawide and off-site potential sources of contamination.

The on-site potential sources of contamination included the following:

- **Auto Repair.** The current business, Llantera El Paisano Auto Repair, has conducted automotive repair at the subject property since approximately 2008; the auto repair shop building was constructed in 1949 and was originally connected to an on-site septic system. On-site storage of tires and car parts indicative of suspect auto wrecking activities were observed during a recent site reconnaissance.
- **Southgate Oil MTCA Cleanup Site.** A large fuel distribution facility known as Southgate Oil operated on the subject property reportedly for 75 years. Numerous USTs were removed in the past, and remedial excavations to remove UST-related contaminated soil occurred in portions of the subject property in the early 2000s. Past releases were reported to Ecology in 2001. Concentrations of diesel-range petroleum hydrocarbons exceeding MTCA Method A cleanup levels were reported to remain in soil along the northern property boundary as of 2002. Diesel-range petroleum hydrocarbons were detected in soil samples from two borings advanced within 15 feet north of the property boundary, at locations both west of and east of the documented residual petroleum-contaminated soil. The concentration of diesel-range petroleum hydrocarbons in a sample from 8 feet below grade was greater than the MTCA cleanup level. Ecology issued a Further Action Opinion Letter for the site in 2006 under the Voluntary Cleanup Program (VCP).
- **Residential Heating Oil Tank.** A former single-family residence on the subject property used oil heat.

The Tacoma Smelter Plume (TSP) was identified as an areawide potential source of contamination for the subject property. The subject property is within Ecology’s mapped footprint of the TSP where arsenic concentrations in surface/near surface soil are predicted to exceed the MTCA Method A cleanup level for unrestricted land use.

Off-site potential sources of contamination include the current and former uses of adjacent properties

to the east across 30th Avenue South (auto repair and towing), north (dry cleaning), west across Pacific Highway South (former gas station) and south (former boat and automotive repair).

Phase II ESA Conclusions

The purpose of the Phase II ESA was to evaluate the potential for RECs or other potential sources of contamination to affect the subject property, and/or to impact soil that may be encountered during Sound Transit construction activities at the site.

Potential On-site Sources

Southgate Oil

As explained in the Phase I ESA report (GeoEngineers 2017b), nine USTs, ranging from 275 to 10,000 gallons and containing gasoline, diesel fuel and heating oil, were removed from the site in October and November 2000 and two heating oil USTs (20,000 and 25,000 gallons) were removed in February 2002. Prior reports (excerpts included in Appendix C) indicate that approximately 550 cubic yards of contaminated soil were removed from UST-related remedial excavations in 2000, and 748 tons of contaminated soil were removed from UST-related remedial excavations in 2002. Soil sampling of the base and sidewalls of the 2002 excavation indicated that soil with diesel-range hydrocarbons remained in the north sidewall of the excavation, to a depth of 10 feet below ground surface (bgs) at the northern property line (Figure 2). The zone of contaminated soil left in place as of 2002 was reported to be approximately 25 feet long and 10 feet deep. A 10-millimeter plastic liner was reportedly placed in the excavation vertically along the northern excavation limits, extending approximately to 14 feet bgs.

Based on information available regarding the northern adjacent parcel (FL-207), diesel-range petroleum hydrocarbons were detected at a concentration greater than the MTCA Method A cleanup level in subsurface soil approximately 50 feet east of where the Southgate Oil residual petroleum-contaminated soil zone was noted in previous reports on file at Ecology. The northern adjacent parcel is approximately 3 to 5 feet lower in elevation at surface grade than FL-209; therefore, the contaminated soil sample reported at 8 feet bgs on FL-207 corresponds to a depth that is the same as the reported depth of the Southgate Oil residual petroleum-contaminated soil.

Geophysical Study and Current Site Conditions

A geophysical survey conducted in June 2017 did not identify any suspect USTs remaining on the subject property; however, the coverage of the survey was limited due to surface obstructions on the property. The geophysical survey revealed two large electromagnetic anomalies and one small ground penetrating radar (GPR) anomaly. One electromagnetic anomaly was in the vicinity of the storm drain at the west end of the property, south of the office, that is interpreted to most likely represent concrete with rebar or a subsurface feature such as an oil/water separator (OWS). The GPR anomaly was southeast of the auto repair building and is interpreted to be shallow buried asphalt or fill material. Nearby and just east of the GPR anomaly was the second electromagnetic anomaly that is interpreted to represent buried metal but was not indicative of a UST.

A site reconnaissance and an interview with the current property owner were conducted in June 2017. Visual observation of much of the ground surface on the property was not possible due to the presence of tires, wheels, old cars, car and truck parts, car-related debris, two DOT shipping containers and other items which obscured the ground surface (see representative site photographs in Appendix A). No evidence of a heating oil UST on the property was observed.

Auto repair activities have taken place on the subject property reportedly for decades and the original subject property auto repair building was originally on a septic system. A below-grade pit or trough approximately 4 feet wide and 15 to 20 feet in length, covered by wooden planks, was noted inside the auto repair garage. It is unclear if the pit is currently used, whether it is lined or unlined, whether it is filled. It is possible the pit functioned in the past as a dry well or sump.

Stained concrete was observed in the auto repair garage and outside (east) of the garage bay door. The surface staining appeared limited in extent.

Field Explorations, Sampling and Chemical Analytical Testing

Shallow soil at a depth of 0.5 to 1.5 feet bgs in boring FL209-B4 completed east of the garage bay door contained cadmium, lead, petroleum hydrocarbons, naphthalenes and carcinogenic PAHs at concentrations greater than MTCA cleanup levels. These contaminants are likely related to a past release (or releases) of automotive fluids in the general vicinity of the auto repair building.

Numerous Phase II ESA soil samples obtained from locations representative of the Southgate Oil backfilled UST excavations, UST excavation limits, and/or from UST excavation backfill soil had detectable diesel- and oil-range hydrocarbons and naphthalenes, in many cases at concentrations greater than MTCA Method A cleanup levels. These data indicate that the prior UST removals and remedial excavations did not completely remove petroleum-contaminated soil exceeding MTCA cleanup levels.

Prior reports noted that during UST removal and remedial excavation sampling in 2002, concentrations of petroleum hydrocarbons exceeding MTCA Method A cleanup levels remained in soil to a depth of at least 14 feet bgs along the northern property boundary. The deepest Phase II ESA soil sample that exceeded MTCA cleanup levels for petroleum was FL209-B-8 at 21 feet bgs; this boring was completed through the backfilled 2002 remedial excavation.

Residual petroleum-related constituents at concentrations greater than MTCA cleanup levels were identified in Phase II ESA soil samples from borings FL209-B3, FL209-B4, FL209-B5 and FL209-B7 which were located at the edges of the previous UST and remedial excavations and outside the lateral limits of the previous remedial excavations; petroleum-contaminated soil in these locations extended to maximum depths of 14 feet bgs.

Mercury was detected in samples from borings FL209-B7 and FL209-B8 at depths of 5.5 to 6.5 feet bgs at concentrations of 2.5 mg/kg and 2.8 mg/kg, greater than the MTCA cleanup level of 2 mg/kg. These samples were collected from soil representative of remedial excavation backfill. Of the 20 samples tested for mercury, mercury was detected in five of the samples, including the two listed above, and

the detected concentrations in the five samples were at least four times higher than the laboratory detection limits. The source of mercury in these five samples is unknown and mercury is not a typical contaminant for petroleum UST sites. The source of mercury may be related to uncontrolled fill placed in the 2000/2002 UST remedial excavations as all the samples with mercury detected were from remedial excavation backfill (FL209-B5-6-6.5, FL209-B6-10-11, FL209-B7-5.5-6.5, FL209-B7-8.0-9.0 and FL209-B8-6-6.5).

The chlorinated volatile organic compound (VOC) perchloroethylene (PCE) was detected in one soil sample (FL209-B12-3.5-4.0) at a concentration of 0.0026 mg/kg, less than the MTCA cleanup level of 0.05 mg/kg and approximately twice the laboratory detection limit. FL209-B12 is located in the eastern portion of the property, near a former fueling island. The PCE detected in this sample appears to be related to an unknown localized on-site source, as opposed to the off-site dry cleaner, based on the lack of chlorinated compounds in 18 other soil samples obtained from the remaining eleven Phase II ESA borings on the subject property.

MTCA Reporting Requirements

The chemical analytical results described above for FL209-B4 with detectable concentrations of contaminants of concern greater than MTCA cleanup levels, and for mercury in soil samples from borings FL209-B7 and FL209-B8 at concentrations greater than the MTCA cleanup level, indicate discovery of a reportable release that appears to be a different source than the past release reported to Ecology for fuel USTs at Southgate Oil.

It is the property owner/operator's responsibility to report the discovery of a release of hazardous substances that may pose a threat to human health and the environment in accordance with MTCA release reporting criteria in WAC 173-340-300, Site Discovery and Reporting. The MTCA reporting requirement is within ninety calendar days of discovery.

Tacoma Smelter Plume

Arsenic and lead were not detected in the samples tested (near-surface soil samples from 8 borings) at concentrations indicative of the areawide TSP impacts.

Potential Off-site Sources

In general, the results of the Phase II ESA explorations, sampling and chemical analysis suggest a low risk of significant impacts from off-site sources of contamination. As noted previously, the source of PCE in a soil sample from boring FL209-B12 was not identified but appears to more likely be related to an on-site isolated source than to an off-site dry cleaner or auto repair source.

Sound Transit Acquisition and Future Construction Recommendations

Based on current design information for the FWLE project (HDR, provided in March 2018), Sound Transit plans to acquire all of FL-209 in fee ("full take") and building impacts are anticipated. Sound Transit's proposed construction and development includes a new roadway, sidewalks and new utilities in the western and central portions of the property, a stormwater detention vault oriented west to

east along the entire length of the northern portion of the property, and elevated tracks at the extreme eastern margin of the subject property (Figure 3). Proposed construction and development activities by Sound Transit could change as project design is refined.

The findings of the Phase II ESA indicate that a remediation cost estimate for cleanup is necessary for FL-209 for Sound Transit's acquisition because contaminants of concern were detected at concentrations greater than MTCA Method A cleanup levels in soil samples from 7 of the 12 Phase II ESA boring locations (FL209-B3 through FL209-B8 and FL209-B11). According to Ecology files and information regarding the north-adjacent property, residual petroleum-contaminated subsurface soil extends off-property to the north.

The findings of the Phase II ESA indicate that a construction cost estimate will be necessary for FL-209 because the findings of the Phase II ESA indicate contaminated or impacted soil at 10 of the 12 Phase II ESA boring locations across the property (FL209-B3 through FL209-B9, FL209-B11 and FL209-B12), at depths likely to coincide with future Sound Transit construction excavation.

Future construction has the potential to encounter impacted or contaminated soil in widespread areas across the subject property. We recommend a soil screening and handling plan be prepared prior to construction activities that outlines soil segregation, handling, stockpiling, and end use/disposal with potential follow-up chemical analytical testing for impacted or suspect contaminated soil that may be encountered. At a minimum, Ecology's "Guidance for Remediation of Petroleum-Contaminated Soil" should be used as a guidance document for soil handling end use options for petroleum-related soil impacts; however, considerations for exported soil to classify as a dangerous waste will need to be considered.

Based on the long site history as a fuel oil storage facility (Southgate Oil), the potential remains to encounter undocumented USTs.

The lateral and vertical extent of residual contaminated and impacted soil should be better defined in order to develop a cleanup plan and a contaminated/impacted soil handling plan for this property. Further assessment should include at a minimum: the source, nature and extent of the mercury detections in five of the Phase II ESA borings; the source, nature and extent of the PCE detection in one of the Phase II ESA borings to evaluate whether soil with PCE would be a Dangerous Waste if excavated; and the pit in the auto repair garage. Therefore, after the property has been cleared and structures removed, we recommend completing supplemental environmental exploration and soil characterization, particularly in areas not accessible during Phase II ESA activities.

The table below summarizes the Phase II ESA findings relative to Sound Transit's proposed acquisition and future construction; the findings are grouped by on-site potential sources, off-site potential sources, and potential areawide sources.

Potential Sources of Contamination Identified Nearby	Potential Source Within Acquisition Area	Potential Source Within Construction Area	Impacted Soil Present	Contaminated Soil Present	Remedial Cost Estimate Necessary For Acquisition	Remedial Cost Estimate Necessary For Construction
On-Site: Current auto repair/wrecking, former Southgate Oil	Yes	Yes	Yes	Yes	Yes	Yes
Off-Site: North, south, east and western properties	No	No	No	No	No	No
Areawide: Tacoma Smelter Plume	Yes	Yes	No	No	No	No

This Executive Summary should be used only in the context of the full report for which it is intended.

1.0 Introduction

This report presents the results of the Phase II Environmental Site Assessment (ESA) for the property located at 23428 Pacific Highway South in Kent, Washington, King County Tax Parcel 2500600480 identified by Sound Transit as Federal Way Link Extension (FWLE) Parcel FL-209 (“subject property”). The subject property is currently owned by Juan Castaneda and Adriana Rojas. An automotive repair shop constructed in 1949 is currently located on the property, as well as an office building constructed in 1977; prior to 1949, the property was developed with a single-family residence. The property is identified as “Southgate Oil” in Ecology’s database of contaminated sites. The subject property is shown relative to surrounding physical features on the Vicinity Map, Figure 1. The layout of the subject property and surrounding properties is shown on the Site Plan and Boring Location Map – FL-209, Figure 2.

Based on current design information for the FWLE project (HDR, provided in March 2018), Sound Transit plans to acquire all of FL-209 in fee (“full take”) and building impacts are anticipated. Sound Transit’s proposed construction and development includes a new roadway, sidewalks and new utilities in the western and central portions of the property, a stormwater detention vault oriented west to east along the entire length of the northern portion of the property, and elevated tracks at the extreme eastern margin of the subject property (Figure 3). Proposed construction and development activities by Sound Transit could change as project design is refined.

The results of this Phase II ESA will be used by Sound Transit as part of their evaluation of potential environmental liabilities associated with ownership of the property and future design and construction of the FWLE. This report has been prepared for the exclusive use of Sound Transit, their agents and project design team. Because this environmental report is not intended for use by others, no one else should rely on this report without first conferring with GeoEngineers, Inc. (GeoEngineers).

Throughout the report, references to “the FWLE”, the “project”, the “proposed project”, “the alignment,” or the “light rail corridor” refer to the alignment selected by the Sound Transit Board in January 2017 after publication of the Final Environmental Impact Statement (FEIS).

1.1 FWLE Project Description

Sound Transit intends to extend light rail between the cities of SeaTac and Federal Way, through the FWLE Preferred Alternative route. The Sound Transit 2 (ST2) Plan, approved by voters in 2008, included environmental study and design of this extension. This 7.8-mile extension would extend light rail south from the Angle Lake Station terminus of the Central Link system at South 200th Street in SeaTac to the Federal Way Transit Center (FWTC) at South 317th Street. The FWLE would travel within the cities of SeaTac, Des Moines, Kent, and Federal Way in King County.

Link Light Rail is currently operating between University of Washington, Seattle and Sea-Tac International Airport. In 2008 the ST2 program was approved by voters. This package added nearly

36 new miles of service to the north, south, and east, to Sound Transit's (ST) initial light rail line, resulting in 55 miles of light rail open for revenue service by 2023. The ST2 program of projects includes construction of light rail from the Angle Lake Station, just south of SeaTac Airport, to Kent/Des Moines Station. ST2 funds were also programmed to provide environmental clearance and preliminary engineering design to downtown Federal Way.

In June 2016, the ST Board unanimously approved to move forward with a November 2016 ballot asking taxpayers to fund Sound Transit 3 (ST3) which was subsequently passed by the taxpayers. ST3 funds the remaining segments from Kent/Des Moines station to the FWTC. Revenue service to the FWTC Station is targeted to open by 2024.

1.2 Authorization

This report was prepared under the terms of the subcontract between HDR and GeoEngineers dated August 24, 2012, along with Amendments 1 through 12. The subcontract authorizes GeoEngineers to provide environmental services for the Sound Transit Federal Way Link Extension in accordance with Agreement No. RTA/AE 044-12 between HDR and Sound Transit.

1.3 Site History and Summary of RECs

In March 2017, GeoEngineers completed a Phase I ESA for the subject property. Following is a summary of pertinent site history and recognized environmental conditions (RECs) in connection with the subject property:

- The earliest identified development on the subject property was a single-family residence with oil heat and a septic tank, constructed in 1931 and demolished by 2002. The available historic resources do not specify if heating oil was stored in an UST or AST.
- The existing automotive repair shop building has been in use on the subject property since the late 1940s and the former Southgate Oil facility operated on the subject property reportedly for 75 years. Nine USTs, ranging from 275 to 10,000 gallons and containing gasoline, diesel fuel and heating oil, were removed from the site in October and November 2000 and two heating oil USTs (20,000 and 25,000 gallons) were removed from the eastern portion of the property in February 2002. Residual diesel-contaminated soil associated with releases from the former Southgate Oil facility remained as of 2002. Diesel-range petroleum hydrocarbons were detected in soil samples from two borings advanced within 15 feet north of the property boundary, at locations both west of and east of the documented residual petroleum-contaminated soil. The concentration of diesel-range petroleum hydrocarbons in a sample from 8 feet below grade was greater than the MTCA cleanup level. Ecology issued a "Further Action Required" determination for the Southgate Oil facility in 2006.
- The subject property is within the mapped area of the Tacoma Smelter Plume (areawide contamination) where arsenic concentrations in surface/near surface soil are predicted to exceed the MTCA Method A cleanup level for unrestricted land use.
- The east-adjacent A to B Auto (Figure 2) and the south-adjacent Allison Marine boat and automotive

repair facility have potential for past leaks, spills or release of automotive-related fluids (e.g., fuels, lube oil, waste oil and degreasing solvents) and boat manufacturing-related chemicals (solvents, metals, petroleum products, hazardous manufacturing chemicals) that could have impacted the subject property.

- The north-adjacent former dry cleaner (Figure 2) operated from at least 1977 until 2008 and has potential for past releases of dry cleaning chemicals to have impacted the subject property.
- The database-listed former Shell site to the west (Figure 2) is considered an HREC to the subject property based on the potential for contaminant migration to the subject property.

1.4 Purpose and Scope of Services

The purpose of the Phase II ESA is to evaluate the potential for RECs or other potential sources of contamination to affect the subject property and/or to impact soil that may be encountered during Sound Transit construction activities at the site. GeoEngineers' scope of services consisted of the following:

1. Performed a site reconnaissance of the property and met with the subject property owner.
2. Developed a health and safety plan for use by our field representatives in accordance with WAC 296-24.
3. Coordinated the marking of subsurface utilities at the exploration locations by notifying the one-call locate service for underground utilities in public rights-of-way and a private utility locate service for underground utilities on private property.
4. Retained a geophysical survey subcontractor to assess for the presence and location of undocumented USTs and former UST excavations at the subject property.
5. Retained a drilling subcontractor to advance 12 hollow-stem auger soil borings to evaluate soil conditions in areas of potential soil contamination.
6. Obtained soil samples from each of the hollow-stem auger borings. Field screened the soil samples for evidence of petroleum and volatiles using visual, water sheen and headspace vapor screening methods. Visually classified the samples in general accordance with ASTM D 2488 and maintained a detailed log of each boring.
7. Submitted select soil samples for chemical analysis of one or more of the following: hydrocarbon identification by NWTPH-HCID, gasoline-range petroleum hydrocarbons by NWTPH-Gx, diesel- and lube oil-range petroleum hydrocarbons by NWTPH-Dx, RCRA metals and/or arsenic and lead by EPA Method 6000/7000 series, PAHs by EPA Method 8270D/SIM, VOCs by EPA Method 8260 and TCLP lead by EPA Method 1311.
8. Evaluated the soil sampling field and chemical analytical data relative to MTCA cleanup levels, naturally occurring background metals concentrations in Puget Sound region soil and dangerous waste classification thresholds in Chapter 173-303 WAC Dangerous Waste Regulations.

2.0 Site Description

2.1 Location and Property Description

General location and property description information for the subject property are summarized in Table 2-1 below. The location is shown relative to surrounding physical features in Figure 1. The current layout of the subject property and surrounding properties are shown in Figure 2.

Table 2-1. Subject Property Location and Description

Quarter/Quarter, Section, Township and Range	NE/SE quarter of Section 16, Township 22, Range 4, Willamette Meridian
Address	23428 Pacific Highway South, Kent, King County, Washington
Tax Parcel Number	King County Parcel 2500600480
Approximate Area	0.64 acres
Existing Use(s)	Automotive service and repair, suspect auto wrecking

2.2 Site Vicinity and General Characteristics

The subject property is in an area of commercial land uses, including auto repair and light industrial warehouse spaces. Figure 2 shows the configuration of the subject property and surrounding properties.

2.3 Site Reconnaissance and Interview

GeoEngineers personnel conducted a visual site reconnaissance on May 31, 2017 to evaluate current conditions on the property relative to previously identified RECs, and to assess the property for potential RECs not identified previously. The GeoEngineers representative was accompanied by owner Juan Castaneda during the May 2017 reconnaissance. The interior of the office was not observed as part of the visit. Photographs of the subject property are included in Appendix A as Figures A-14 through A-23.

The majority of the site is paved. A significant portion of the property was occupied by tires, wheels, old cars, car and truck parts, and car-related debris. Two DOT shipping containers were also present on the property and were not accessed during the site visit. We did not observe evidence of a heating oil UST on the property.

Evidence of auto repair activities was observed in the garage, including a variety of tools, auto repair and maintenance materials, and other stored objects that are not related to auto repair. There is an out-of-use pit or trough at the west end of the garage, covered by wooden planks with stored items over each end. The pit was approximately 4 feet wide and 15 to 20 feet in length. The depth of the pit was unclear because the pit was covered with wooden planks. A

below-grade pit or trough approximately 4 feet wide and 15 to 20 feet in length, covered by wooden planks, was noted inside the auto repair garage. It is unclear if the pit is currently used, whether it is lined or unlined, whether it is filled.

Stained concrete was observed in the garage and outside (east) of the garage bay door. Several containers with motor oil (lube and/or waste oil) were observed including a 55-gallon drum, a bathtub and a bucket. Evidence of a former fueling island was observed on the eastern portion of the property. No features indicating USTs or ASTs were identified. An aboveground hoist is located under a temporary storage shed (awning) situated east of the auto repair building.

A concrete pad located in the asphalt-paved drive south of the office building may be indicative of a storm drain oil/water separator; however, presence of an oil/water separator at this location was not confirmed by our interview with Mr. Castaneda. The geophysical survey interpreted a large electromagnetic anomaly around the storm drain that may be rebar in the concrete, or another subsurface feature such as an oil/water separator.

3.0 Physical Setting

3.1 Topography and Hydrogeologic Setting

The subject property is at an elevation of approximately 400 feet (North American Vertical Datum of 1988 [NAVD 88], sea level). Land surface at the site is generally flat. Our knowledge of the general physiographic setting, geology and groundwater occurrence in the vicinity of the subject property is based on our review of the available maps, our general experience in the area and our recent soil explorations. Subsurface conditions observed during our recent soil explorations are described in the following sections of this report.

3.1.1 Geologic Setting

Glaciation events in the Puget Lowland left thick deposits of glacially-derived and reworked sediments across the region. The upland plateau in the Project area was formed during the latest glacial epoch called the Vashon stade of the continental Fraser glaciation. The advance and retreat of the Vashon-age Puget glacial lobe, approximately 14,000 to 10,000 years ago, deposited most of the near-surface materials and sculpted most of the present landforms within the Puget Lowland.

After the latest glaciation, Holocene period sediments were deposited over the glacial soils. These deposits typically consist of alluvial soils commonly found in river valleys as well as colluvial deposits (landslide materials) on slopes. Peat and other organic soils occur in numerous depressional areas at the surface. Some of these Holocene period sediments have been modified by human activity, including placement of undocumented landfill material in the Midway landfill and placement of roadway embankment fill for construction of I-5.

The prior environmental reports for the subject property encountered 8 to 10 feet of sandy clay with gravel, underlain by dense glacial till deposits to depths of 15 feet bgs.

3.1.2 Groundwater Conditions

The Phase II ESA explorations did not extend to groundwater. Below is a general description of groundwater conditions throughout the Project area.

Groundwater encountered in the FWLE project area may be grouped into one of three main aquifer types: unconfined, semi-confined and confined artesian. Unconfined aquifers may include groundwater within recent alluvium along streams and creeks, within recessional outwash that is perched above low-permeability glacial till, within discontinuous lenses of permeable layers in glacial till, or within advance outwash that is exposed at the ground surface. The semi-confined aquifer is present in the advance outwash where it is overlain by less permeable soils but the groundwater level is below the confining layer, making the aquifer semi-confined. Confined aquifers encountered in the project area are either flowing artesian

(elevated groundwater levels aboveground surface) or sub-artesian (elevated groundwater levels at or near ground surface).

Groundwater was encountered at approximately 78 feet bgs during drilling in a geotechnical boring completed approximately 40 feet to the east for FWLE (FWLE-D02). Obvious indicators of contamination were not noted in boring logs for nearby explorations. The groundwater is noted as being in a semi-confined aquifer type (GeoEngineers, January 2017a).

4.0 Contaminants of Concern and Cleanup Levels

In addition to contaminants associated with the Tacoma Smelter Plume (i.e., lead and arsenic), potential contaminants identified for soil at the subject property are associated with the former Southgate Oil operations and past/current auto repair activities, as well as the west-adjacent service station property, the north adjacent dry-cleaning facility, the eastern auto repair and towing operations, and the southern boat repair operations. Potential contaminants for the Phase II ESA screening included gasoline-, diesel- and oil-range petroleum hydrocarbons and related constituents such as VOCs, metals, and PAHs and chlorinated solvents associated with dry cleaning operations including perchloroethylene (PCE), and trichloroethylene (TCE).

The chemical analytical data for samples obtained during this investigation were compared to the respective MTCA Method A cleanup levels. MTCA Method B cleanup levels were used for analytes where MTCA Method A cleanup levels are not established. Where appropriate, detected concentrations of metals in soil also were compared to naturally occurring background metals concentrations in Puget Sound region soil (Washington State Department of Ecology [Ecology], 1994).

4.1 Contaminated and Impacted Soil Classifications

For purposes of Sound Transit's property acquisition and future construction activities at FL-209, contaminated soil and impacted soil are defined as follows:

- **Contaminated Soil:** Soil containing concentrations of contaminants greater than applicable cleanup levels such as MTCA Method A Cleanup Levels for Unrestricted Use, or other relevant cleanup levels established by state, local, or federal regulation, law, or permit condition, if no Method A level has been developed.
- **Impacted Soil:** Soil containing detectable concentrations of contaminants that are less than applicable cleanup levels, specifically MTCA Method A Cleanup Levels for Unrestricted Land Use, or other relevant cleanup levels established by state, local, or federal regulation, law, or permit condition, if no Method A level has been developed. Also, soil containing detectable concentrations of total metals that are less than MTCA Cleanup Levels but greater than naturally occurring background metals concentrations in Puget Sound region soil (Ecology, 1994). Impacted soil is not considered contaminated but may be subject to restrictions or conditions for end use at off-site facilities.

5.0 Subsurface Explorations

5.1 General

The Phase II ESA explorations included 12 hollow-stem auger borings from which soil samples were obtained to characterize subsurface conditions. The field explorations were completed on June 20 and 21 and July 6 and 20, 2017. Holt Services Inc. (Holt) performed drilling services. The boring locations will be surveyed by ST personnel. The 12 boring locations were selected based on the locations of potential sources of contamination, soil sample data from prior environmental assessments of the property, observations made during our June 2017 site reconnaissance, and access logistics. The Phase II ESA boring locations are shown in Figure 2. Ground surface elevations for the boring locations were determined by locational survey.

Twelve borings (FL209-B1 through FL209-B12) were completed to depths of 11 to 30.5 feet bgs. Subsurface boring logs and the field exploration program are presented in Appendix A. Approximate boring locations are shown on Figure 2.

Explorations were monitored by a representative of GeoEngineers who visually classified and performed field screening tests on soil samples collected from the subsurface explorations for evidence of petroleum and volatiles. Subsurface conditions and field screening results are shown on the subsurface exploration logs presented in Appendix A. Soil samples selected from the borings were submitted to OnSite Environmental, Inc. (OnSite) in Redmond, Washington for chemical analysis. The soil chemical analytical results are summarized in Table 1. Copies of the laboratory reports are presented in Appendix B.

5.2 Geophysical Survey

A geophysical survey was completed in June 2017, in accessible areas of the property (Appendix A). Due to surface interference or access constraints, the survey did not include areas where cars, tires, wheels, debris, and other objects were stored.

The geophysical survey did not identify any suspect USTs remaining on the subject property. The geophysical survey revealed two large electromagnetic anomalies and one small GPR anomaly. One electromagnetic anomaly was in the vicinity of the storm drain at the west end of the property (Figure 2), south of the office, that is interpreted to most likely represent concrete with rebar or a subsurface feature such as an OWS. The GPR anomaly was southeast of the auto repair building and is interpreted to be shallow buried asphalt or fill material (Figure 2). Nearby and just east of the GPR anomaly was the second electromagnetic anomaly that is interpreted to represent buried metal (Figure 2), but was not indicative of a UST.

5.3 Sampling and Analysis Plan

Subsurface conditions and field screening results were evaluated to develop the sampling and analysis plan for the Phase II ESA. The exploration locations are shown in Figure 2. Analyses completed for each exploration are summarized in the table below.

Table 5.1 Sampling and Analysis Summary

Direct-Push Boring ID	Analyses Completed					
	Diesel- and Lube-Oil Range Hydrocarbons	Gasoline-Range Hydrocarbons	PAHs	VOCs	RCRA 8 Metals or As, Pb	TCLP Lead
FL209-B1	X	X	--	X	--	--
FL209-B2	X	X	--	--	--	--
FL209-B3	X	X	--	X	X	--
FL209-B4	X	X	X	X	X	X
FL209-B5	X	X	X	X	X	--
FL209-B6 ¹	X	X	X	X	X	--
FL209-B7 ¹	X	X	X	X	X	--
FL209-B8	X	X	X	X	X	--
FL209-B9	X	X	X	X	X	--
FL209-B10	X	X	--	X	X	--
FL209-B11 ¹	X	X	X	X	X	--
FL209-B12	X	X	X	X	X	--

Notes:

¹ Sample analyzed for hexavalent chromium

"X" = Sample Analyzed

RCRA = Resource Conservation and Recovery Act

"—" = not analyzed

"TCLP" = Toxicity Characteristic Leaching Procedure

6.0 Findings

6.1 Subsurface Observations and Field Screening

We observed the completion of 12 borings, FL209-B1 through FL209-B12, using hollow-stem auger drilling methods. Discrete soil samples were collected from each boring for field screening and possible chemical analysis. Soil conditions encountered beneath the asphalt concrete pavement consisted of interbedded sands with gravel and silts to the total depths explored. Groundwater was not encountered during drilling of the borings. Physical evidence of petroleum and/or volatiles based on field screening was observed in soil samples from 11 of the 12 borings. Moderate and heavy sheens and/or petroleum odor were observed in soil samples from five of the twelve borings. Field screening results are shown in the boring logs in Appendix A and samples that field screened with evidence of petroleum were generally consistent with samples that had petroleum compounds detected by chemical analysis with the exception of samples with slight sheens which did not always contain detectable petroleum concentrations.

6.2 Analytical Testing Results

Forty-seven soil samples collected from the direct push borings were submitted for chemical analysis of one more of the following: gasoline-range petroleum hydrocarbons, diesel- and lube oil-range petroleum hydrocarbons, VOCs, PAHs, and metals. One sample with elevated total lead was analyzed for or TCLP lead.

6.2.1 Total Petroleum Hydrocarbons

Gasoline-range Petroleum Hydrocarbons

Gasoline-range petroleum hydrocarbons were only detected in a shallow soil sample from FL209-B4 at a depth of 0.5 to 1.5 feet bgs. The laboratory noted that the presence of heavier-range hydrocarbons was impacting the gasoline results in the sample. Diesel- and oil-range hydrocarbons were also detected in this sample. This result likely indicates a past surface release or spill from auto repair activities, based on the location of the boring east of the auto repair garage.

Diesel- and Oil-range Petroleum Hydrocarbons

The matrix below presents a summary of the findings for diesel- and/or oil-range petroleum hydrocarbons in the soil samples. The list of samples for each boring is shown from shallowest to deepest, which provides a snapshot of the vertical profile and extent of contaminated/impacted soil for each boring. For samples with results greater than the MTCA cleanup level of 2,000 mg/kg (for the sum of diesel- and oil-range petroleum hydrocarbons), the matrix presents the relative degree of contamination in the sample using the "Exceedance Factor" (EF) as an indicator. The EF is calculated as the detected concentration in the sample divided by the corresponding MTCA cleanup level.

Boring	Sample Depth (feet bgs)	Diesel/Oil Not-detected	Diesel/Oil Contaminated >MTCA CUL (EF ¹)	Diesel/Oil Impacted <MTCA CUL	PAHs ² Detected >MTCA	Interpreted Source of Contaminants Detected
FL209-B1	4.5-5 9.5-10.5	X X				N/A
FL209-B2	1-2	X				OWS, Former fuel dispenser
FL209-B3	10-11 15-16	X	X (1.25)			Former USTs or surface spill
FL209-B4	0.5-1.5 5.5-6.5		X (1.5)	X	PAHs (N), cPAHs	Surface spill
FL209-B5	1-2 6-6.5 8-9 10.5-11.5 13-14 17.5-18.5 22.5-23	X X	X (1.2) X (2.6)	X X X	PAHs (N) PAHs (N)	Former USTs ³
FL209-B6	10-11 20.5-21 27.5-28	X	X (1.1)	X		Former USTs ³
FL209-B7	1-2 5.5-6.5 8-9 10.5-11.5 12.5-13.5 15-16 20-20.5	X X	X (1.1) X (3.6)	X X X	PAHs (N)	Former USTs ³
FL209-B8	1-2 6-6.5 10-11 15-16 20-21 22.5-23 27.5-28 30-30.5	X X	X (1.4) X (4.7)	X X X X	PAHs (N)	Former USTs ³
FL209-B9	1-2 5.5-6.5	X		X		Former USTs ³
FL209-B10	5.5-6.5 10-10.5 25-26	X X X				N/A
FL209-B11	1-2 3-4 6-6.5	X	X (4.2)	X	PAHs (N)	Former USTs ³

Boring	Sample Depth (feet bgs)	Diesel/Oil Not-detected	Diesel/Oil Contaminated >MTCA CUL (EF ¹)	Diesel/Oil Impacted <MTCA CUL	PAHs ² Detected >MTCA	Interpreted Source of Contaminants Detected
FL209-B12	1-2 3.5-4 5.5-6.5	X		X X		Former fueling island

Notes:

¹ Exceedance factor = detected concentration/MTCA Method A CUL of 2,000 mg/kg. For example, 4,000 mg/kg represents an EF of 2. EFs are rounded to one decimal.

² Presumed to be associated with petroleum contamination and not from another source. Unless otherwise noted, the PAH compound naphthalene (N) was the only compound detected >MTCA in samples noted above.

³ Includes impacted/contaminated excavation backfill, residual contamination that remained at UST removal/remedial excavation limits, and/or UST-related contaminated soil not excavated during the prior remedial excavations.

N/A = not applicable

6.2.2 VOCs

Petroleum-related VOCs were detected at concentrations less than corresponding MTCA cleanup levels in 19 soil samples analyzed. Acetone and 2-butanone (common laboratory contaminants) were also detected in several of the analyzed samples.

Soil sample FL209-B12-3.5-4, collected at a depth of 3.5 to 4 feet bgs near a former fueling island in the eastern margin of the property was the only sample for which one of the chlorinated VOCs, PCE, a solvent that could be associated with auto repair or with dry cleaning operations, was detected. PCE was not detected in any of the other samples analyzed, and other dry cleaning-related compounds such as TCE and vinyl chloride (VC) were not detected.

No VOC detections exceeded the MTCA cleanup levels.

6.2.3 PAHs

Carcinogenic and noncarcinogenic PAHs were detected in 23 soil samples analyzed. The concentration of cPAHs in one sample from boring FL209-B4-0.5-1.5 collected at a depth of 0.5 to 1.5 feet bgs was greater than the corresponding MTCA cleanup level of 0.1 mg/kg (see matrix above). The detected concentrations of cPAHs in the remaining samples analyzed were all less than the corresponding MTCA cleanup levels.

Naphthalenes were detected at concentrations above the MTCA cleanup level of 5 mg/kg in six samples analyzed (see table above). Other PAH compounds were detected at concentrations less than established MTCA cleanup levels.

6.2.4 Metals

Several metals, including arsenic and lead, either were not detected or were detected at concentrations less than the corresponding MTCA cleanup levels in the soil samples analyzed except the following:

- Cadmium and lead were detected in the sample from boring FL209-B4-0.5-1.5 collected at a depth of 0.5-1.5 feet bgs at concentrations greater than the corresponding MTCA cleanup levels of 2 mg/kg and 250 mg/kg, respectively. The detected concentrations of these analytes in the sample are presumed to be related to a surface release from auto repair activities. Sample FL209-B4-0.5-1.5 was subsequently analyzed for TCLP lead; TCLP lead in the sample was less than the Dangerous Waste threshold of 5 milligrams per liter (mg/L).
- Mercury was detected in samples from borings FL209-B7 and FL209-B8 at depths of 5.5 to 6.5 feet bgs, at concentrations higher than the MTCA cleanup level of 2 mg/kg. These samples were collected from remedial excavation backfill.

Based on the results for arsenic and lead in 8 samples not including sample FL209-B4-0.5-1.5, residual impacts from the Tacoma Smelter Plume do not appear to be a concern for the subject property.

7.0 Conclusions and Recommendations

7.1 Phase II ESA Conclusions and Recommendations

The purpose of the Phase II ESA was to evaluate the potential for RECs or other potential sources of contamination to affect the subject property, and/or to impact soil that may be encountered during Sound Transit construction activities at the property.

7.1.1 Potential On-site Sources

Southgate Oil

As explained in the Phase I ESA report (GeoEngineers 2017b), nine USTs, ranging from 275 to 10,000 gallons and containing gasoline, diesel fuel and heating oil, were removed from the site in October and November 2000 and two heating oil USTs (20,000 and 25,000 gallons) were removed in February 2002. Prior reports (excerpts included in Appendix C) indicate that approximately 550 cubic yards of contaminated soil were removed from UST-related remedial excavations in 2000, and 748 tons of contaminated soil were removed from UST-related remedial excavations in 2002. Soil sampling of the base and sidewalls of the 2002 excavation indicated that soil with diesel-range hydrocarbons remained in the north sidewall of the excavation to a depth of 10 feet bgs, at the northern property line (Figure 2). The zone of contaminated soil left in place as of 2002 was reported to be approximately 25 feet long and 10 feet deep. A 10-millimeter plastic liner was reportedly placed in the excavation vertically along the northern excavation limits, extending approximately to 14 feet bgs.

Based on information available regarding the northern adjacent parcel (FL-207), diesel-range petroleum hydrocarbons were detected at a concentration greater than the MTCA Method A cleanup level in subsurface soil approximately 50 feet east of where the Southgate Oil residual petroleum-contaminated soil zone was noted in previous reports on file at Ecology. The northern adjacent parcel is approximately 3 to 5 feet lower in elevation at surface grade than FL-209; therefore, the contaminated soil sample reported at 8 feet bgs on FL-207 corresponds to a depth that is the same as the reported depth of the Southgate Oil residual petroleum-contaminated soil.

Geophysical Study and Current Site Conditions

A geophysical survey conducted in June 2017 did not identify any suspect USTs remaining on the subject property; however, the coverage of the survey was limited due to surface obstructions on the property. The geophysical survey revealed two large electromagnetic anomalies and one small GPR anomaly. One electromagnetic anomaly was in the vicinity of the storm drain at the west end of the property, south of the office, that is interpreted to most likely represent concrete with rebar or a subsurface feature such as an OWS. The GPR anomaly was southeast of the auto repair building and is interpreted to be shallow buried asphalt or fill

material. Nearby and just east of the GPR anomaly was the second electromagnetic anomaly that is interpreted to represent buried metal but was not indicative of a UST.

A site reconnaissance and an interview with the current property owner were conducted in June 2017. Visual observation of much of the ground surface on the property was not possible due to the presence of tires, wheels, old cars, car and truck parts, car-related debris, two DOT shipping containers and other items which obscured the ground surface (see representative site photographs in Appendix A). No evidence of a heating oil UST on the property was observed.

Auto repair activities have taken place on the subject property reportedly for decades and the original subject property auto repair building was originally on a septic system. A below-grade pit or trough approximately 4 feet wide and 15 to 20 feet in length, covered by wooden planks, was noted inside the auto repair garage. It is unclear if the pit is currently used, whether it is lined or unlined, whether it is filled. It is possible the pit functioned in the past as a dry well or sump.

Stained concrete was observed in the auto repair garage and outside (east) of the garage bay door. The surface staining appeared limited in extent.

Field Explorations, Sampling and Chemical Analytical Testing

Shallow soil at a depth of 0.5 to 1.5 feet bgs in boring FL209-B4 completed east of the garage bay door contained cadmium, lead, petroleum hydrocarbons, naphthalenes and carcinogenic PAHs at concentrations greater than MTCA cleanup levels. These contaminants are likely related to a past release (or releases) of automotive fluids in the general vicinity of the auto repair building.

Numerous Phase II ESA soil samples obtained from locations representative of the Southgate Oil backfilled UST excavations, UST excavation limits, and/or from UST excavation backfill soil had detectable diesel- and oil-range hydrocarbons and naphthalenes, in many cases at concentrations greater than MTCA Method A cleanup levels. These data indicate that the prior UST removals and remedial excavations did not completely remove petroleum-contaminated soil exceeding MTCA cleanup levels.

Prior reports noted that during UST removal and remedial excavation sampling in 2002, concentrations of petroleum hydrocarbons exceeding MTCA Method A cleanup levels remained in soil to a depth of at least 14 feet bgs along the northern property boundary. The deepest Phase II ESA soil sample that exceeded MTCA cleanup levels for petroleum was FL209-B-8 at 21 feet bgs; this boring was completed through the backfilled 2002 remedial excavation.

Residual petroleum-related constituents at concentrations greater than MTCA cleanup levels were identified in Phase II ESA soil samples from borings FL209-B3, FL209-B4, FL209-B5 and FL209-B7 which were located at the edges of the previous UST and remedial excavations and outside the lateral limits of the previous remedial excavations; petroleum-contaminated soil in

these locations extended to a maximum depth of 14 feet bgs.

Mercury was detected in samples from borings FL209-B7 and FL209-B8 at depths of 5.5 to 6.5 feet bgs at concentrations of 2.5 mg/kg and 2.8 mg/kg, greater than the MTCA cleanup level of 2 mg/kg. These samples were collected from soil representative of remedial excavation backfill. Of the 20 samples tested for mercury, mercury was detected in five of the samples, including the two listed above, and the detected concentrations in the five samples were at least four times higher than the laboratory detection limits. The source of mercury in these five samples is unknown and mercury is not a typical contaminant for petroleum UST sites. The source of mercury may be related to uncontrolled fill placed in the 2000/2002 UST remedial excavations as all the samples with mercury detected were from remedial excavation backfill (FL209-B5-6-6.5, FL209-B6-10-11, FL209-B7-5.5-6.5, FL209-B7-8.0-9.0 and FL209-B8-6-6.5).

The chlorinated VOC PCE was detected in one soil sample (FL209-B12-3.5-4.0) at a concentration of 0.0026 mg/kg, less than the MTCA cleanup level of 0.05 mg/kg and approximately twice the laboratory detection limit. FL209-B12 is located in the eastern portion of the property, near a former fueling island. The PCE detected in this sample appears to be related to an unknown localized on-site source, as opposed to the off-site dry cleaner, based on the lack of chlorinated compounds in 18 other soil samples obtained from the remaining eleven Phase II ESA borings on the subject property.

MTCA Reporting Requirements

The chemical analytical results described above for FL209-B4 with detectable concentrations of contaminants of concern greater than MTCA cleanup levels, and for mercury in soil samples from borings FL209-B7 and FL209-B8 at concentrations greater than the MTCA cleanup level, indicate discovery of a reportable release that appears to be a different source than the past release reported to Ecology for fuel USTs at Southgate Oil.

It is the property owner/operator's responsibility to report the discovery of a release of hazardous substances that may pose a threat to human health and the environment in accordance with MTCA release reporting criteria in WAC 173-340-300, Site Discovery and Reporting. The MTCA reporting requirement is within ninety calendar days of discovery.

7.1.2 Tacoma Smelter Plume

Arsenic and lead were not detected in the samples tested (near-surface soil samples from 8 borings) at concentrations indicative of the areawide TSP impacts.

7.1.3 Potential Off-site Sources

In general, the results of the Phase II ESA explorations, sampling and chemical analysis suggest a low risk of significant impacts from off-site sources of contamination. As noted previously, the source of PCE in a soil sample from boring FL209-B12 was not identified but appears to more likely be related to an on-site isolated source than to an off-site dry cleaner or auto repair

source.

7.2 Sound Transit Acquisition and Future Construction Recommendations

Based on current design information for the FWLE project (HDR, provided in March 2018), Sound Transit plans to acquire all of FL-209 in fee (“full take”) and building impacts are anticipated. Sound Transit’s proposed construction and development includes a new roadway, sidewalks and new utilities in the western and central portions of the property, a stormwater detention vault oriented west to east along the entire length of the northern portion of the property, and elevated tracks at the extreme eastern margin of the subject property (Figure 3). Proposed construction and development activities by Sound Transit could change as project design is refined.

The findings of the Phase II ESA indicate that a remediation cost estimate for cleanup is necessary for FL-209 for Sound Transit’s acquisition because contaminants of concern were detected at concentrations greater than MTCA Method A cleanup levels in soil samples from seven of the 12 Phase II ESA boring locations (FL209-B3 through FL209-B8 and FL209-B11). According to Ecology files and information regarding the north-adjacent property, residual petroleum-contaminated subsurface soil extends off-property to the north.

The findings of the Phase II ESA indicate that a construction cost estimate will be necessary for FL-209 because the findings of the Phase II ESA indicate contaminated or impacted soil at 10 of the 12 Phase II ESA boring locations across the property (FL209-B3 through FL209-B9, FL209-B11 and FL209-B12), at depths likely to coincide with future Sound Transit construction excavation.

Future construction has the potential to encounter impacted or contaminated soil in widespread areas across the subject property. We recommend a soil screening and handling plan be prepared prior to construction activities that outlines soil segregation, handling, stockpiling, and end use/disposal with potential follow-up chemical analytical testing for impacted or suspect contaminated soil that may be encountered. At a minimum, Ecology’s “Guidance for Remediation of Petroleum-Contaminated Soil” should be used as a guidance document for soil handling end use options for petroleum-related soil impacts; however, considerations for exported soil to classify as a dangerous waste will need to be considered.

Based on the long site history as a fuel oil storage facility (Southgate Oil), the potential remains to encounter undocumented USTs.

The lateral and vertical extent of residual contaminated and impacted soil should be better defined in order to develop a cleanup plan and a contaminated/impacted soil handling plan for this property. Further assessment should include at a minimum: the source, nature and extent of the mercury detections in five of the Phase II ESA borings; the source, nature and extent of

the PCE detection in one of the Phase II ESA borings to evaluate whether soil with PCE would be a Dangerous Waste if excavated; and the pit in the auto repair garage. Therefore, after the property has been cleared and structures removed, we recommend completing supplemental environmental exploration and soil characterization, particularly in areas not accessible during Phase II ESA activities.

The table below summarizes the Phase II ESA findings relative to Sound Transit's proposed acquisition and future construction; the findings are grouped by on-site potential sources, off-site potential sources, and potential areawide sources.

Potential Sources of Contamination Identified Nearby	Potential Source Within Acquisition Area	Potential Source Within Construction Area	Impacted Soil Present	Contaminated Soil Present	Remedial Cost Estimate Necessary For Acquisition	Remedial Cost Estimate Necessary For Construction
On-Site: Current auto repair/wrecking, former Southgate Oil	Yes	Yes	Yes	Yes	Yes	Yes
Off-Site: North, south, east and western properties	No	No	No	No	No	No
Areawide: Tacoma Smelter Plume	Yes	Yes	No	No	No	No

8.0 Limitations and Guidelines for Use

These Limitations provide information to help you manage your risks with respect to the use of this report. Some clients, design professionals and contractors may not recognize that the geoscience practices (geotechnical engineering, geology and environmental science) are far less exact than other engineering and natural science disciplines. This lack of understanding can create unrealistic expectations that could lead to disappointments, claims and disputes. GeoEngineers includes these explanatory “limitations” provisions in our reports to help reduce such risks. Please confer with GeoEngineers if you are unclear how these “Limitations and Guidelines for Use” apply to your project or site.

This Phase II ESA has been prepared, in general accordance with the scope and limitations of the subcontract between HDR and GeoEngineers dated August 24, 2012, along with Amendments 1 through 12 and Agreement No. RTA/AE 044-12 between HDR and Sound Transit.

This report has been prepared for the exclusive use of Sound Transit and their agents. This report is not intended for use by others, and the information contained herein is not applicable to other properties. No other party may rely on the product of our services unless we agree in advance to such reliance in writing. This is to provide our firm with reasonable protection against open-ended liability claims by third parties with whom there would otherwise be no contractual limits to their actions. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

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

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

Please refer to the appendix titled “Report Limitations and Guidelines for Use” for additional information pertaining to use of this report.

9.0 References

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Table 1
Summary of Soil Chemical Analytical Results¹
Sound Transit - Federal Way Link Extension FL209
Kent, Washington

Boring Identification	FL209-B1		FL209-B2	FL209-B3			FL209-B4		FL209-B5							MTCA Method A/B Cleanup Level ¹⁴	Naturally Occurring Background Metals in Puget Sound Soils ¹⁸
Sample Identification ²	FL209-B1-4.5-5'	FL209-B1-9.5-10.5'	FL209-B2-1-2'	FL209-B3-1-2'	FL209-B3-10-11'	FL209-B3-15.5-16'	FL209-B4-0.5-1.5'	FL209-B4-5.5-6.5'	FL209-B5-1-2	FL209-B5-6-6.5	FL209-B5-8-9	FL209-B5-10.5-11.5	FL209-B5-13-14	FL209-B5-17.5-18.5	FL209-B5-22.5-23		
Sample Date	6/20/2017	6/20/2017	6/20/2017	6/20/2017	6/20/2017	6/20/2017	6/21/2017	6/21/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017		
Sample Start Depth (feet bgs)	4.5	9.5	1.0	1.0	10	15.5	0.5	5.5	1.0	6.0	8.0	10.5	13	17.5	22.5		
Sample End Depth (feet bgs)	5.0	10.5	2.0	2.0	11	16	1.5	6.5	2.0	6.5	9.0	11.5	14	18.5	23		
NWTPH-HCID ³ (mg/kg)																	
Gasoline-range hydrocarbons	22 U	22 U	23 U	--	--	--	--	--	--	--	--	--	--	--	--	30/100 ¹⁵	N/A
Diesel-range hydrocarbons	55 U	56 U	57 U	--	--	--	--	--	--	--	--	--	--	--	--	2,000	
Lube Oil-range Hydrocarbons	110 U	110 U	110 U	--	--	--	--	--	--	--	--	--	--	--	--	2,000	
NWTPH-Gx ⁴ (mg/kg)																	
Gasoline-range hydrocarbons	--	--	--	--	10 U	5.8 U	720 ¹⁹	5.5 U	6.3 U	4.9 U	--	--	25 U	5.5 U	5.9 U	30/100 ¹⁵	N/A
NWTPH-Dx ⁵ (mg/kg)																	
Diesel-range hydrocarbons	--	--	--	--	2,500	28 U	1,400	41	27 U	450	620	2,400	5,100	1,400	26 U	2,000	N/A
Lube Oil-range Hydrocarbons	--	--	--	--	240 U	55 U	1,600	57 U	53 U	540	250	55 U	270 U	60 U	53 U	2,000	
Metals ⁶ (mg/kg)																	
Arsenic	--	--	--	11 U	--	--	12	--	11 U	11 U	--	--	11 U	11 U	11 U	20	7
Barium	--	--	--	--	--	--	84	--	--	63	--	--	33	38	41	16,000	NE
Cadmium	--	--	--	--	--	--	14	0.57 U	--	0.56 U	--	--	0.55 U	0.54 U	0.53 U	2	1
Chromium	--	--	--	--	--	--	29	--	--	28	--	--	25	28	22	2,000 ¹⁶	48
Chromium, Hexavalent	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	19	NE
Lead	--	--	--	22	--	--	520	5.7 U	5.3 U	15	--	--	5.5 U	5.4 U	5.3 U	250	24
Mercury	--	--	--	--	--	--	0.26 U	--	--	1.5	--	--	0.27 U	0.27 U	0.26 U	2	0.07
Selenium	--	--	--	--	--	--	11 U	--	--	11 U	--	--	11 U	11 U	11 U	400	NE
Silver	--	--	--	--	--	--	1.1 U	--	--	1.1 U	--	--	1.1 U	1.1 U	1.1 U	400	NE
TCLP ⁷ (mg/L)																	
Lead	--	--	--	--	--	--	0.31	--	--	--	--	--	--	--	--	N/A	NE
BTEX ⁸ (mg/kg)																	
Benzene	--	--	--	--	--	--	--	--	0.020 U	--	--	--	--	--	--	0.03	N/A
Ethylbenzene	--	--	--	--	--	--	--	--	0.063 U	--	--	--	--	--	--	7	
Toluene	--	--	--	--	--	--	--	--	0.063 U	--	--	--	--	--	--	6	
Xylene, m-,p-	--	--	--	--	--	--	--	--	0.063 U	--	--	--	--	--	--	9	
Xylene, o-	--	--	--	--	--	--	--	--	0.063 U	--	--	--	--	--	--		
Total Xylenes ⁹	--	--	--	--	--	--	--	--	0.063 U	--	--	--	--	--	--		
VOCs ¹⁰ (mg/kg)																	
1,1,1,2-Tetrachloroethane	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	38.5	N/A
1,1,1-Trichloroethane	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	2	
1,1,2,2-Tetrachloroethane	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	5	
1,1,2-Trichloroethane	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	17.5	
1,1-Dichloroethane	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	175	
1,1-Dichloroethene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	4,000	
1,1-Dichloropropene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	NE	
1,2,3-Trichlorobenzene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	NE	
1,2,3-Trichloropropane	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	0.0333	
1,2,4-Trichlorobenzene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	34.5	
1,2,4-Trimethylbenzene	--	0.0010 U	--	--	0.048 U	0.0010 U	4.7	0.0010 U	--	0.00083 U	--	--	0.048 U	0.11	0.0013	NE	
1,2-Dibromo-3-Chloropropane	--	0.0050 U	--	--	0.24 U	0.0051 U	0.25 U	0.0050 U	--	0.0042 U	--	--	0.24 U	0.0044 U	0.0057 U	1.25	
1,2-Dibromoethane	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	0.005	
1,2-Dichlorobenzene (o-Dichlorobenzene)	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	7,200	
1,2-Dichloroethane	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	11	
1,2-Dichloropropane	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	27.8	
1,3,5-Trimethylbenzene	--	0.0010 U	--	--	0.048 U	0.0010 U	1.5	0.0010 U	--	0.00083 U	--	--	0.048 U	0.012	0.0011 U	800	
1,3-Dichlorobenzene (m-Dichlorobenzene)	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	NE	N/A
1,3-Dichloropropane	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	NE	
1,4-Dichlorobenzene (p-Dichlorobenzene)	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	185	
2,2-Dichloropropane	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	NE	
2-Butanone (MEK)	--	0.0050 U	--	--	0.24 U	0.0051 U	0.25 U	0.0050 U	--	0.0042 U	--	--	0.24 U	0.0044 U	0.0057 U	48,000	
2-Chloroethyl vinyl ether	--	0.0050 U	--	--	0.24 U	0.0051 U	0.25 U	0.0050 U	--	0.0042 U	--	--	0.24 U	0.0044 U	0.0057 U	NE	
2-Chlorotoluene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	1,600	
2-Hexanone	--	0.0050 U	--	--	0.24 U	0.0051 U	0.25 U	0.0050 U	--	0.0042 U	--	--	0.24 U	0.0044 U	0.0057 U	NE	
4-Chlorotoluene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	NE	
4-Methyl-2-Pentanone (Methyl isobutyl ketone)	--	0.0050 U	--	--	0.24 U	0.0051 U	0.25 U	0.0050 U	--	0.0042 U	--	--	0.24 U	0.0044 U	0.0057 U	6,400	
Acetone ¹¹	--	0.0050 U	--	--	0.24 U	0.0051 U	0.25 U	0.0050 U	--	0.027	--	--	0.48 U	0.031	0.011 U	72,000	

Boring Identification	FL209-B1		FL209-B2	FL209-B3			FL209-B4		FL209-B5							MTCA Method A/B Cleanup Level ¹⁴	Naturally Occurring Background Metals in Puget Sound Soils ¹⁸
Sample Identification ²	FL209-B1-4.5-5'	FL209-B1-9.5-10.5'	FL209-B2-1-2'	FL209-B3-1-2'	FL209-B3-10-11'	FL209-B3-15.5-16'	FL209-B4-0.5-1.5'	FL209-B4-5.5-6.5'	FL209-B5-1-2	FL209-B5-6-6.5	FL209-B5-8-9	FL209-B5-10.5-11.5	FL209-B5-13-14	FL209-B5-17.5-18.5	FL209-B5-22.5-23		
Sample Date	6/20/2017	6/20/2017	6/20/2017	6/20/2017	6/20/2017	6/20/2017	6/21/2017	6/21/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017		
Sample Start Depth (feet bgs)	4.5	9.5	1.0	1.0	10	15.5	0.5	5.5	1.0	6.0	8.0	10.5	13	17.5	22.5		
Sample End Depth (feet bgs)	5.0	10.5	2.0	2.0	11	16	1.5	6.5	2.0	6.5	9.0	11.5	14	18.5	23		
Benzene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	0.03	N/A
Bromobenzene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	NE	
Bromochloromethane	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	NE	
Bromodichloromethane	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	16.1	
Bromoform (Tribromomethane)	--	0.0050 U	--	--	0.24 U	0.0051 U	0.25 U	0.0050 U	--	0.0042 U	--	--	0.24 U	0.0044 U	0.0057 U	127	
Bromomethane	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	112	
Carbon Disulfide	--	0.0022 U	--	--	0.11 U	0.0023 U	0.11 U	0.0017 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	8,000	
Carbon Tetrachloride	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	14.3	
Chlorobenzene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	1,600	
Chloroethane	--	0.0050 U	--	--	0.24 U	0.0051 U	0.25 U	0.0050 U	--	0.0042 U	--	--	0.24 U	0.0044 U	0.0057 U	NE	
Chloroform	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	32.3	
Chloromethane	--	0.0050 U	--	--	0.24 U	0.0051 U	0.25 U	0.0050 U	--	0.0042 U	--	--	0.24 U	0.0044 U	0.0057 U	NE	
cis-1,2-Dichloroethene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	160	
cis-1,3-Dichloropropene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	NE	
Dibromochloromethane	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	11.9	
Dibromomethane	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	800	
Dichlorodifluoromethane (CFC-12)	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	16,000	
Ethylbenzene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.38	0.0010 U	--	0.00083 U	--	--	0.048 U	0.0024	0.0011 U	6	
Hexachlorobutadiene	--	0.0050 U	--	--	0.24 U	0.0051 U	0.25 U	0.0050 U	--	0.0042 U	--	--	0.24 U	0.0044 U	0.0057 U	12.8	
Isopropylbenzene (Cumene)	--	0.0010 U	--	--	0.048 U	0.0010 U	0.30	0.0010 U	--	0.00083 U	--	--	0.22	0.055	0.0011 U	8,000	
Methyl Iodide (Iodomethane)	--	0.0082 U	--	--	0.39 U	0.0084 U	0.39 U	0.0064 U	--	0.0042 U	--	--	0.24 U	0.0044 U	0.0057 U	NE	
Methyl t-butyl ether	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	0.1	
Methylene Chloride	--	0.010 U	--	--	0.48 U	0.010 U	0.50 U	0.010 U	--	0.0083 U	--	--	0.48 U	0.0089 U	0.011 U	0.02	
Naphthalene	--	0.0010 U	--	--	0.048 U	0.0010 U	6.8	0.0010 U	--	0.00083 U	--	--	0.048 U	0.022	0.0026	5	
n-Butylbenzene	--	0.0010 U	--	--	0.065	0.0010 U	1.0	0.0010 U	--	0.0011	--	--	1.2	0.081	0.0011 U	4,000	
n-Propylbenzene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.48	0.0010 U	--	0.00083 U	--	--	0.64	0.12	0.0011 U	8,000	
p-Isopropyltoluene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.80	0.0010 U	--	0.00083 U	--	--	0.048 U	0.043	0.0011 U	NE	
Sec-Butylbenzene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.29	0.0010 U	--	0.00083 U	--	--	0.50	0.067	0.0011 U	8,000	
Styrene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	16,000	
Tert-Butylbenzene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.0034	0.0011 U	8,000	
Tetrachloroethene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	0.05	
Toluene	--	0.0050 U	--	--	0.24 U	0.0051 U	0.25 U	0.0050 U	--	0.0042 U	--	--	0.24 U	0.0044 U	0.0057 U	7	
Trans-1,2-Dichloroethene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	1,600	
Trans-1,3-Dichloropropene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	NE	
Trichloroethene	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	0.03	
Trichlorofluoromethane (CFC-11)	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	24,000	
Vinyl Acetate	--	0.0071 U	--	--	0.34 U	0.0073 U	0.35 U	0.0050 U	--	0.0042 U	--	--	0.24 U	0.0044 U	0.0057 U	80,000	
Vinyl Chloride	--	0.0010 U	--	--	0.048 U	0.0010 U	0.050 U	0.0010 U	--	0.00083 U	--	--	0.048 U	0.00089 U	0.0011 U	240	
Xylene, m-,p-	--	0.0050 U	--	--	0.24 U	0.0051 U	1.7	0.0020 U	--	0.0017 U	--	--	0.096 U	0.0060	0.0023 U	9	
Xylene, o-	--	0.0010 U	--	--	0.048 U	0.0010 U	0.94	0.0010 U	--	0.00083 U	--	--	0.048 U	0.0015	0.0011 U		
Total Xylenes ⁹	--	0.0050 U	--	--	0.24 U	0.0051 U	2.64	0.0020 U	--	0.0017 U	--	--	0.096 U	0.0075	0.0023 U		
PAHs ¹² (mg/kg)																	
1-Methylnaphthalene	--	--	--	--	--	--	19	0.0076 U	--	0.015	0.84	7.4	23	1.3	0.0070 U	5	N/A
2-Methylnaphthalene	--	--	--	--	--	--	26	0.0076 U	--	0.040	0.68	7.9	30	1.1	0.0070 U		
Naphthalene	--	--	--	--	--	--	5.8	0.0076 U	--	0.015	0.082	0.36	0.76	0.092	0.0070 U		
Total Naphthalenes ¹³	--	--	--	--	--	--	50.8	0.0076 U	--	0.070	1.602	15.66	53.76	2.492	0.0070 U		
Acenaphthene	--	--	--	--	--	--	3.0	0.0076 U	--	0.0074 U	0.12	0.80	2.0	0.18	0.0070 U	4,800	
Acenaphthylene	--	--	--	--	--	--	0.83	0.0076 U	--	0.0074 U	0.036	0.42	0.54	0.044	0.0070 U	NE	
Anthracene	--	--	--	--	--	--	1.9	0.0076 U	--	0.014	0.052	0.18	0.60	0.064	0.0070 U	24,000	
Benzo(a)anthracene	--	--	--	--	--	--	1.8	0.0076 U	--	0.014	0.017	0.0073 U	0.018	0.0072 U	0.0070 U	See cPAHs	
Benzo(a)pyrene	--	--	--	--	--	--	0.37	0.0076 U	--	0.017	0.014	0.0073 U	0.0073 U	0.0072 U	0.0070 U	See cPAHs	
Benzo(b)fluoranthene	--	--	--	--	--	--	0.26	0.0076 U	--	0.018	0.014	0.0073 U	0.0073 U	0.0072 U	0.0070 U	See cPAHs	
Benzo(g,h,i)perylene	--	--	--	--	--	--	0.35	0.0076 U	--	0.020	0.013	0.0073 U	0.0073 U	0.0072 U	0.0070 U	NE	
Benzo(j,k)fluoranthene	--	--	--	--	--	--	0.14 U	0.0076 U	--	0.0074 U	0.0075 U	0.0073 U	0.0073 U	0.0072 U	0.0070 U	See cPAHs	
Chrysene	--	--	--	--	--	--	3.0	0.0076 U	--	0.032	0.039	0.023	0.040	0.0072 U	0.0070 U	See cPAHs	
Dibenzo(a,h)anthracene	--	--	--	--	--	--	0.14 U	0.0076 U	--	0.0074 U	0.0075 U	0.0073 U	0.0073 U	0.0072 U	0.0070 U	See cPAHs	
Fluoranthene	--	--	--	--	--	--	0.89	0.0076 U	--	0.017	0.023	0.025	0.15 U	0.0072 U	0.0070 U	3,200	
Fluorene	--	--	--	--	--	--	5.6	0.0076 U	--	0.012	0.23	2.2	3.4	0.36	0.0070 U	3,200	

Table 1
Summary of Soil Chemical Analytical Results¹
Sound Transit - Federal Way Link Extension FL209
Kent, Washington

Boring Identification		FL209-B6				FL209-B7						FL209-B8						MTCA Method A/B Cleanup Level ¹⁴	Naturally Occurring Background Metals in Puget Sound Soils ¹⁸	
Sample Identification ²	FL209-B6-0.5-1.5'	FL209-B6-10-11'	FL209-B6-20.5-21'	FL209-B6-27.5-28'	FL209-B7-1-2	FL209-B7-5.5-6.5	FL209-B7-8-9	FL209-B7-10.5-11.5	FL209-B7-12.5-13.5	FL209-B7-15-16	FL209-B7-20-20.5	FL209-B8-1-2	FL209-B8-6-6.5	FL209-B8-8-9	FL209-B8-10-11	FL209-B8-15-16	FL209-B8-20-21			
Sample Date	6/21/2017	6/21/2017	6/21/2017	6/21/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017			
Sample Start Depth (feet bgs)	0.5	10	20.5	27.5	1.0	5.5	8.0	10.5	12.5	15	20	1.0	6.0	8.0	10	15	20			
Sample End Depth (feet bgs)	1.5	11	21	28	2.0	6.5	9.0	11.5	13.5	16	20.5	2.0	6.5	9.0	11	16	21			
NWTPH-HCID ³ (mg/kg)																				
Gasoline-range hydrocarbons		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30/100 ¹⁵	N/A	
Diesel-range hydrocarbons		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2,000		
Lube Oil-range Hydrocarbons		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2,000		
NWTPH-Gx ⁴ (mg/kg)																				
Gasoline-range hydrocarbons		--	9.6 U	12 U	5.4 U	5.6 U	12 U	--	26 U	9.7 U	11 U	--	5.3 U	9.7 U	--	10 U	24 U	28 U	30/100 ¹⁵	N/A
NWTPH-Dx ⁵ (mg/kg)																				
Diesel-range hydrocarbons		--	1,500	370	27 U	26 U	1,400	960	5,900	69	180	27 U	27 U	890	--	1,700	2,800	9,300	2,000	N/A
Lube Oil-range Hydrocarbons		--	610	54 U	55 U	53 U	730	380	1,200	54 U	82	55 U	54 U	370	--	54 U	55 U	270 U	2,000	
Metals ⁶ (mg/kg)																				
Arsenic		11 U	11 U	11 U	--	11 U	11 U	--	11 U	11 U	--	--	--	11 U	--	11 U	11 U	11 U	20	7
Barium		--	55	36	--	--	65	--	60	32	--	--	--	59	--	31	39	52	16,000	NE
Cadmium		--	0.57 U	0.54 U	--	--	0.56 U	--	0.56 U	0.54 U	--	--	--	0.57 U	--	0.54 U	0.55 U	0.55 U	2	1
Chromium		--	27	30	--	--	32	--	24	26	--	--	--	25	--	21	18	24	2,000 ¹⁶	48
Chromium, Hexavalent		--	--	1.1 U	--	--	1.1 U	--	--	--	--	--	--	--	--	--	--	--	19	NE
Lead		5.4 U	10	5.4 U	--	5.3 U	15	--	5.6 U	5.4 U	--	--	--	12	--	5.4 U	5.5 U	5.5 U	250	24
Mercury		--	1.5	0.27 U	--	0.26 U	2.5	1.4	0.28 U	0.27 U	--	--	0.27 U	2.8	0.27 U	0.27 U	0.27 U	0.27 U	2	0.07
Selenium		--	11 U	11 U	--	--	11 U	--	11 U	11 U	--	--	--	11 U	--	11 U	11 U	11 U	400	NE
Silver		--	1.1 U	1.1 U	--	--	1.1 U	--	1.1 U	1.1 U	--	--	--	1.1 U	--	1.1 U	1.1 U	1.1 U	400	NE
TCLP ⁷ (mg/L)																				
Lead		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	N/A	NE
BTEX ⁸ (mg/kg)																				
Benzene		--	--	--	--	0.020 U	0.024 U	--	--	0.020 U	0.022 U	--	0.020 U	0.020 U	--	0.020 U	--	--	0.03	N/A
Ethylbenzene		--	--	--	--	0.056 U	0.12 U	--	--	0.097 U	0.11 U	--	0.053 U	0.097 U	--	0.11	--	--	7	
Toluene		--	--	--	--	0.056 U	0.12 U	--	--	0.097 U	0.11 U	--	0.053 U	0.097 U	--	0.10 U	--	--	6	
Xylene, m-,p-		--	--	--	--	0.056 U	0.12 U	--	--	0.097 U	0.11 U	--	0.053 U	0.097 U	--	0.11	--	--	9	
Xylene, o-		--	--	--	--	0.056 U	0.12 U	--	--	0.097 U	0.11 U	--	0.053 U	0.097 U	--	0.10 U	--	--		
Total Xylenes ⁹		--	--	--	--	0.056 U	0.12 U	--	--	0.097 U	0.11 U	--	0.053 U	0.097 U	--	0.11	--	--		
VOCs ¹⁰ (mg/kg)																				
1,1,1,2-Tetrachloroethane		--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	38.5	N/A
1,1,1-Trichloroethane		--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	2	
1,1,2,2-Tetrachloroethane		--	0.055 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	5	
1,1,2-Trichloroethane		--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	17.5	
1,1-Dichloroethane		--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	175	
1,1-Dichloroethene		--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	4,000	
1,1-Dichloropropene		--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	NE	
1,2,3-Trichlorobenzene		--	0.055 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	NE	
1,2,3-Trichloropropane		--	0.055 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	0.0333	
1,2,4-Trichlorobenzene		--	0.055 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	34.5	
1,2,4-Trimethylbenzene		--	0.055 U	0.00086 U	0.0012 U	--	--	--	0.17	--	0.00095 U	--	--	--	--	--	0.071	5.1	NE	
1,2-Dibromo-3-Chloropropane		--	0.28 U	0.0043 U	0.0060 U	--	--	--	0.25 U	--	0.0047 U	--	--	--	--	--	0.25 U	0.27 U	1.25	
1,2-Dibromoethane		--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	0.005	
1,2-Dichlorobenzene (o-Dichlorobenzene)		--	0.055 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	7,200	
1,2-Dichloroethane		--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	11	
1,2-Dichloropropane		--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	27.8	
1,3,5-Trimethylbenzene		--	0.055 U	0.00086 U	0.0012 U	--	--	--	0.098	--	0.00095 U	--	--	--	--	--	0.57	0.88	800	
1,3-Dichlorobenzene (m-Dichlorobenzene)		--	0.055 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	NE	N/A
1,3-Dichloropropane		--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	NE	
1,4-Dichlorobenzene (p-Dichlorobenzene)		--	0.055 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	185	
2,2-Dichloropropane		--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	NE	
2-Butanone (MEK)		--	0.0042 U	0.0043 U	0.0060 U	--	--	--	0.25 U	--	0.0047 U	--	--	--	--	--	0.25 U	0.27 U	48,000	
2-Chloroethyl vinyl ether		--	0.0042 U	0.0043 U	0.0060 U	--	--	--	0.25 U	--	0.0047 U	--	--	--	--	--	0.25 U	0.27 U	NE	
2-Chlorotoluene		--	0.055 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	1,600	
2-Hexanone		--	0.0042 U	0.0043 U	0.0060 U	--	--	--	0.25 U	--	0.0047 U	--	--	--	--	--	3.0	0.27 U	NE	
4-Chlorotoluene		--	0.055 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	NE	
4-Methyl-2-Pentanone (Methyl isobutyl ketone)		--	0.0042 U	0.0043 U	0.0060 U	--	--	--	0.25 U	--	0.0047 U	--	--	--	--	--	0.25 U	0.27 U	6,400	
Acetone ¹¹		--	0.058	0.022	0.0060 U	--	--	--	0.49 U	--	0.035	--	--	--	--	--	0.51 U	0.53 U	72,000	

Boring Identification	FL209-B6				FL209-B7								FL209-B8							MTCA Method A/B Cleanup Level ¹⁴	Naturally Occurring Background Metals in Puget Sound Soils ¹⁸
Sample Identification ²	FL209-B6-0.5-1.5'	FL209-B6-10-11'	FL209-B6-20.5-21'	FL209-B6-27.5-28'	FL209-B7-1-2	FL209-B7-5.5-6.5	FL209-B7-8-9	FL209-B7-10.5-11.5	FL209-B7-12.5-13.5	FL209-B7-15-16	FL209-B7-20-20.5	FL209-B8-1-2	FL209-B8-6-6.5	FL209-B8-8-9	FL209-B8-10-11	FL209-B8-15-16	FL209-B8-20-21				
Sample Date	6/21/2017	6/21/2017	6/21/2017	6/21/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017				
Sample Start Depth (feet bgs)	0.5	10	20.5	27.5	1.0	5.5	8.0	10.5	12.5	15	20	1.0	6.0	8.0	10	15	20				
Sample End Depth (feet bgs)	1.5	11	21	28	2.0	6.5	9.0	11.5	13.5	16	20.5	2.0	6.5	9.0	11	16	21				
Benzene	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	0.03	N/A		
Bromobenzene	--	0.055 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	NE			
Bromochloromethane	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	NE			
Bromodichloromethane	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	16.1			
Bromoform (Tribromomethane)	--	0.0042 U	0.0043 U	0.0060 U	--	--	--	0.25 U	--	0.0047 U	--	--	--	--	--	0.25 U	0.27 U	127			
Bromomethane	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	112			
Carbon Disulfide	--	0.0018 U	0.0018 U	0.0020 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	8,000			
Carbon Tetrachloride	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	14.3			
Chlorobenzene	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	1,600			
Chloroethane	--	0.0042 U	0.0043 U	0.0060 U	--	--	--	0.25 U	--	0.0047 U	--	--	--	--	--	0.25 U	0.27 U	NE			
Chloroform	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	32.3			
Chloromethane	--	0.0042 U	0.0043 U	0.0060 U	--	--	--	0.25 U	--	0.0047 U	--	--	--	--	--	0.25 U	0.27 U	NE			
cis-1,2-Dichloroethene	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	160			
cis-1,3-Dichloropropene	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	NE			
Dibromochloromethane	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	11.9			
Dibromomethane	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	800			
Dichlorodifluoromethane (CFC-12)	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.0016 U	--	--	--	--	--	0.051 U	0.053 U	16,000			
Ethylbenzene	--	0.0015	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.076	0.89	6			
Hexachlorobutadiene	--	0.28 U	0.0043 U	0.0060 U	--	--	--	0.25 U	--	0.0047 U	--	--	--	--	--	0.25 U	0.27 U	12.8			
Isopropylbenzene (Cumene)	--	0.013	0.00086 U	0.0012 U	--	--	--	0.091	--	0.00095 U	--	--	--	--	--	0.25	0.92	8,000			
Methyl Iodide (Iodomethane)	--	0.0066 U	0.0067 U	0.0077 U	--	--	--	0.25 U	--	0.0047 U	--	--	--	--	--	0.25 U	0.27 U	NE			
Methyl t-butyl ether	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	0.1			
Methylene Chloride	--	0.0084 U	0.0086 U	0.012 U	--	--	--	0.49 U	--	0.0095 U	--	--	--	--	--	0.51 U	0.53 U	0.02			
Naphthalene	--	0.055 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	2.0	5			
n-Butylbenzene	--	0.12	0.00086 U	0.0012 U	--	--	--	0.36	--	0.00095 U	--	--	--	--	--	1.2	2.1	4,000			
n-Propylbenzene	--	0.055 U	0.00086 U	0.0012 U	--	--	--	0.17	--	0.00095 U	--	--	--	--	--	0.34	1.5	8,000			
p-Isopropyltoluene	--	0.064	0.00086 U	0.0012 U	--	--	--	0.16	--	0.00095 U	--	--	--	--	--	0.51	0.86	NE			
Sec-Butylbenzene	--	0.055	0.00086 U	0.0012 U	--	--	--	0.22	--	0.00095 U	--	--	--	--	--	1.2	1.6	8,000			
Styrene	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	16,000			
Tert-Butylbenzene	--	0.055 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.058	0.053 U	8,000			
Tetrachloroethene	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	0.05			
Toluene	--	0.0042 U	0.0043 U	0.0060 U	--	--	--	0.25 U	--	0.0047 U	--	--	--	--	--	0.25 U	0.27 U	7			
Trans-1,2-Dichloroethene	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	1,600			
Trans-1,3-Dichloropropene	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	NE			
Trichloroethene	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	0.03			
Trichlorofluoromethane (CFC-11)	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	24,000			
Vinyl Acetate	--	0.0059 U	0.0060 U	0.0060 U	--	--	--	0.25 U	--	0.0047 U	--	--	--	--	--	0.25 U	0.27 U	80,000			
Vinyl Chloride	--	0.00084 U	0.00086 U	0.0012 U	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U	240			
Xylene, m-,p-	--	0.0039	0.0026	0.0026	--	--	--	0.098 U	--	0.0019 U	--	--	--	--	--	0.10 U	0.47	9			
Xylene, o-	--	0.0022	0.0020	0.0019	--	--	--	0.049 U	--	0.00095 U	--	--	--	--	--	0.051 U	0.053 U				
Total Xylenes ⁹	--	0.0061	0.0046	0.0045	--	--	--	0.098 U	--	0.0019 U	--	--	--	--	--	0.10 U	0.47				
PAHs ¹² (mg/kg)																					
1-Methylnaphthalene	--	0.34	0.077	--	--	--	--	4.9	0.11	0.12	--	--	0.031	--	0.28	1.3	9.6	5	N/A		
2-Methylnaphthalene	--	0.24	0.051	--	--	--	--	2.9	0.089	0.092	--	--	0.085	--	0.022	1.9	17				
Naphthalene	--	0.033	0.019	--	--	--	--	0.40	0.0072 U	0.0081	--	--	0.037	--	0.18	0.33	4.9				
Total Naphthalenes ¹³	--	0.613	0.147	--	--	--	--	8.2	0.199	0.2201	--	--	0.153	--	0.482	3.53	31.5				
Acenaphthene	--	0.054	0.039	--	--	--	--	0.86	0.015	0.022	--	--	0.0088	--	0.25	0.35	2.0	4,800			
Acenaphthylene	--	0.016	0.0078	--	--	--	--	0.29	0.0072 U	0.0071 U	--	--	0.0075 U	--	0.094	0.063	0.29	NE			
Anthracene	--	0.013	0.011	--	--	--	--	0.26	0.0083	0.012	--	--	0.017	--	0.090	0.077	0.52	24,000			
Benzo(a)anthracene	--	0.0076 U	0.0072 U	--	--	--	--	0.12	0.0072 U	0.0071 U	--	--	0.042	--	0.0072 U	0.0073 U	0.015 U	See cPAHs			
Benzo(a)pyrene	--	0.0076 U	0.0072 U	--	--	--	--	0.027	0.0072 U	0.0071 U	--	--	0.040	--	0.0072 U	0.0073 U	0.0073 U	See cPAHs			
Benzo(b)fluoranthene	--	0.0076 U	0.0072 U	--	--	--	--	0.025	0.0072 U	0.0071 U	--	--	0.048	--	0.0072 U	0.0073 U	0.0073 U	See cPAHs			
Benzo(g,h,i)perylene	--	0.0076 U	0.0072 U	--	--	--	--	0.													

																		MTCA Method A/B Cleanup Level ¹⁴	Naturally Occurring Background Metals in Puget Sound Soils ¹⁸
Boring Identification	FL209-B6				FL209-B7							FL209-B8							
Sample Identification ²	FL209-B6-0.5-1.5'	FL209-B6-10-11'	FL209-B6-20.5-21'	FL209-B6-27.5-28'	FL209-B7-1-2	FL209-B7-5.5-6.5	FL209-B7-8-9	FL209-B7-10.5-11.5	FL209-B7-12.5-13.5	FL209-B7-15-16	FL209-B7-20-20.5	FL209-B8-1-2	FL209-B8-6-6.5	FL209-B8-8-9	FL209-B8-10-11	FL209-B8-15-16	FL209-B8-20-21		
Sample Date	6/21/2017	6/21/2017	6/21/2017	6/21/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017	7/6/2017		
Sample Start Depth (feet bgs)	0.5	10	20.5	27.5	1.0	5.5	8.0	10.5	12.5	15	20	1.0	6.0	8.0	10	15	20		
Sample End Depth (feet bgs)	1.5	11	21	28	2.0	6.5	9.0	11.5	13.5	16	20.5	2.0	6.5	9.0	11	16	21		
Indeno(1,2,3-c,d)pyrene	--	0.0076 U	0.0072 U	--	--	--	--	0.011	0.0072 U	0.0071 U	--	--	0.029	--	0.0072 U	0.0073 U	0.0073 U	See cPAHs	N/A
Phenanthrene	--	0.20	0.13	--	--	--	--	2.2	0.070	0.098	--	--	0.059	--	0.79	0.67	3.9	NE	
Pyrene	--	0.031	0.011	--	--	--	--	0.35	0.0081	0.012	--	--	0.069	--	0.069	0.066	0.48	2,400	
cPAHs (benzo(a)pyrene toxicity equivalent concn)	--	0.0058	0.0054 U	--	--	--	--	0.0453	0.0054 U	0.0054	--	--	0.0544	--	0.0054 U	0.0055 U	0.0059 U	0.1	

Notes:

- ¹ Chemical analysis performed by OnSite Environmental, Inc., of Redmond, Washington.
- ² Sample ID = Parcel ID - boring number - depth of sample [feet bgs]. FL209-B1-4.5-5' = Boring 1 from Parcel FL209, collected from a depth of 4.5 to 5 feet bgs.
- ³ Petroleum Hydrocarbon Identification by Northwest Method NWTPH-HCID.
- ⁴ Gasoline-range petroleum hydrocarbons by Northwest Method NWTPH-Gx.
- ⁵ Diesel- and lube oil-range petroleum hydrocarbons by Northwest Method NWTPH-Dx.
- ⁶ Resource Conservation Recovery Act (RCRA) metals analyzed by EPA 6000/7000 series method.
- ⁷ Toxicity Characteristic Leaching Procedure (TCLP) metals analyzed by EPA Method 1311.
- ⁸ Benzene, toluene, ethylbenzene, xylenes (BTEX) by United States Environmental Protection Agency (EPA) Method 8021B.
- ⁹ Total xylenes consists of m,p- and o- xylenes. The higher detection limit is used for non-detects.
- ¹⁰ Volatile organic compounds (VOCs) analyzed by United States Environmental Protection Agency (EPA) Method 8260C.
- ¹¹ Acetone is a common laboratory contaminant.
- ¹² Polycyclic aromatic hydrocarbons (PAHs) and carcinogenic PAHs (cPAHs) analyzed by EPA Method 8270D/SIM.
- ¹³ Total naphthalenes consists of 1-methylnaphthalene, 2-methylnaphthalene and naphthalene.
- ¹⁴ MTCA Method B cleanup level used when Method A cleanup level has not been established.
- ¹⁵ Model Toxics Control Act (MTCA) Method A cleanup level for gasoline is 30 mg/kg if benzene is detected or if the sum of toluene, ethylbenzene and xylenes are greater than or equal to 1% of the total gasoline detection.
- ¹⁶ MTCA Method A cleanup level for Trivalent Chromium.
- ¹⁷ Results for cPAHs are shown as the sum of the benzo(a)pyrene toxicity equivalent concentrations, calculated by multiplying each individual cPAH concentration by its corresponding TEF. In this sum, non-detects are represented as ½ of the corresponding analyte reporting limit multiplied by the TEF.
- ¹⁸ 90th Percentile for natural background soil metals concentrations in Puget Sound region, Department of Ecology, publication #94-115, dated October 1994.
- ¹⁹ Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

"--" = not tested

mg/kg = milligrams per kilogram

MTCA = Model Toxics Control Act

U = Analyte was not detected at or greater than the listed reporting limit.

TEF = Toxicity Equivalency Factor as defined in WAC 173-340-900 Table 708-2.

Bold font type indicates that the analyte was detected at a concentration greater than the respective laboratory reporting limit.

Grey shading indicates that the detected result exceeds the specified MTCA Cleanup Level.

Table 1
Summary of Soil Chemical Analytical Results¹
Sound Transit - Federal Way Link Extension FL209
Kent, Washington

Boring Identification	FL209-B8 (continued)			FL209-B9		FL209-B10				FL209-B11			FL209-B12			MTCA Method A/B Cleanup Level ¹⁴	Naturally Occurring Background Metals in Puget Sound Soils ¹⁸
Sample Identification ²	FL209-B8-22.5-23	FL209-B8-27.5-28	FL209-B8-30-30.5	FL209-B9-1-2	FL209-B9-5.5-6.5	FL209-B10-1-2	FL209-B10-5.5-6.5	FL209-B10-10-10.5	FL209-B10-25-26	FL209-B11-1-2	FL209-B11-3-4	FL209-B11-6-6.5	FL209-B12-1-2	FL209-B12-3.5-4	FL209-B12-5.5-6.5		
Sample Date	7/6/2017	7/7/2017	7/7/2017	7/7/2017	7/7/2017	7/20/2017	7/20/2017	7/20/2017	7/20/2017	7/7/2017	7/7/2017	7/7/2017	7/20/2017	7/20/2017	7/20/2017		
Sample Start Depth (feet bgs)	22.5	27.5	30	1.0	5.5	1.0	5.5	10	25	1.0	3.0	6.0	1.0	3.5	5.5		
Sample End Depth (feet bgs)	23	28	30.5	2.0	6.5	2.0	6.5	10.5	26	2.0	4.0	6.5	2.0	4.0	6.5		
NWTPH-HCID ³ (mg/kg)																	
Gasoline-range hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	30/100 ¹⁵	N/A
Diesel-range hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2,000	
Lube Oil-range Hydrocarbons	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2,000	
NWTPH-Gx ⁴ (mg/kg)																	
Gasoline-range hydrocarbons	8.9 U	10 U	4.7 U	5.0 U	6.0 U	--	5.0 U	5.4 U	4.8 U	12 U	13 U	4.7 U	10 U	12 U	10 U	30/100 ¹⁵	N/A
NWTPH-Dx ⁵ (mg/kg)																	
Diesel-range hydrocarbons	1,400	170	27 U	27 U	32 U	--	28 U	27 U	28 U	550	8,400	28 U	320	1,200	27 U	2,000	N/A
Lube Oil-range Hydrocarbons	170 U	75 U	54 U	96	63 U	--	55 U	54 U	55 U	350	540 U	56 U	50 U	330	54 U	2,000	
Metals ⁶ (mg/kg)																	
Arsenic	--	--	--	11 U	--	5.3 U	--	--	--	5.4 U	13 U	--	5.3 U	--	--	20	7
Barium	--	--	--	--	--	--	--	--	--	--	100	--	69	--	--	16,000	NE
Cadmium	--	--	--	--	--	--	--	--	--	--	0.63 U	--	0.53 U	--	--	2	1
Chromium	--	--	--	--	--	--	--	--	--	--	53	--	35	--	--	2,000 ¹⁶	48
Chromium, Hexavalent	--	--	--	--	--	--	--	--	--	--	1.3 U	--	--	--	--	19	NE
Lead	--	--	--	5.4 U	--	9.2	--	--	--	5.8	6.3 U	--	5.3 U	--	--	250	24
Mercury	--	--	--	--	--	--	--	--	--	--	0.31 U	--	0.27 U	--	--	2	0.07
Selenium	--	--	--	--	--	--	--	--	--	--	13 U	--	11 U	--	--	400	NE
Silver	--	--	--	--	--	--	--	--	--	--	1.3 U	--	1.1 U	--	--	400	NE
TCLP ⁷ (mg/L)																	
Lead	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	N/A	NE
BTEX ⁸ (mg/kg)																	
Benzene	0.020 U	0.021 U	0.020 U	0.020 U	0.020 U	--	--	--	--	0.024 U	--	0.020 U	--	--	--	0.03	N/A
Ethylbenzene	0.089 U	0.10 U	0.047 U	0.050 U	0.060 U	--	--	--	--	0.12 U	--	0.047 U	--	--	--	7	
Toluene	0.089 U	0.10 U	0.047 U	0.050 U	0.060 U	--	--	--	--	0.12 U	--	0.047 U	--	--	--	6	
Xylene, m-,p-	0.089 U	0.10 U	0.047 U	0.050 U	0.060 U	--	--	--	--	0.12 U	--	0.047 U	--	--	--	9	
Xylene, o-	0.089 U	0.10 U	0.047 U	0.050 U	0.060 U	--	--	--	--	0.12 U	--	0.047 U	--	--	--		
Total Xylenes ⁹	0.089 U	0.10 U	0.047 U	0.050 U	0.060 U	--	--	--	--	0.12 U	--	0.047 U	--	--	--		
VOCs ¹⁰ (mg/kg)																	
1,1,1,2-Tetrachloroethane	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	38.5	N/A
1,1,1-Trichloroethane	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	2	
1,1,2,2-Tetrachloroethane	--	0.0013 U	--	0.0014 U	--	--	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.075 U	0.0010 U	0.0014 U	0.0014 U	0.0012 U	5	
1,1,2-Trichloroethane	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	17.5	
1,1-Dichloroethane	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	175	
1,1-Dichloroethene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	4,000	
1,1-Dichloropropene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	NE	
1,2,3-Trichlorobenzene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	NE	
1,2,3-Trichloropropane	--	0.0013 U	--	0.0014 U	--	--	0.0012 U	0.0012 U	0.0011 U	0.0012 U	0.075 U	0.0010 U	0.0014 U	0.0014 U	0.0012 U	0.0333	
1,2,4-Trichlorobenzene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	34.5	
1,2,4-Trimethylbenzene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.023	3.8	0.00078 U	0.022	0.0011 U	0.00092 U	NE	
1,2-Dibromo-3-Chloropropane	--	0.0049 U	--	0.0053 U	--	--	0.0048 U	0.0048 U	0.0044 U	0.0045 U	0.38 U	0.0039 U	0.0053 U	0.0054 U	0.0046 U	1.25	
1,2-Dibromoethane	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	0.005	
1,2-Dichlorobenzene (o-Dichlorobenzene)	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	7,200	
1,2-Dichloroethane	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	11	
1,2-Dichloropropane	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	27.8	
1,3,5-Trimethylbenzene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.79	0.00078 U	0.0074	0.0011 U	0.00092 U	800	
1,3-Dichlorobenzene (m-Dichlorobenzene)	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	NE	
1,3-Dichloropropane	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	NE	
1,4-Dichlorobenzene (p-Dichlorobenzene)	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	185	
2,2-Dichloropropane	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	NE	
2-Butanone (MEK)	--	0.0049 U	--	0.0053 U	--	--	0.0048 U	0.0048 U	0.0044 U	0.0063	0.38 U	0.0039 U	0.0053 U	0.0054 U	0.0046 U	48,000	
2-Chloroethyl vinyl ether	--	0.0064 U	--	0.0069 U	--	--	0.0060 U	0.0060 U	0.0055 U	0.0059 U	0.38 U	0.0051 U	0.0053 U	0.0054 U	0.0046 U	NE	
2-Chlorotoluene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	1,600	
2-Hexanone	--	0.0049 U	--	0.0053 U	--	--	0.0048 U	0.0048 U	0.0044 U	0.0045 U	0.38 U	0.0039 U	0.0053 U	0.0054 U	0.0046 U	NE	
4-Chlorotoluene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	NE	
4-Methyl-2-Pentanone (Methyl isobutyl ketone)	--	0.0049 U	--	0.0053 U	--	--	0.0048 U	0.0048 U	0.0044 U	0.0045 U	0.38 U	0.0039 U	0.0053 U	0.0054 U	0.0046 U	6,400	
Acetone ¹¹	--	0.012	--	0.011 U	--	--	0.0095 U	0.0095 U	0.0087 U	0.050	0.75 U	0.010	0.036	0.011 U	0.0092 U	72,000	N/A

	FL209-B8 (continued)			FL209-B9		FL209-B10				FL209-B11			FL209-B12			MTCA Method A/B Cleanup Level ¹⁴	Naturally Occurring Background Metals in Puget Sound Soils ¹⁸
Boring Identification	FL209-B8-22.5-23	FL209-B8-27.5-28	FL209-B8-30-30.5	FL209-B9-1-2	FL209-B9-5.5-6.5	FL209-B10-1-2	FL209-B10-5.5-6.5	FL209-B10-10-10.5	FL209-B10-25-26	FL209-B11-1-2	FL209-B11-3-4	FL209-B11-6-6.5	FL209-B12-1-2	FL209-B12-3.5-4	FL209-B12-5.5-6.5		
Sample Identification ²	7/6/2017	7/7/2017	7/7/2017	7/7/2017	7/7/2017	7/20/2017	7/20/2017	7/20/2017	7/20/2017	7/7/2017	7/7/2017	7/7/2017	7/20/2017	7/20/2017	7/20/2017		
Sample Date	22.5	27.5	30	1.0	5.5	1.0	5.5	10	25	1.0	3.0	6.0	1.0	3.5	5.5		
Sample Start Depth (feet bgs)	23	28	30.5	2.0	6.5	2.0	6.5	10.5	26	2.0	4.0	6.5	2.0	4.0	6.5		
Sample End Depth (feet bgs)																	
Benzene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	0.03	N/A
Bromobenzene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	NE	
Bromochloromethane	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	NE	
Bromodichloromethane	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	16.1	
Bromoform (Tribromomethane)	--	0.0049 U	--	0.0053 U	--	--	0.0048 U	0.0048 U	0.0044 U	0.0045 U	0.38 U	0.0039 U	0.0053 U	0.0054 U	0.0046 U	127	
Bromomethane	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	112	
Carbon Disulfide	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	8,000	
Carbon Tetrachloride	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	14.3	
Chlorobenzene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	1,600	
Chloroethane	--	0.0049 U	--	0.0053 U	--	--	0.0048 U	0.0048 U	0.0044 U	0.0045 U	0.38 U	0.0039 U	0.0053 U	0.0054 U	0.0046 U	NE	
Chloroform	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	32.3	
Chloromethane	--	0.0062 U	--	0.0067 U	--	--	0.0064 U	0.0064 U	0.0058 U	0.0057 U	0.38 U	0.0049 U	0.0053 U	0.0054 U	0.0046 U	NE	
cis-1,2-Dichloroethene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	160	
cis-1,3-Dichloropropene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	NE	
Dibromochloromethane	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	11.9	
Dibromomethane	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	800	
Dichlorodifluoromethane (CFC-12)	--	0.0020 U	--	0.0021 U	--	--	0.0016 U	0.0016 U	0.0015 U	0.0018 U	0.098 U	0.0016 U	0.0011 U	0.0011 U	0.00092 U	16,000	
Ethylbenzene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.0011	0.11	0.00078 U	0.0011 U	0.0011 U	0.00092 U	6	
Hexachlorobutadiene	--	0.0049 U	--	0.0053 U	--	--	0.0048 U	0.0048 U	0.0044 U	0.0045 U	0.38 U	0.0039 U	0.0053 U	0.0054 U	0.0046 U	12.8	
Isopropylbenzene (Cumene)	--	0.0012	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0020	0.0011 U	0.00092 U	8,000	
Methyl Iodide (Iodomethane)	--	0.0049 U	--	0.0053 U	--	--	0.0048 U	0.0048 U	0.0044 U	0.0045 U	0.38 U	0.0039 U	0.0053 U	0.0054 U	0.0046 U	NE	
Methyl t-butyl ether	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	0.1	
Methylene Chloride	--	0.016 U	--	0.017 U	--	--	0.0095 U	0.0095 U	0.0087 U	0.015 U	0.75 U	0.012 U	0.011 U	0.011 U	0.0092 U	0.02	
Naphthalene	--	0.0053	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	5	
n-Butylbenzene	--	0.0054	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.0039	0.39	0.00078 U	0.021	0.0011 U	0.00092 U	4,000	
n-Propylbenzene	--	0.0016	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.0022	0.29	0.00078 U	0.0059	0.0011 U	0.00092 U	8,000	
p-Isopropyltoluene	--	0.0017	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.0019	0.16	0.00078 U	0.012	0.0011 U	0.00092 U	NE	
Sec-Butylbenzene	--	0.0042	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.0012	0.11	0.00078 U	0.011	0.0011 U	0.00092 U	8,000	
Styrene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	16,000	
Tert-Butylbenzene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	8,000	
Tetrachloroethene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0026	0.00092 U	0.05	
Toluene	--	0.0049 U	--	0.0053 U	--	--	0.0048 U	0.0048 U	0.0044 U	0.0045 U	0.38 U	0.0039 U	0.0053 U	0.0054 U	0.0046 U	7	
Trans-1,2-Dichloroethene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	1,600	
Trans-1,3-Dichloropropene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	NE	
Trichloroethene	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	0.03	
Trichlorofluoromethane (CFC-11)	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	24,000	
Vinyl Acetate	--	0.0049 U	--	0.0053 U	--	--	0.0048 U	0.0048 U	0.0044 U	0.0045 U	0.38 U	0.0039 U	0.0053 U	0.0054 U	0.0046 U	80,000	
Vinyl Chloride	--	0.00098 U	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U	240	
Xylene, m-,p-	--	0.0020 U	--	0.0021 U	--	--	0.0019 U	0.0019 U	0.0017 U	0.0022	0.20	0.0016 U	0.0021 U	0.0021 U	0.0018 U	9	
Xylene, o-	--	0.0016	--	0.0011 U	--	--	0.00095 U	0.00095 U	0.00087 U	0.00091 U	0.075 U	0.00078 U	0.0011 U	0.0011 U	0.00092 U		
Total Xylenes ⁹	--	0.0016	--	0.0021 U	--	--	0.0019 U	0.0019 U	0.0017 U	0.0022	0.20	0.0016 U	0.0021 U	0.0021 U	0.0018 U		
PAHs ¹² (mg/kg)																	
1-Methylnaphthalene	0.83	0.031	0.0072 U	0.0072 U	0.0084 U	--	--	--	--	0.018	13	0.0075 U	0.28	0.068	0.0072 U	5	N/A
2-Methylnaphthalene	1.4	0.10	0.0072 U	0.0072 U	0.0084 U	--	--	--	--	0.022	19	0.0075 U	0.19	0.065	0.0073		
Naphthalene	0.36	0.017	0.0072 U	0.0072 U	0.0084 U	--	--	--	--	0.0082	0.39	0.0075 U	0.020</				

Boring Identification	FL209-B8 (continued)			FL209-B9		FL209-B10				FL209-B11			FL209-B12			MTCA Method A/B Cleanup Level ¹⁴	Naturally Occurring Background Metals in Puget Sound Soils ¹⁸
Sample Identification ²	FL209-B8-22.5-23	FL209-B8-27.5-28	FL209-B8-30-30.5	FL209-B9-1-2	FL209-B9-5.5-6.5	FL209-B10-1-2	FL209-B10-5.5-6.5	FL209-B10-10-10.5	FL209-B10-25-26	FL209-B11-1-2	FL209-B11-3-4	FL209-B11-6-6.5	FL209-B12-1-2	FL209-B12-3.5-4	FL209-B12-5.5-6.5		
Sample Date	7/6/2017	7/7/2017	7/7/2017	7/7/2017	7/7/2017	7/20/2017	7/20/2017	7/20/2017	7/20/2017	7/7/2017	7/7/2017	7/7/2017	7/20/2017	7/20/2017	7/20/2017		
Sample Start Depth (feet bgs)	22.5	27.5	30	1.0	5.5	1.0	5.5	10	25	1.0	3.0	6.0	1.0	3.5	5.5		
Sample End Depth (feet bgs)	23	28	30.5	2.0	6.5	2.0	6.5	10.5	26	2.0	4.0	6.5	2.0	4.0	6.5		
Indeno(1,2,3-c,d)pyrene	0.0072 U	0.0071 U	0.0072 U	0.0072 U	0.0084 U	--	--	--	--	0.0086	0.0084 U	0.0075 U	0.0071 U	0.018	0.0072 U	See cPAHs	N/A
Phenanthrene	0.45	0.060	0.0072 U	0.0072 U	0.0084 U	--	--	--	--	0.10	5.9	0.0075 U	0.41	0.036	0.0072 U	NE	
Pyrene	0.048	0.0071 U	0.0072 U	0.0072 U	0.0084 U	--	--	--	--	0.045	0.19	0.0075 U	0.033	0.0080 U	0.0072 U	2,400	
cPAHs (benzo(a)pyrene toxicity equivalent concn)	0.0054 U	0.0054 U	0.0054 U	0.0054 U	0.0063 U	--	--	--	--	0.0136	0.0065	0.0057 U	0.0054 U	0.0084	0.0054 U	0.1	

Notes:

- ¹ Chemical analysis performed by OnSite Environmental, Inc., of Redmond, Washington.
- ² Sample ID = Parcel ID - boring number - depth of sample [feet bgs]. FL209-B1-4.5-5' = Boring 1 from Parcel FL209, collected from a depth of 4.5 to 5 feet bgs.
- ³ Petroleum Hydrocarbon Identification by Northwest Method NWTPH-HCID.
- ⁴ Gasoline-range petroleum hydrocarbons by Northwest Method NWTPH-Gx.
- ⁵ Diesel- and lube oil-range petroleum hydrocarbons by Northwest Method NWTPH-Dx.
- ⁶ Resource Conservation Recovery Act (RCRA) metals analyzed by EPA 6000/7000 series method.
- ⁷ Toxicity Characteristic Leaching Procedure (TCLP) metals analyzed by EPA Method 1311.
- ⁸ Benzene, toluene, ethylbenzene, xylenes (BTEX) by United States Environmental Protection Agency (EPA) Method 8021B.
- ⁹ Total xylenes consists of m,p- and o- xylenes. The higher detection limit is used for non-detects.
- ¹⁰ Volatile organic compounds (VOCs) analyzed by United States Environmental Protection Agency (EPA) Method 8260C.
- ¹¹ Acetone is a common laboratory contaminant.
- ¹² Polycyclic aromatic hydrocarbons (PAHs) and carcinogenic PAHs (cPAHs) analyzed by EPA Method 8270D/SIM.
- ¹³ Total naphthalenes consists of 1-methylnaphthalene, 2-methylnaphthalene and naphthalene.
- ¹⁴ MTCA Method B cleanup level used when Method A cleanup level has not been established.
- ¹⁵ Model Toxics Control Act (MTCA) Method A cleanup level for gasoline is 30 mg/kg if benzene is detected or if the sum of toluene, ethylbenzene and xylenes are greater than or equal to 1% of the total gasoline detection.
- ¹⁶ MTCA Method A cleanup level for Trivalent Chromium.
- ¹⁷ Results for cPAHs are shown as the sum of the benzo(a)pyrene toxicity equivalent concentrations, calculated by multiplying each individual cPAH concentration by its corresponding TEF. In this sum, non-detects are represented as ½ of the corresponding analyte reporting limit multiplied by the TEF.
- ¹⁸ 90th Percentile for natural background soil metals concentrations in Puget Sound region, Department of Ecology, publication #94-115, dated October 1994.
- ¹⁹ Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

"--" = not tested

mg/kg = milligrams per kilogram

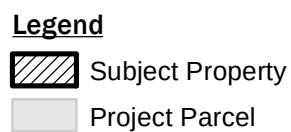
MTCA = Model Toxics Control Act

U = Analyte was not detected at or greater than the listed reporting limit.

TEF = Toxicity Equivalency Factor as defined in WAC 173-340-900 Table 708-2.

Bold font type indicates that the analyte was detected at a concentration greater than the respective laboratory reporting limit.

Grey shading indicates that the detected result exceeds the specified MTCA Cleanup Level.



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Figure 1

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

Data Source: Mapbox Open Street Map, 2017

Projection: NAD 1983 UTM Zone 10N



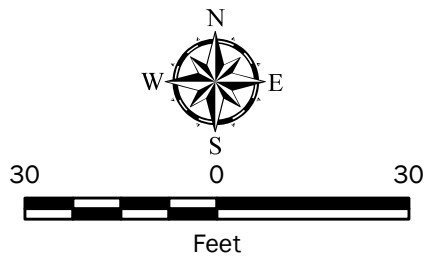
Legend

 Hollow-stem Boring	 One or More Samples Analyzed were > MTCA Screening Levels	 Site Feature
 All Samples Analyzed Either were ND or < MTCA Screening Levels	 Subject Property	 Parcel
	 Approximate Previous UST and Remedial Excavation Locations	

Notes:

1. Based on current design information for the FWLE project (HDR, provided in June 2017)
2. The locations of all features shown are approximate. 3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
Data Source: Aerial and road names from King County 2015.

Parcel #: 2500600480
Address: 23428 PACIFIC HWY S
City: Kent
Owner: CASTANEDA, JUAN & ROJAS
Current Use: retail store

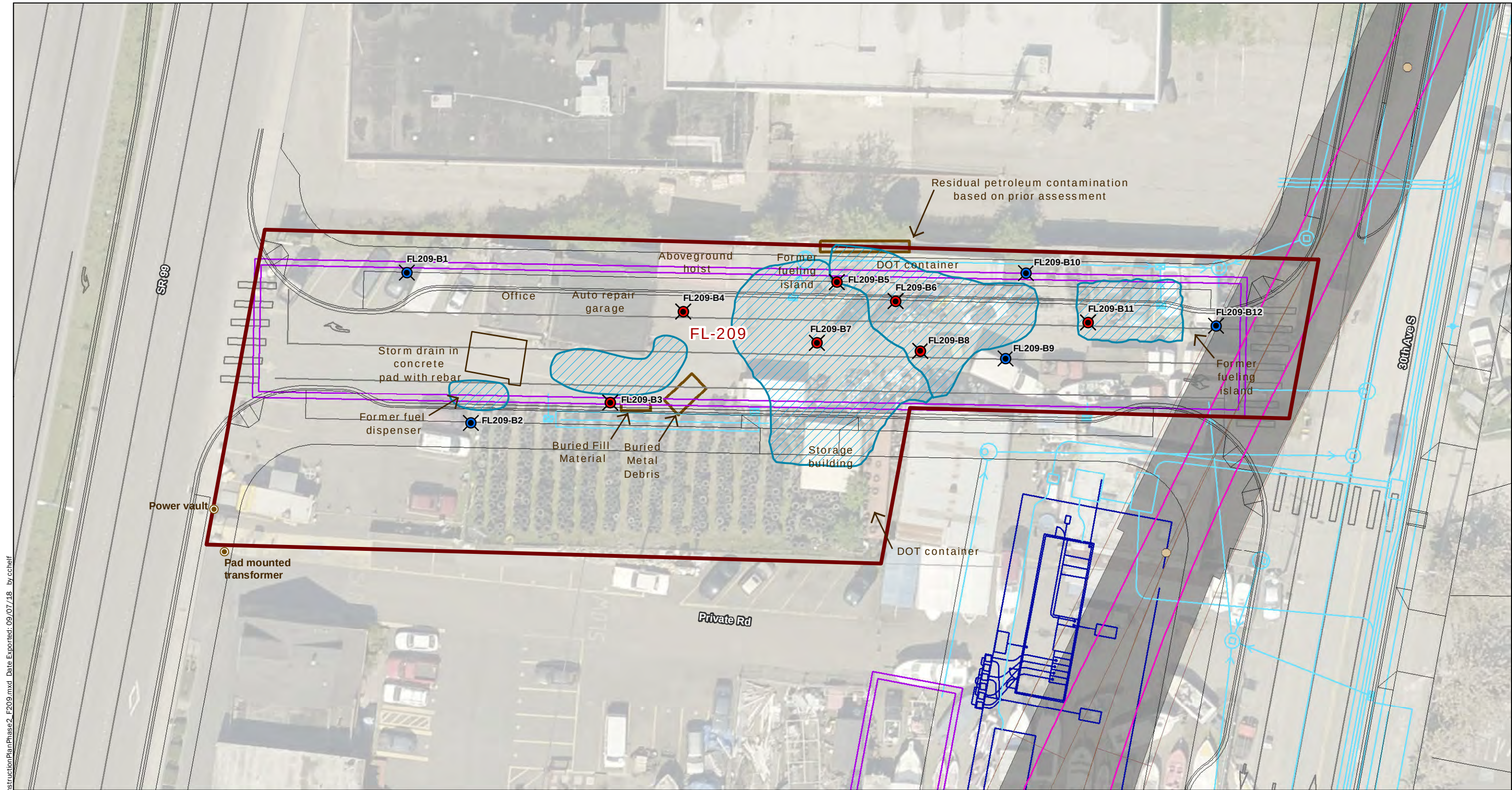


**Site Plan and Boring Location Map
FL-209**

Phase II ESA
Federal Way Link Extension
Washington



Figure 2



Legend

Hollow-stem Boring	One or More Samples Analyzed were > MTCA Screening Levels	Site Feature	Approximate Previous Remedial Excavation Location
All Samples Analyzed Either were ND or < MTCA Screening Levels	Subject Property	Parcel	

Notes:

1. Based on current design information for the FWLE project (HDR, provided in March 2018)
2. The locations of all features shown are approximate. 3. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.
Data Source: Aerial and road names from King County 2015.

Planned Construction Features

Column	Stormwater Ponds and Vaults
Track	Proposed Sewer
Road/Parking/Sidewalk	TPSS - Traction
Station (line)	Striping (Pavement Markings)
	Structure

Proposed Construction Plan - FL-209

Phase II ESA
Federal Way Link Extension
Washington

Figure 3

APPENDIX A

FIELD EXPLORATION PROGRAM

APPENDIX A

FIELD PROCEDURES AND BORING LOGS

Underground Utility Locate

Prior to drilling activities, an underground utility locate was conducted in the areas of the proposed boring locations to identify subsurface utilities and/or potential underground physical hazards. The underground utility check consisted of contacting a local utility alert service (one-call) and hiring a private utility locating service.

Soil Sampling

The direct-push explorations were completed using hollow-stem auger drilling equipment. Soil samples from the hollow-stem auger borings were obtained using a split spoon sampler. The sampler was driven into the soil using a 140-pound hammer. Upon retrieval, the sampler was opened and a GeoEngineers representative examined the soil and performed field screening tests. The boring logs are presented in Figures A-2 through A-14. Selected photographs taken during the Phase II ESA drilling are presented as Figures A-15 through A-24.

Selected soil samples were obtained in glass jars (supplied by the analytical laboratory), labeled and stored in a cooler with ice pending delivery to the laboratory. VOC samples were collected first, directly from the sample sleeve using the 5035A sampling method. Following the VOC sample collection, the remaining soil was placed in sample containers provided by the analytical laboratory. All sampling equipment was decontaminated between samples using a Liqui-Nox® wash solution and distilled water rinse.

Soil samples obtained from the explorations were collected from the sampler with a stainless-steel knife, a stainless-steel trowel and/or new gloves. A portion of each sample was placed in laboratory-prepared sample jars for possible chemical analysis. The remaining portion of each sample was used for field screening.

The samples collected from the borings were identified using the following identification system: FL209-B1-3.5-4.5, where FL-209 is the identified Federal Way Link Extension parcel on which the boring was located, B1 is the boring number and the approximate depth at which the sample was obtained (e.g., FL209-B1-3.5-4.5 was collected from the FL-209 parcel at boring B1 at a depth of approximately 3.5 to 4.5 feet bgs).

Selected samples from the explorations were submitted for chemical analysis based on field screening results. The soil samples were placed in a cooler with ice for transport to the laboratory. Standard chain-of-custody procedures were followed in transporting the soil samples to the laboratory. Drill cuttings were placed in drums pending disposal.

Field Screening of Soil Samples

Soil samples obtained from the borings were screened in the field for evidence of contamination using: 1) visual examination; 2) sheen screening and 3) vapor headspace screening with a photo-ionization detector (PID). The results of headspace and sheen screening are included in the boring logs.

Visual screening consists of inspecting the soil for stains indicative of petroleum-related contamination. Visual screening is generally more effective when contamination is related to heavy petroleum hydrocarbons, such as motor oil or hydraulic oil, or when hydrocarbon concentrations are high. Sheen screening and headspace vapor screening are more sensitive methods that have been effective in detecting contamination at concentrations less than regulatory cleanup guidelines. Sheen screening involves placing soil in a pan of water and observing the water surface for signs of sheen. Sheen classifications are as follows:

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

Headspace vapor screening involves placing a soil sample in a plastic sample bag. Air is captured in the bag and the bag is shaken to expose the soil to the air trapped in the bag. The probe of a PID is inserted in the bag and the instrument measures the concentration of combustible vapor in the air removed from the sample headspace. The PID measures concentrations in ppm (parts per million) and is calibrated to isobutylene. The PID is designed to quantify combustible gas and organic vapor concentrations up to 2,500 ppm. A lower threshold of significance of 1 ppm was used in this application. Field screening results are site-specific and vary with soil type, soil moisture content, temperature and type of contaminant.

SOIL CLASSIFICATION CHART

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

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

Sampler Symbol Descriptions

	2.4-inch I.D. split barrel
	Standard Penetration Test (SPT)
	Shelby tube
	Piston
	Direct-Push
	Bulk or grab
	Continuous Coring

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

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

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

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

ADDITIONAL MATERIAL SYMBOLS

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

Groundwater Contact



Measured groundwater level in exploration, well, or piezometer



Measured free product in well or piezometer

Graphic Log Contact



Distinct contact between soil strata



Approximate contact between soil strata

Material Description Contact



Contact between geologic units



Contact between soil of the same geologic unit

Laboratory / Field Tests

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

Sheen Classification

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

Key to Exploration Logs

Drilled	Start 6/20/2017	End 6/20/2017	Total Depth (ft)	17.75	Logged By Checked By	AJF DLC	Driller	Holt Services, Inc.	Drilling Method	Hollow-stem Auger
Surface Elevation (ft)			398.4		Hammer		Autohammer		Drilling	
Vertical Datum			NAVD88		Data		140 (lbs) / 30 (in) Drop		Equipment	
Easting (X)			1278400.3631		System		WA State Plane North		Groundwater not observed at time of exploration	
Northing (Y)			146141.2639		Datum		NAD83			
Notes:										

Elevation (feet)	FIELD DATA				Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Interval	Recovered (in)	Blows/foot	Collected Sample Sample Name Testing						
0						AC	Approximately 2 inches of asphalt concrete pavement			
						GP	Gray angular gravel (fill)			
						GP	Brown sandy gravel (fill)	NS	<1	
395		15	15	FL209-B1-1.5-2.5		SP	Light brown fine to medium sand with gravel and trace silt (loose, moist)			
5		7	50/5"	FL209-B1-4.5-5.5 CA		SP	Light brown/light gray fine to medium sand with gravel and trace silt (very dense, moist) (3-inch sluff)	SS	<1	
		13	50/6"	FL209-B1-6.5-7.5			Increasing silt, becomes dense	SS	<1	
390										
		18	54	FL209-B1-9.5-10.5 CA				NS	1.0	
		14	28			SP-SM	Light brown gravelly fine to medium sand with silt (dense, moist) (3-inch sluff)	NS	<1	
385										
		15	50/6"					NS	<1	
		11	50/3"	FL209-B1-17-18		SP	Brown gravelly fine to coarse sand with trace silt (dense, moist) (2-inch sluff)	NS	<1	

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on hand-held GPS

Log of Boring FL209-B1

GEOENGINEERS 

Project: Sound Transit - Federal Way Link Extension FL209
Project Location: 23428 Pacific Highway South, Kent, Washington
Project Number: 4082-039-01

Figure A-2
Sheet 1 of 1

Start Drilled	6/20/2017	End 6/20/2017	Total Depth (ft)	15	Logged By Checked By	PDR DLC	Driller	Holt Services, Inc.	Drilling Method	Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	398.9 NAVD88			Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop			Drilling Equipment	CME track rig	
Easting (X) Northing (Y)	1278420.6452 146093.7896			System Datum	WA State Plane North NAD83			Groundwater not observed at time of exploration		
Notes:										

Elevation (feet)	FIELD DATA				Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample						
395	0	17	18			AC	Approximately 2 inches of asphalt concrete pavement			
						GP	Gray gravel (fill)	SS	<1	
				FL209-B2-1-2 CA		SP	Orange-brown fine to medium sand with gravel and trace silt (loose, moist)	NS	<1	
	5	15	45			SP	Light brown gravelly fine to medium sand with trace silt (medium dense, moist)			
							Becomes very dense	NS	<1	
							With gravel and silt	NS	<1	
	10	12	50/6"					NS	<1	
						SP	Light brown gravelly fine to medium sand with trace silt (dense, moist)			Drill chatter begins at 10 feet
						GP	No recovery, large cobble in shoe, cuttings are with sand; brown rounded gravel (very dense, moist)			
										Drill on large boulder, back of rig lifts when trying to drill
	15	0	100/0.5"							

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on Locational Survey, Vertical approximated based on hand-held GPS

Log of Boring FL209-B2



Project: Sound Transit - Federal Way Link Extension FL209
Project Location: 23428 Pacific Highway South, Kent, Washington
Project Number: 4082-039-01

Figure A-3
Sheet 1 of 1

Start Drilled 6/21/2017	End 6/21/2017	Total Depth (ft) 18	Logged By Checked By AJF DLC	Driller Holt Services, Inc.	Drilling Method Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	397.2 NAVD88	Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	CME track rig
Easting (X) Northing (Y)	1278487.8517 146128.8982	System Datum	WA State Plane North NAD83	Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	FIELD DATA					Graphic Log	Group Classification	MATERIAL DESCRIPTION	Screen	Headspace Vapor (ppm)	REMARKS
	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
0	12	25			FL209-B4-0.5-1.5 CA		AC	Approximately 2 inches of asphalt concrete pavement	MS	132.2	Heavy oil odor
395	4	6					SP-SM	Dark brown/black fine to medium sand with silt and gravel (loose, moist) Decreased staining Brown staining in layers, becomes very loose	MS	74.3	
5	18	59			FL209-B4-5.5-6.5 CA		SP	Brown fine to medium sand with gravel and orange-mottling (medium dense, moist)	NS	<1	
390	16	50/4"			FL209-B4-8-9		SP	Light brown fine to medium sand with occasional gravel and trace silt (very dense, moist)	NS	<1	
10	12	50/6"					SP	Light brown fine to medium sand with gravel and trace silt (very dense, moist)	NS	<1	
385	5	50/5"					SP-SM	Light gray/brown gravelly fine to medium sand with silt (very dense, moist) (till?)	NS	<1	
15	3	50/3"			FL209-B4-15-15.5				NS	<1	
380	3	50/3"			FL209-B4-17.5-18				NS	<1	

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on hand-held GPS

Log of Boring FL209-B4



Project: Sound Transit - Federal Way Link Extension FL209
Project Location: 23428 Pacific Highway South, Kent, Washington
Project Number: 4082-039-01

Figure A-5
Sheet 1 of 1

Date: 9/11/17 Path: P:\4 4082039\GINT\408203901 ENV LOGS.GPJ DBLibrary\Library\GEOENGINEERS_DF_STD_US_JUNE_2017.GLB\GEB_ENVIRONMENTAL_STANDARD_NO_GW

Start Drilled	7/6/2017	End 7/6/2017	Total Depth (ft)	23.5	Logged By Checked By	PDR DLC	Driller Holt Services, Inc.	Drilling Method	Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	397 NAVD88			Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop		Drilling Equipment	Mobile B-59	
Easting (X) Northing (Y)	1278536.452 146138.2941			System Datum	WA State Plane North NAD83		Groundwater not observed at time of exploration		
Notes:									

Elevation (feet)	FIELD DATA					MATERIAL DESCRIPTION	Screen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing				
395	0	6	50/5"		FL209-B5-1.2 CA	GP			
						SP	NS	<1	Grab sample from cuttings
						GP	NS	<1	
390	5	12	8		FL209-B5-6.6.5 CA	SP-SM	MS	2.0	
						SM	MS	20.6	Petroleum odor
					FL209-B5-8.9 CA	SM	MS	20.6	
							HS	70.8	Petroleum odor
385	10	18	79		FL209-B5-10.5-11.5 CA	SM	HS	187.9	Petroleum odor
						SP-SM	HS	111.6	Petroleum odor
					FL209-B5-13-14 CA	SP-SM	MS	71.2	Petroleum odor
380	15	18	115		FL209-B5-15.5-16.5 CA	SP-SM	MS	71.2	
					FL209-B5-17.5-18.5 CA	SP-SM	MS	71.2	Petroleum odor
375	20	0	75/6"			NR			
					FL209-B5-22.5-23 CA	SP-SM	NS	2.0	

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on hand-held GPS

Log of Boring FL209-B5



Project: Sound Transit - Federal Way Link Extension FL209
Project Location: 23428 Pacific Highway South, Kent, Washington
Project Number: 4082-039-01

Figure A-6
Sheet 1 of 1

Date: 9/11/17 Path: P:\4 4082039\GINT\408203901 ENV LOGS.GPJ DBLibrary/Library\GEOENGINEERS_DF STD_US_JUNE_2017 GLB\GEB_ENVIRONMENTAL_STANDARD_NO_GW

Start Drilled	6/21/2017	End 6/21/2017	Total Depth (ft)	30.5	Logged By Checked By	AJF DLC	Driller	Holt Services, Inc.	Drilling Method	Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	397.1 NAVD88			Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop			Drilling Equipment	CME track rig	
Easting (X) Northing (Y)	1278554.9267 146132.3325			System Datum	WA State Plane North NAD83			Groundwater not observed at time of exploration		
Notes:										

Elevation (feet)	FIELD DATA					Group Classification	MATERIAL DESCRIPTION	Screen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample Sample Name Testing	Graphic Log					
395	0	14	15	FL209- B6-0.5-1.5 CA		GP	Gray angular gravel (fill)	NS	<1	
						SP	Brown gravelly fine to medium sand	NS	<1	
		12	6			SP	Brown fine to medium sand with occasional gravel (loose, moist)	NS	<1	
390	5	12	7	FL209- B6-5.5-6.5		SM	Gray fine to medium silty sand with gravel (very loose, moist)	SS	11.4	
		12	6					SS	4.7	
385	10	14	6	FL209- B6-10-11 CA				SS	16.7	
		6	7					SS	7.9	
380	15	14	5	FL209- B6-15-16				SS	6.8	
		16	13				Concrete in shoe	SS	6.7	
375	20	12	50/2"	FL209- B6-20.5-21 CA		SP	Gray gravelly fine to coarse sand with trace silt (very dense, moist) (till)	SS	50.9	
		3	50/3"					NS	2.8	
370	25	1	50/3"					NS	<1	
		5	120/5"	FL209- B6-27.5-28 CA				NS	<1	
	30	5	100/6"	FL209- B6-30-30.5				NS	<1	

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on hand-held GPS

Log of Boring FL209-B6



Project: Sound Transit - Federal Way Link Extension FL209
Project Location: 23428 Pacific Highway South, Kent, Washington
Project Number: 4082-039-01

Figure A-7
Sheet 1 of 1

Drilled	Start 7/6/2017	End 7/6/2017	Total Depth (ft)	20.5	Logged By Checked By	PDR DLC	Driller Holt Services, Inc.	Drilling Method	Hollow-stem Auger	
Surface Elevation (ft) Vertical Datum			396.8 NAVD88		Hammer Data		Autohammer 140 (lbs) / 30 (in) Drop		Drilling Equipment	Mobile B-54
Easting (X) Northing (Y)		1278530.1463 146119.0268			System Datum		WA State Plane North NAD83		Groundwater not observed at time of exploration	
Notes:										

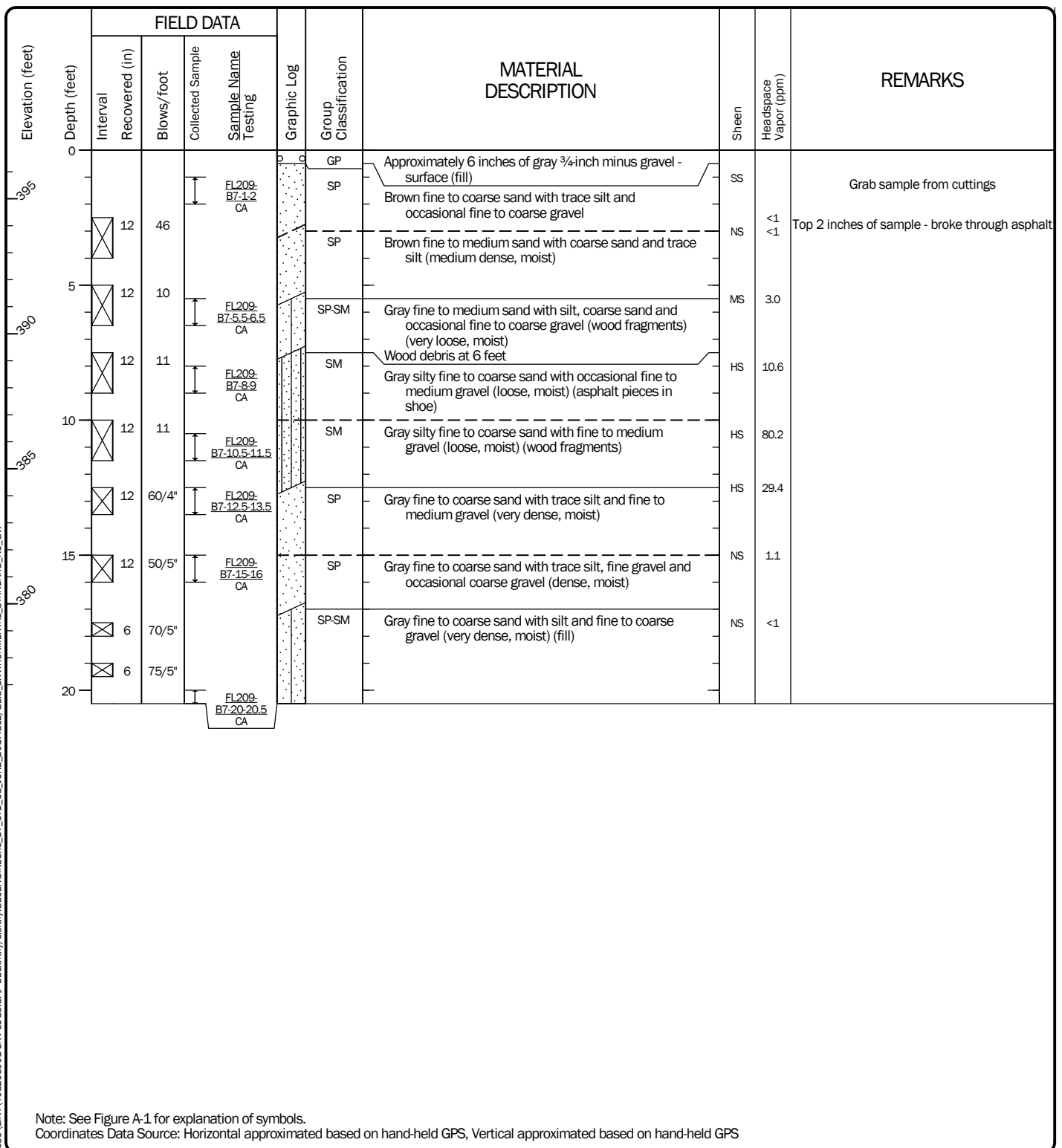


Figure A-8
Sheet 1 of 1

Drilled	Start 7/6/2017	End 7/7/2017	Total Depth (ft)	30.5	Logged By Checked By	PDR DLC	Driller	Holt Services, Inc.	Drilling Method	Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	397 NAVD88				Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop			Drilling Equipment	Mobile B-54
Easting (X) Northing (Y)	1278562.8332 146116.5422				System Datum	WA State Plane North NAD83			Groundwater not observed at time of exploration	
Notes:										

Elevation (feet)	FIELD DATA					Group Classification	MATERIAL DESCRIPTION	Screen	Headspace Vapor (ppm)	REMARKS
	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Graphic Log					
0						GP	¾-inch-minus gravel (fill)			
395	18	4		FL209-B8-1.2 CA		SP	Brown fine to coarse sand with trace silt and occasional fine gravel (very loose, moist)	SS	<1	Grab sample from cuttings
5	18	4				SP	Brown medium to coarse sand with fine gravel	SS	<1	
390	18	42		FL209-B8-6.5 CA		SM	Brown silty fine to coarse sand with fine gravel (very loose, very moist)	HS	1.3	
	18			FL209-B8-8.9 CA		SP	Gray fine to medium sand with coarse sand and fine gravel (medium dense, very moist)	HS	60.3	
10	0	35		FL209-B8-10.11 CA		SM	Gray silty fine sand with fine gravel and coarse sand (medium dense, moist)	HS	28.3	Petroleum odor
385	12	50/6"		FL209-B8-12.5-13.5		SM	Gray silty fine to coarse sand with fine to coarse gravel (dense, moist)	MS	85.8	Petroleum odor
15	12	50/2"		FL209-B8-15.16 CA		SM	Gray silty fine to coarse sand with fine to coarse gravel (very dense, moist)	HS	42.6	Petroleum odor
380	12	70/8"		FL209-B8-17.5-18.5		SM	Gray silty fine to coarse sand with fine to coarse gravel (very dense, moist)	MHS	79.2	Petroleum odor
20	12	50/5"		FL209-B8-20.21 CA		SM	Gray silty fine to coarse sand with fine to coarse gravel (dense, moist)	HS	105.7	Petroleum odor
375	6	80/4"		FL209-B8-22.5-23 CA		SM	Gray silty fine to coarse sand with fine to coarse gravel (very dense, moist)	SS	1.8	
	6	75/3"				NR	No recovery	SS		
370	0	100/6"		FL209-B8-27.5-28 CA		SPSM	Brown fine to coarse sand with silt and fine to coarse gravel (very dense, moist)	SS	6.0	
30	6	98/8"		FL209-B8-30.30.5 CA		SP	Brown fine to coarse sand with trace silt and fine to coarse gravel (very dense, moist)	NS	<1	

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on hand-held GPS

Log of Boring FL209-B8



Project: Sound Transit - Federal Way Link Extension FL209
Project Location: 23428 Pacific Highway South, Kent, Washington
Project Number: 4082-039-01

Figure A-9
Sheet 1 of 1

Date: 9/11/17 Path: P:\4 4082039\GINT\408203901 ENV LOGS.GPJ DBLibrary/Library\GEOENGINEERS_DE STD_US_JUNE_2017 GLB\GEB ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 7/7/2017	End 7/7/2017	Total Depth (ft)	23	Logged By Checked By	PDR DLC	Driller	Holt Services, Inc.	Drilling Method	Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	397 NAVD88				Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop			Drilling Equipment	Mobile B-60
Easting (X) Northing (Y)	1278589.762 146114.1085				System Datum	WA State Plane North NAD83			Groundwater not observed at time of exploration	
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA				Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
		Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
395	0						GP	1/2-inch-minus gravel (fill)			
							SP	Brown fine to medium sand with trace silt, occasional coarse sand and fine to coarse gravel	SS	<1	Grab sample from cuttings
		18	15		FL209-B9-12 CA		SM	Brown silty fine to coarse sand with fine gravel (loose, moist)	SS	<1	
	5	18	56		FL209-B9-5.5-6.5 CA		SM	Brown silty fine sand with coarse sand and occasional fine to coarse gravel (medium dense, moist)	NS	<1	
		18	62				SM	Brown silty fine to coarse sand with fine to coarse gravel (medium dense, moist)	NS	<1	
	10	12	82				SP-SM	Brown fine to coarse sand with silt, fine gravel and occasional coarse gravel (dense, moist)	NS	<1	
		6	75/6"		FL209-B9-12.5-13		SP-SM	Brown fine to coarse sand with silt, fine to coarse gravel and occasional cobble (very dense, moist)	NS	<1	
	15	12	80/8"				SP-SM	Brown fine to coarse sand with silt, fine to coarse gravel and an increase in cobbles (seen from cuttings) (very dense, moist)	NS	<1	
		6			FL209-B9-17.5-18		SP-SM	Brown fine to coarse sand with silt and fine to coarse gravel (coarse gravel seen more in cuttings) (moist)	NS	<1	
	20	0	50/5"				SP-SM	Brown fine to coarse sand with silt and fine to coarse gravel (very dense, moist)	NS	<1	Drill hit obstruction, drill stopped and driving sampler
375											

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on hand-held GPS

Log of Boring FL209-B9



Project: Sound Transit - Federal Way Link Extension FL209
Project Location: 23428 Pacific Highway South, Kent, Washington
Project Number: 4082-039-01

Figure A-10
Sheet 1 of 1

Date: 9/11/17 Path: P:\4 4082039\GINT\408203901 ENV LOGS.GPJ DBLibrary/Library\GEOENGINEERS_DF STD_US_JUNE_2017 GLB\GEB_ENVIRONMENTAL_STANDARD_NO_GW

Drilled	Start 7/20/2017	End 7/20/2017	Total Depth (ft)	26.5	Logged By Checked By	PDR DLC	Driller Holt Services, Inc.	Drilling Method	Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	397.1 NAVD88			Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop		Drilling Equipment	Mobile B-57	
Easting (X) Northing (Y)	1278596.2944 146141.1531			System Datum	WA State Plane North NAD83		Groundwater not observed at time of exploration		
Notes:									

Elevation (feet)	Depth (feet)	FIELD DATA				Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
		Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
	0						GP	½-inch-minus gravel (fill)			
-395		18	25		FL209-B10-1-2 CA		SM	Brown silty fine to medium sand with occasional coarse sand (loose, moist)	NS	<1	
							ML	Brown silt with fine sand (soft, moist)	NS	<1	
							SM	Brown silty fine to coarse sand with occasional fine gravel (loose, moist)	NS	<1	
-390	5	18	44		FL209-B10-5.5-6.5 CA		SM	Brown silty fine to coarse sand with coarse gravel (medium dense, moist)	NS	<1	
		18	84/10"				SM	Gray silty fine to medium sand with occasional coarse sand and fine to coarse gravel (dense, moist) (native)	NS	<1	
-385	10	3	50/6"		FL209-B10-10-10.5 CA			Becomes very dense	NS	<1	
		12	93/10"						NS	<1	
-380	15	6	75/9"						NS	<1	
	20										
-375											
	25	18	95		FL209-B10-25-26 CA		SM	Gray silty fine to coarse sand with fine gravel (very dense, moist)	NS	<1	
							ML	Gray silt with fine sand interbeds (hard, moist)	NS	<1	

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on hand-held GPS

Figure A-11
Sheet 1 of 1

Drilled	Start 7/7/2017	End 7/7/2017	Total Depth (ft)	13.5	Logged By Checked By	PDR DLC	Driller	Holt Services, Inc.	Drilling Method	Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	396.9 NAVD88				Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop			Drilling Equipment	Mobile B-60
Easting (X) Northing (Y)	1278615.9335 146125.5432				System Datum	WA State Plane North NAD83			Groundwater not observed at time of exploration	
Notes:										

Elevation (feet)	Depth (feet)	FIELD DATA				Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
		Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing						
395	0						GP	1/2-inch rounded yard rock/gravel (fill)			
					FL209-B11-1-2 CA		GP	Brown fine gravel with fine to coarse sand and trace silt (moist)	SS	<1	Grab sample from cuttings
	18				FL209-B11-3-4 CA		ML	Gray silt with fine sand and occasional fine gravel (moist)	MS	119.6	Petroleum odor
	5	18					SP	Brown fine sand with trace silt and large gravel (moist)	SS	1	
390					FL209-B11-6-6.5 CA		GP	Brown fine gravel with medium to coarse sand, trace silt and occasional coarse gravel (moist)	NS	<1	
			50/2"				SP-SM	Brown fine to coarse sand with silt and fine gravel (moist)			
							NR	No recovery			
	10	0	50/1"								
385					FL209-B11-12.5-13.5		SW-SM	Brown fine to coarse sand with silt and fine gravel (very dense, moist)	NS		

Note: See Figure A-1 for explanation of symbols.

Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on hand-held GPS

Log of Boring FL209-B11



Project: Sound Transit - Federal Way Link Extension FL209
 Project Location: 23428 Pacific Highway South, Kent, Washington
 Project Number: 4082-039-01

Figure A-12
 Sheet 1 of 1

Start Drilled 7/20/2017	End 7/20/2017	Total Depth (ft) 11	Logged By Checked By PDR DLC	Driller Holt Services, Inc.	Drilling Method Hollow-stem Auger
Surface Elevation (ft) Vertical Datum	397.2 NAVD88	Hammer Data	Autohammer 140 (lbs) / 30 (in) Drop	Drilling Equipment	Mobile B-57
Easting (X) Northing (Y)	1278656.4482 146124.4431	System Datum	WA State Plane North NAD83	Groundwater not observed at time of exploration	
Notes:					

Elevation (feet)	FIELD DATA					MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Depth (feet)	Interval Recovered (in)	Blows/foot	Collected Sample Sample Name Testing	Graphic Log	Group Classification			
395	0					SP			
				FL209- B12-1-2 CA		ML	HS	4.8	
		18	8				MS	13.6	
				FL209- B12-3.5-4 CA		SP-SM	HS	25.6	
5		6	7 1/8"				SS	1.4	
				FL209- B12-5.5-6.5 CA			SS	<1	
390		6	50/6"			GP			
10		12	70/9"						
						Cobbles			

Note: See Figure A-1 for explanation of symbols.
Coordinates Data Source: Horizontal approximated based on hand-held GPS, Vertical approximated based on hand-held GPS

Log of Boring FL209-B12



Project: Sound Transit - Federal Way Link Extension FL209
Project Location: 23428 Pacific Highway South, Kent, Washington
Project Number: 4082-039-01

Figure A-13
Sheet 1 of 1



Photograph 1 - FL209, auto repair building and entrance off Pacific Highway S. Photo shows concrete pad in center of paved drive; presumed oil/water separator or storm drain. View to west.



Photograph 2 - FL209, auto repair garage and adjacent temporary shed (awning). View to west.

FL209 Site Photographs May/June 2017
23428 Pacific Hwy S, Kent, WA

Phase II Environmental Site Assessment
 Federal Way Link Extension
 Washington



Figure A-14



Photograph 3 - FL209, auto repair garage interior, showing wooden-plank-covered pit (arrows), covered by stored items.



Photograph 4 - FL209, aboveground hoist located east of auto repair building in temporary shed.

**FL209 Site Photographs May/June 2017
23428 Pacific Hwy S, Kent, WA**

Phase II Environmental Site Assessment
Federal Way Link Extension
Washington



Figure A-15



Photograph 5 - FL209, car parts and other materials stored on property. View looking east-southeast.



Photograph 6 - FL209, tires stored on property. View looking west-southwest

**FL209 Site Photographs May/June 2017
23428 Pacific Hwy S, Kent, WA**

Phase II Environmental Site Assessment
Federal Way Link Extension
Washington



Figure A-16



Photograph 7 - FL209, central portion of property. View to west.



Photograph 8 - Boring location FL209-B1, view to northeast. Auto repair office in photo right. Former dry cleaner on adjacent-north property (tan building).

FL209 Site Photographs May/June 2017
23428 Pacific Hwy S, Kent, WA

Phase II Environmental Site Assessment
 Federal Way Link Extension
 Washington



Figure A-17



Photograph 9 - Drilling soil boring FL209-B2 (see arrow), view to southeast.



Photograph 10 - Drilling soil boring FL209-B3, view to west.

FL209 Site Photographs May/June 2017
23428 Pacific Hwy S, Kent, WA

Phase II Environmental Site Assessment
 Federal Way Link Extension
 Washington



Figure A-18



Photograph 11 – Drilling boring FL209-B4, view to north



Photograph 12 – Drilling boring FL209-B5, view to east.

FL209 Site Photographs May/June 2017
23428 Pacific Hwy S, Kent, WA

Phase II Environmental Site Assessment
 Federal Way Link Extension
 Washington



Figure A-19



Photograph 13 – Boring location FL209-B6, view to northeast.



Photograph 14 – Boring location FL209-B7 (arrow), view to south.

FL209 Site Photographs May/June 2017
23428 Pacific Hwy S, Kent, WA

Phase II Environmental Site Assessment
 Federal Way Link Extension
 Washington



Figure A-20



Photograph 15 – Boring location FL209-B8 (arrow), view to south.



Photograph 16 – Boring location FL209-B9 (arrow), view to west.

FL209 Site Photographs May/June 2017
23428 Pacific Hwy S, Kent, WA

Phase II Environmental Site Assessment
 Federal Way Link Extension
 Washington



Figure A-21



Photograph 17 – Boring location FL209-B10, adjacent to north fence where residual petroleum-contaminated soil reportedly remains. View to north.



Photograph 18– Boring location FL209-B11 (arrow), view to east.

FL209 Site Photographs May/June 2017
23428 Pacific Hwy S, Kent, WA

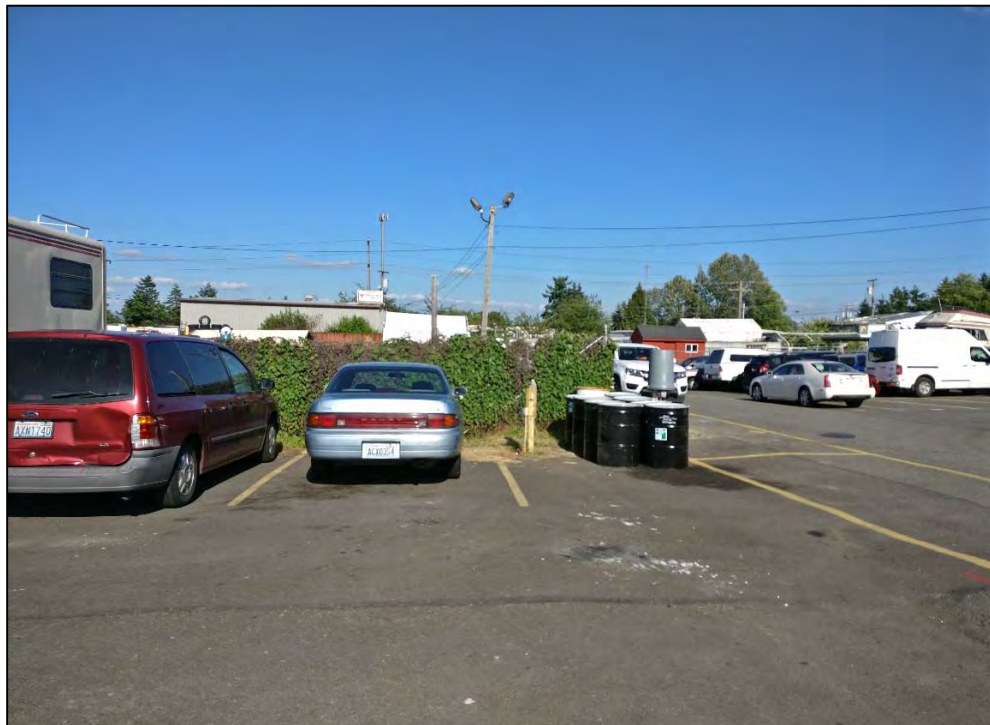
Phase II Environmental Site Assessment
 Federal Way Link Extension
 Washington



Figure A-22



Photograph 23 – Boring location FL209-B12, view to west.



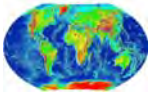
Photograph 24– FL209 Phase II ESA drum storage location, view to east.

FL209 Site Photographs May/June 2017
23428 Pacific Hwy S, Kent, WA

Phase II Environmental Site Assessment
 Federal Way Link Extension
 Washington



Figure A-23



July 14, 2017

Our Ref.: 107-0428-005.000

GeoEngineers, Inc.
1101 Fawcett Avenue, Suite 200
Tacoma, WA 98402

Attention: Ms. Tricia DeOme

**RE: REPORT ON THE GEOPHYSICAL SURVEY AT 23428 PACIFIC
HIGHWAY S, KENT, WA**

Dear Ms. DeOme:

Global Geophysics conducted geophysical survey on June 6, 2017 at 23428 Pacific Highway S, Kent, WA. The proposed objective of the geophysical investigation is to assist in locating potential underground storage tank.

METHODOLOGY AND INSTRUMENTATION

GPR and EM61 were used for this study. The following paragraphs describe the methods and field procedures.

Time Domain Electromagnetic (EM61)

The time-domain electromagnetic system is capable of detecting buried metal objects. It transmits a pulsed electromagnetic field into the ground, which induces eddy currents in buried metallic objects. These eddy currents generate secondary electromagnetic fields that are detected by the system. The time duration or decay rate, of the secondary EM field is related to the electrical conductivity characteristics of the buried object.

A four-channel (gate) high sensitivity metal detector, Geonics EM61 Mk2, will be used to collect the data along the same traverses as the GPR. The low channel number (1) represents anomalies produced by shallow objects and the high channel number (4) represents anomalies produced by deeper objects. The subsurface depth range is from approximately 1 to 15 feet. The data will be stored digitally and downloaded after the survey for analysis and mapping.

Ground Penetrating Radar

The GPR method uses electromagnetic pulses, emitted at regular intervals by an antenna to map subsurface features. The electromagnetic pulses are reflected where changes in electrical properties of materials occur such as changes in lithology or where underground utilities are present. The reflected electromagnetic energy is received by an antenna, converted into an electrical signal, and recorded on the GPR unit. The data is recorded and viewed in real time on a graphical display that depicts a continuous profile or cross-section image of the subsurface directly beneath the path of the antenna.

The depth of penetration of the GPR signal varies according to antenna frequency and the conductivity of the subsurface material. The depth of subsurface penetration with GPR decreases with an increase in the frequency of the antenna and an increase in soil conductivity. Low frequency antennas (50 to 500 MHz) provide the best compromise between obtaining good subsurface penetration and resolution.

The data were collected along the same EM transects using Geophysical Survey Systems, Inc. (GSSI) SIR 2000 GPR system with antennas having a center frequency of 200 MHz. The data was digitally recorded for post processing.

RESULTS

The EM61 data are contoured and presented in Figure 1. GPR profiles are shown in Figures 2-8. The interpreted GPR anomalies are overlaid on the EM61 data. There were areas piled with car and tire debris, which were not surveyed. The interpreted locations of one large EM anomaly and one large GPR anomaly are marked on the map. Other linear GPR anomalies are likely to be utilities.

LIMITATIONS OF THE GEOPHYSICAL METHOD

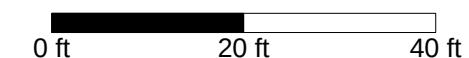
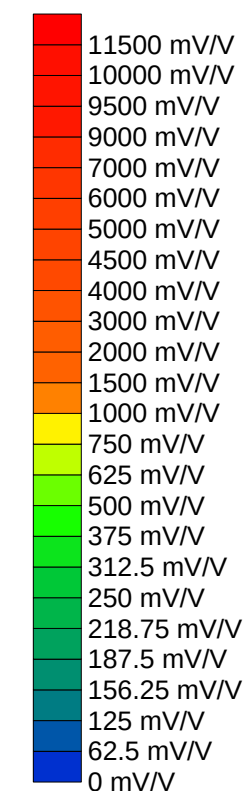
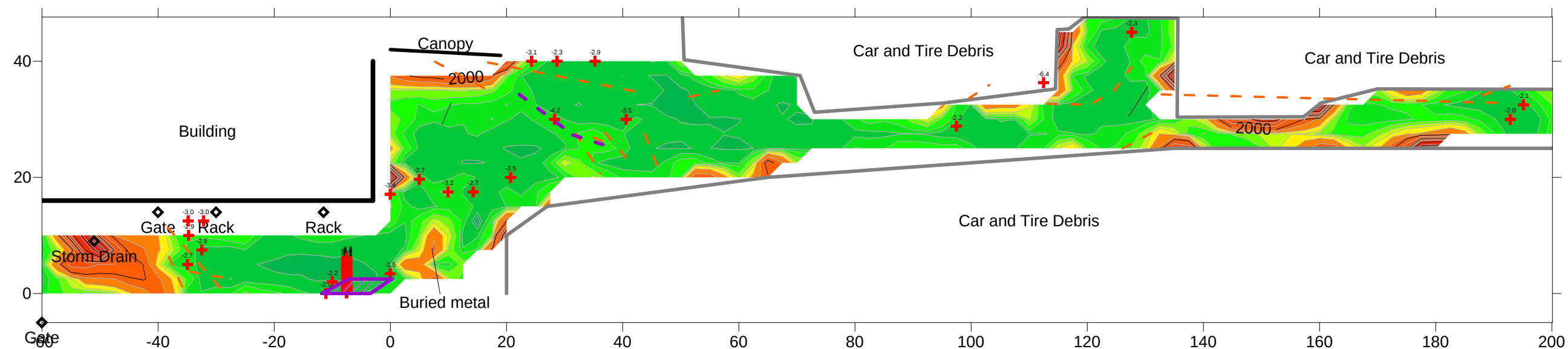
Global geophysics services are conducted in a manner consistent with the level of care and skill ordinarily exercised by other members of the geophysical community currently practicing under similar conditions subject to the time limits and financial and physical constraints applicable to the services. GPR and EM are remote sensing geophysical methods that may not detect all subsurface conditions due to the limitations of the methods, soil conditions, size of the features and their depths.

Sincerely,

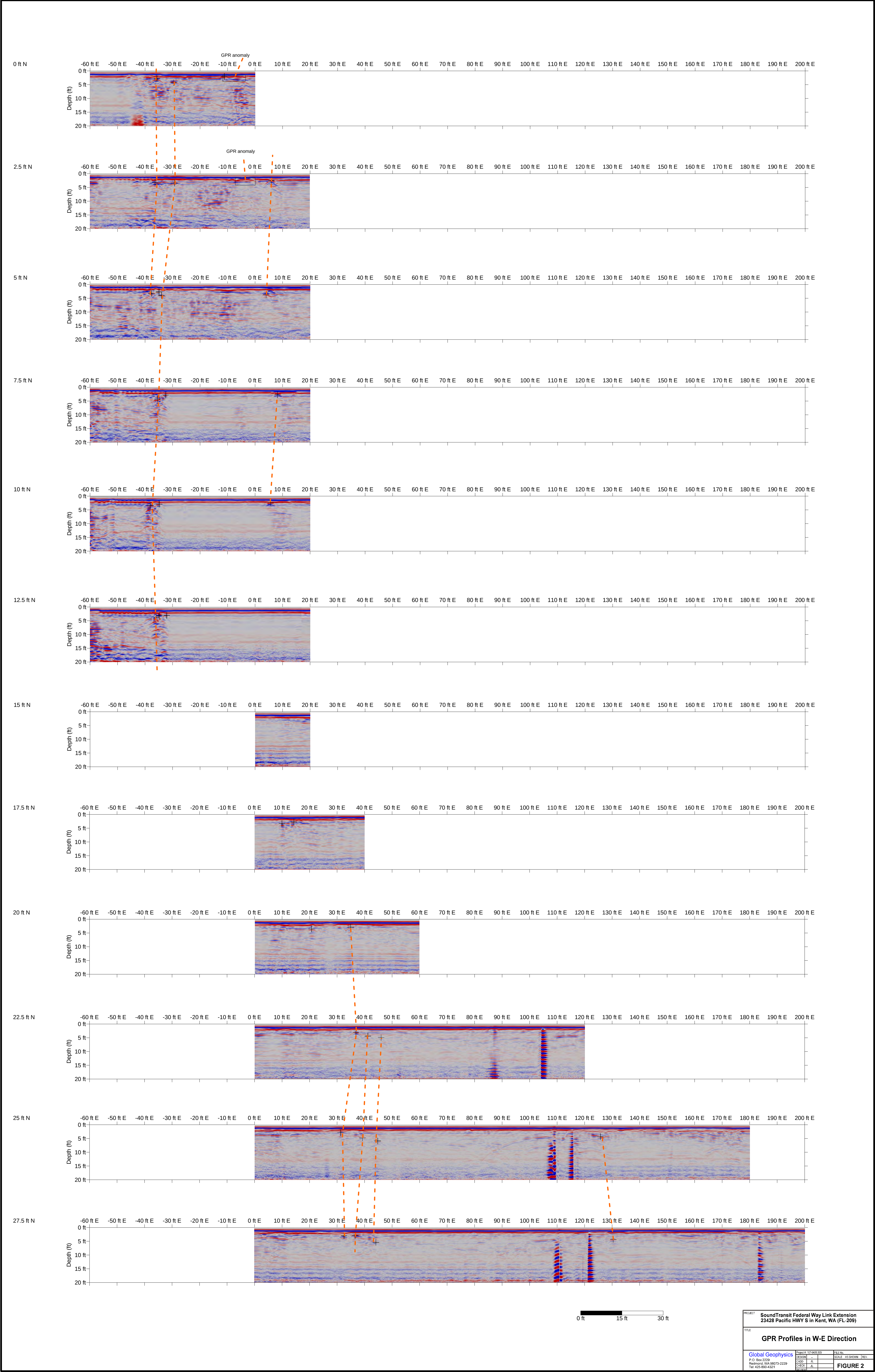
Global Geophysics

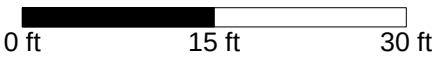
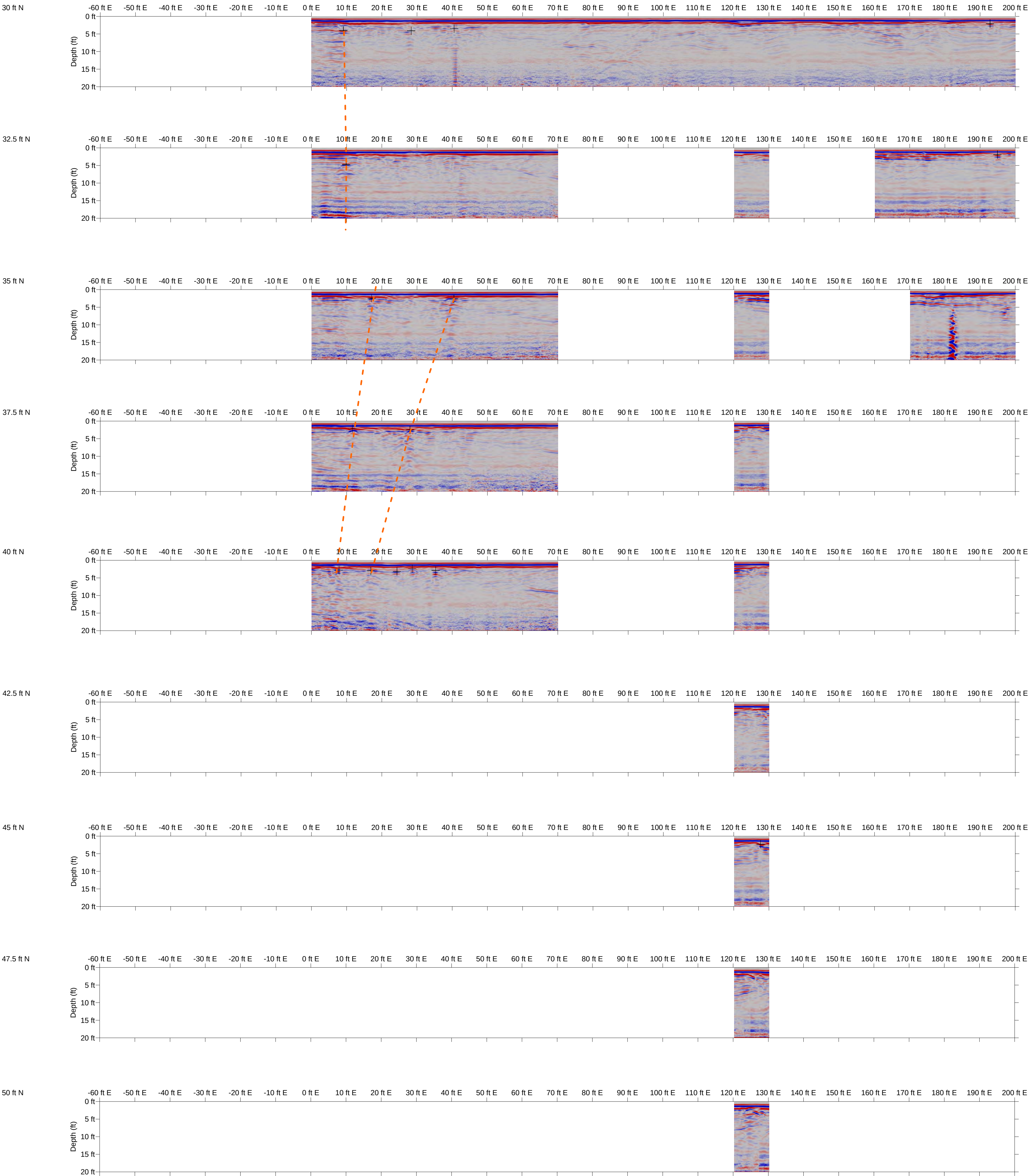


John Liu, Ph.D., R.G.
Principal Geophysicist

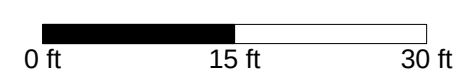
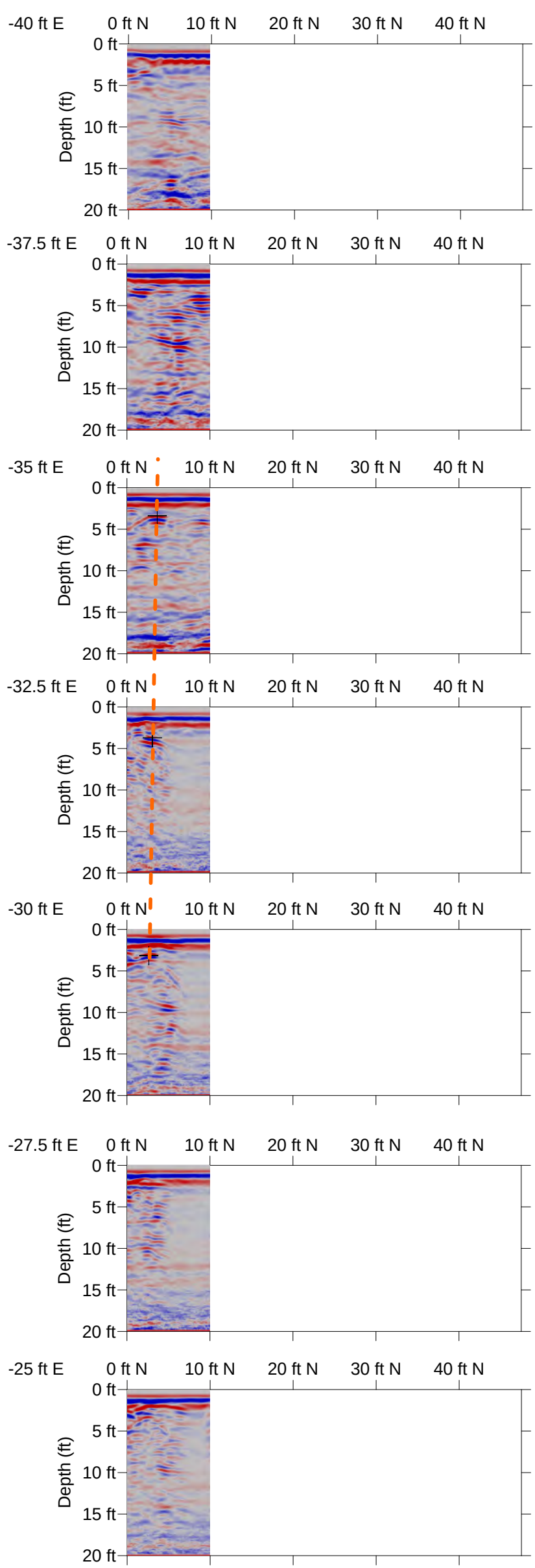
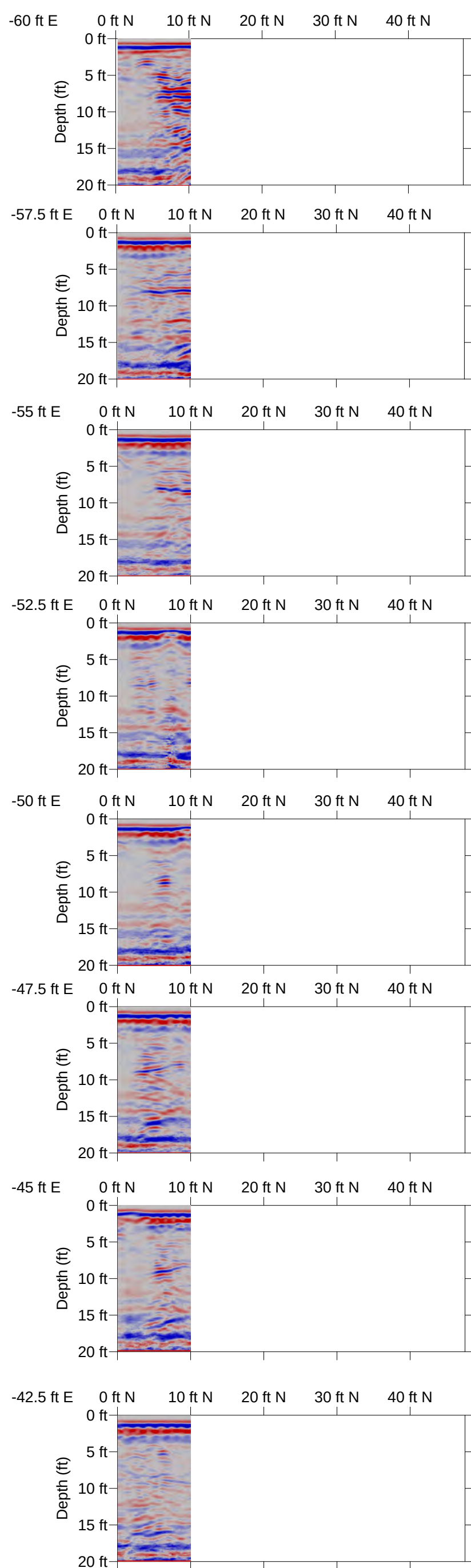


PROJECT				SoundTransit Federal Way Link Extension 23428 Pacific HWY S in Kent, WA (FL-209)			
TITLE				EM61 Data Plan			
Global Geophysics		Project #: 107-0428.005		FILE No.			
DESIGN	--			SCALE	AS SHOWN	REV.	
CADD	JL						
CHECK	JL						
REVIEW	--						
P.O. Box 2229 Redmond, WA 98073-2229 Tel: 425-890-4321				FIGURE 1			

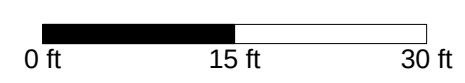
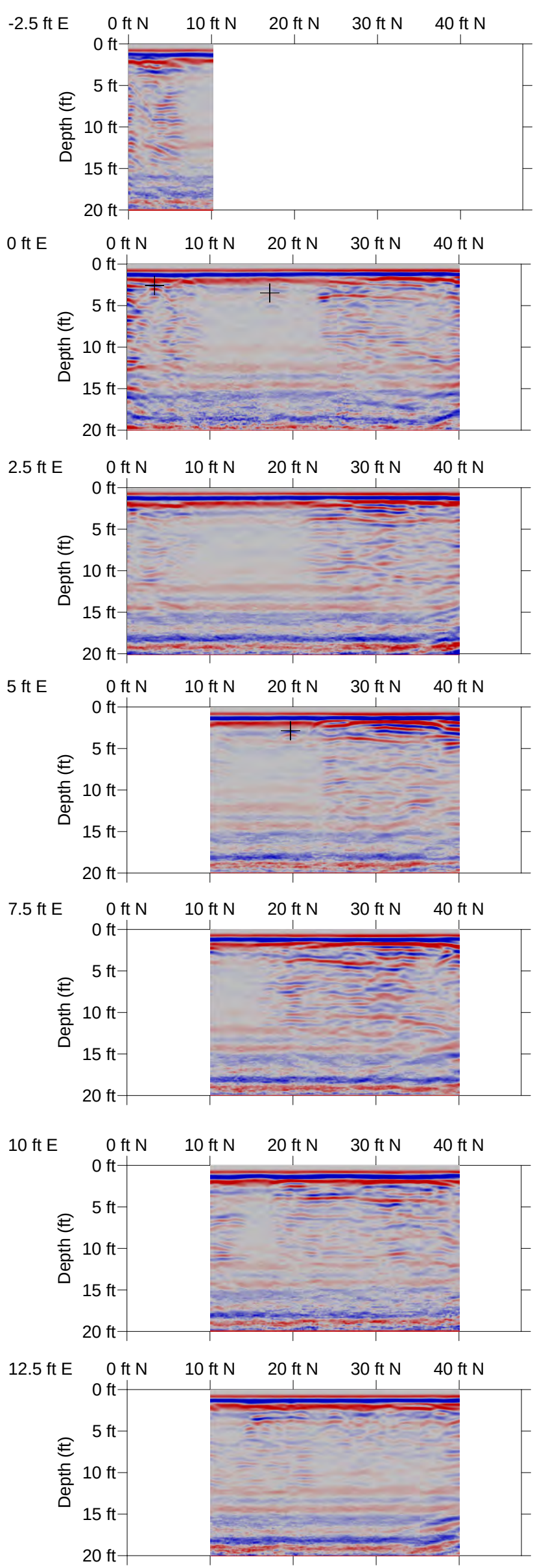
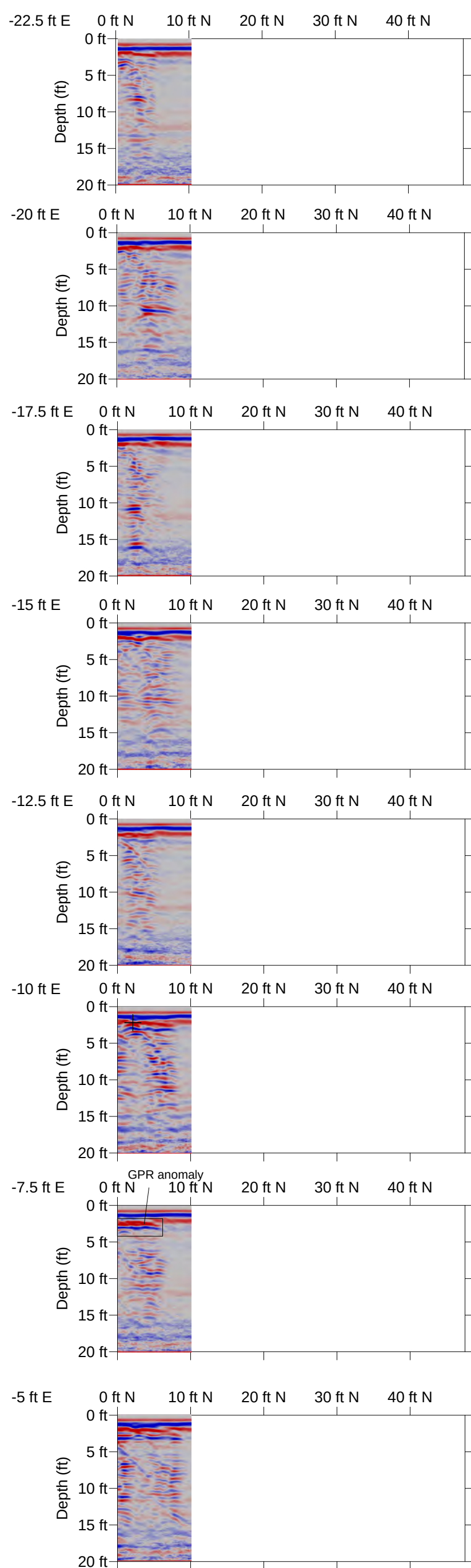




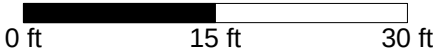
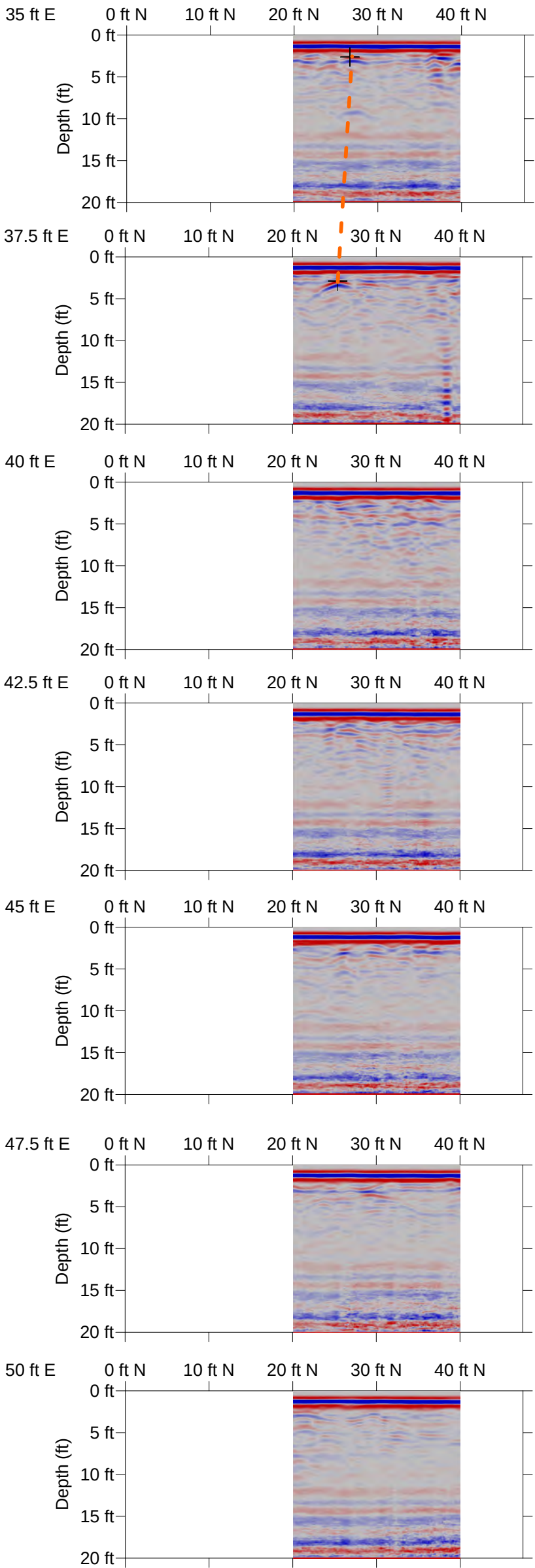
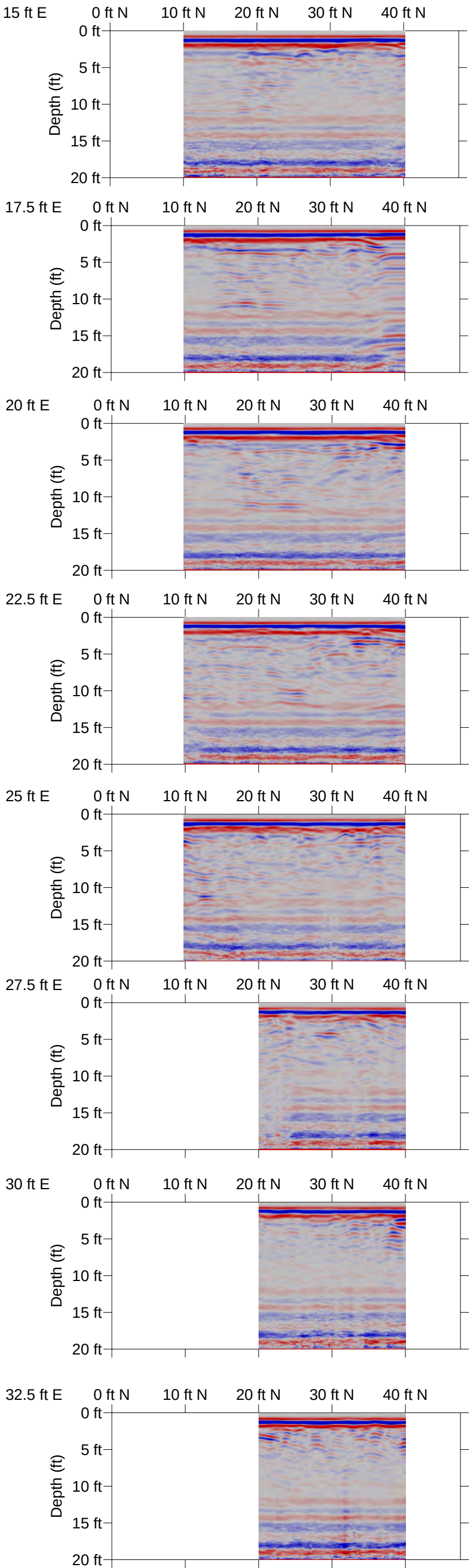
PROJECT	SoundTransit Federal Way Link Extension 23428 Pacific HWY S in Kent, WA (FL-209)		
TITLE	GPR Profiles in W-E Direction		
Global Geophysics P.O. Box 2229 Redmond, WA 98073-2229 Tel: 425-860-1321	Project #	1056678-005	File No.
	DESIGN	AL	SCALE AS SHOWN
	CADD	AL	REV
	CHECK	AL	
	REVIEW	AL	
			FIGURE 3



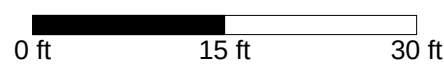
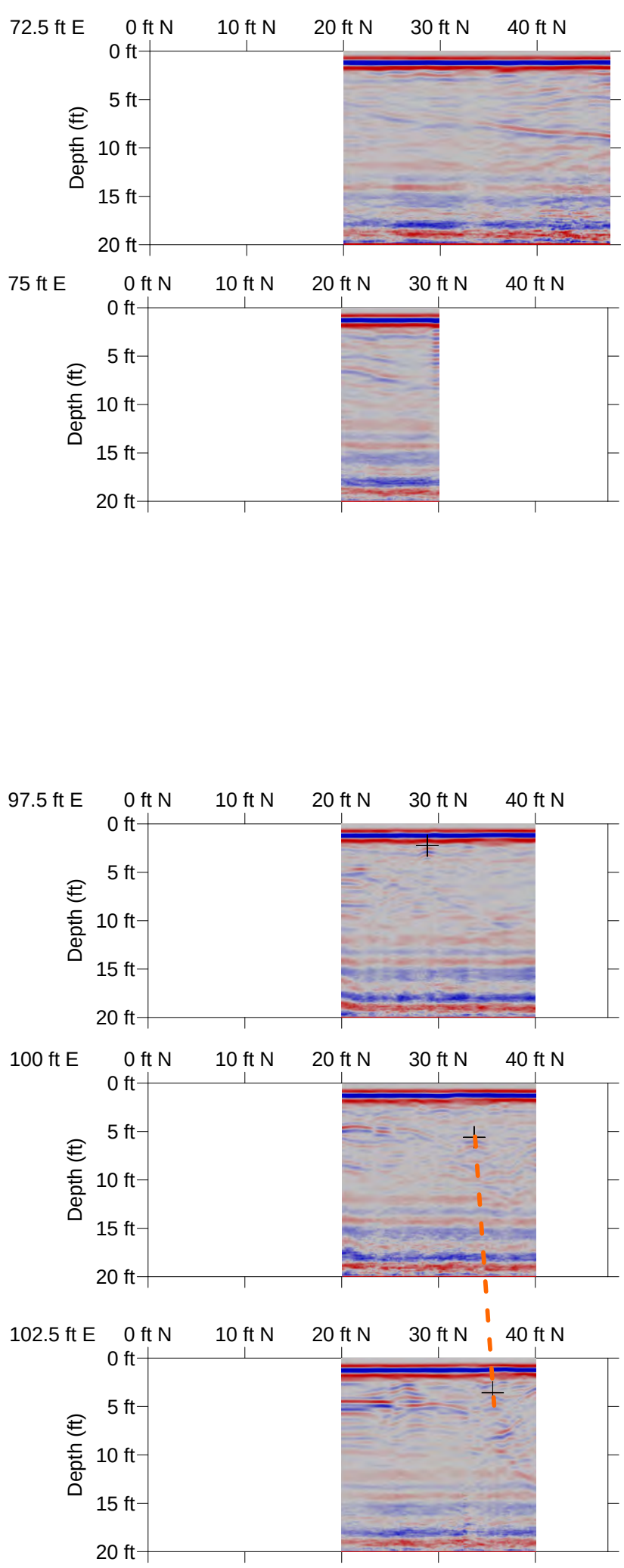
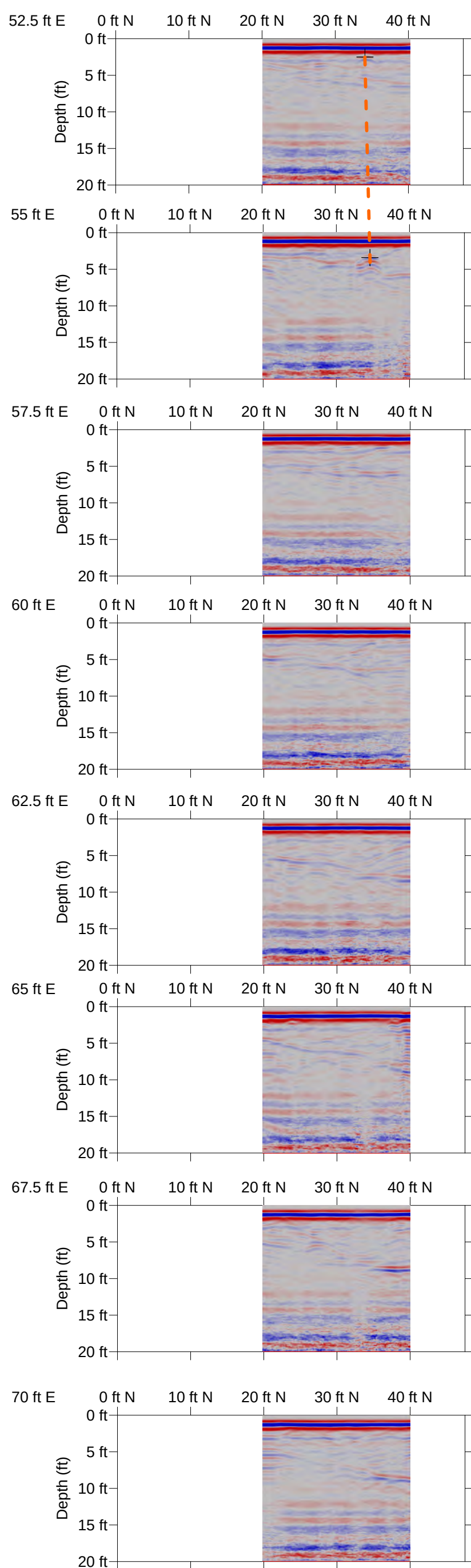
PROJECT				SoundTransit Federal Way Link Extension 23428 Pacific HWY S in Kent, WA (FL-209)			
TITLE				GPR Profiles in S-N Direction			
Global Geophysics P.O. Box 2229 Redmond, WA 98073-2229 Tel: 425-890-4321				Project #: 107-0428.005		FILE No.	
				DESIGN	--	SCALE	AS SHOWN
				CADD	JL	REV.	
				CHECK	JL		
				REVIEW	--		
				FIGURE 4			



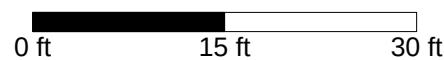
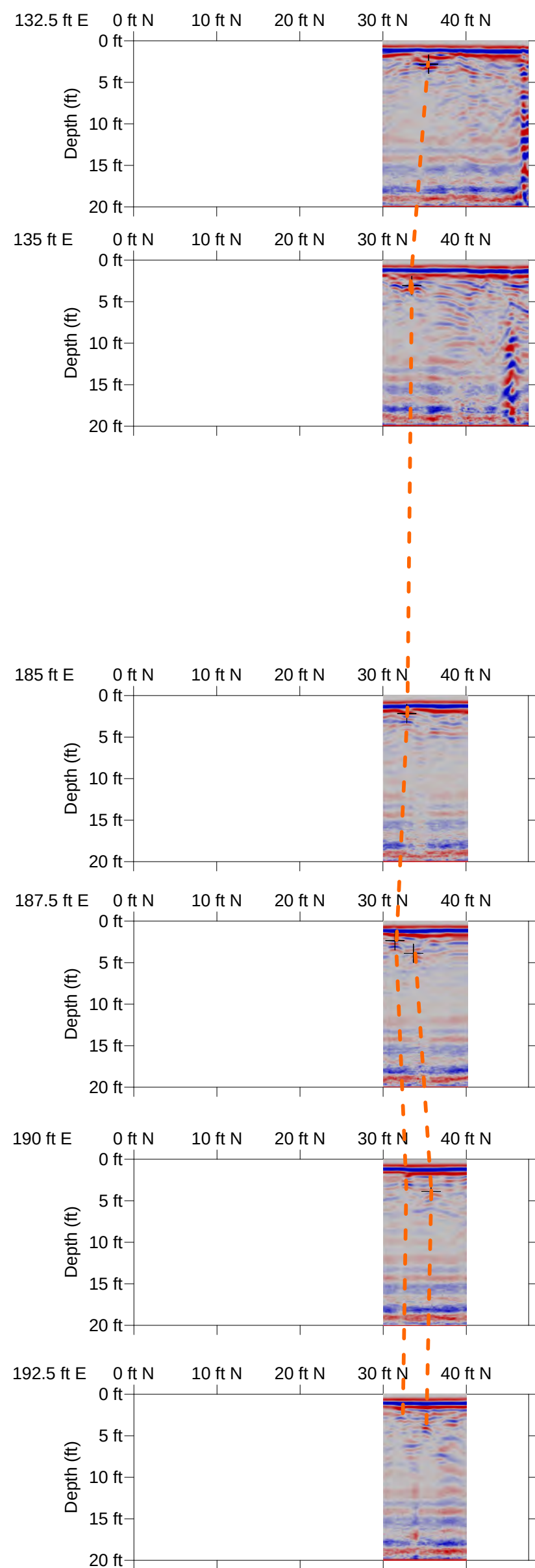
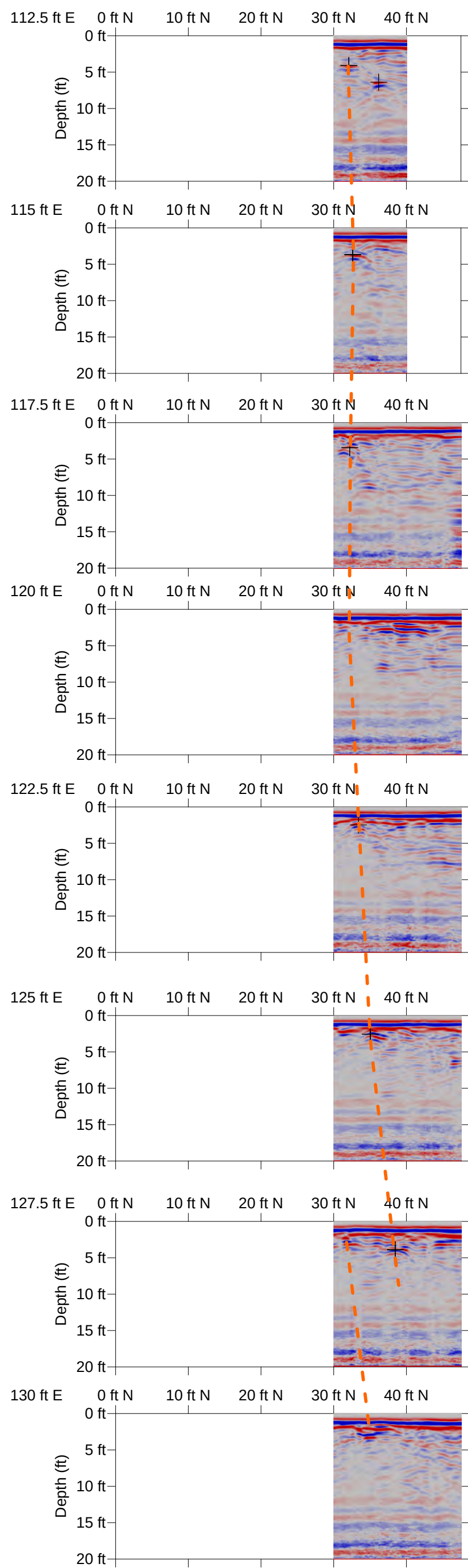
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TITLE		GPR Profiles in S-N Direction			
Global Geophysics P.O. Box 2229 Redmond, WA 98073-2229 Tel: 425-890-4321		Project #:	107-0428.005	FILE No.	
		DESIGN	--	SCALE	AS SHOWN
		CADD	JL		REV.
		CHECK	JL		
		REVIEW	--		
FIGURE 5					



PROJECT		SoundTransit Federal Way Link Extension 23428 Pacific HWY S in Kent, WA (FL-209)			
TITLE		GPR Profiles in S-N Direction			
Global Geophysics P.O. Box 2229 Redmond, WA 98073-2229 Tel: 425-890-4321		Project #: 107-0428.006		FILE No.	
		DESIGN	--	SCALE	AS SHOWN
		CADD	JL		REV.
		CHECK	JL		
		REVIEW	--		
					FIGURE 4



PROJECT				SoundTransit Federal Way Link Extension 23428 Pacific HWY S in Kent, WA (FL-209)			
TITLE				GPR Profiles in S-N Direction			
Global Geophysics P.O. Box 2229 Redmond, WA 98073-2229 Tel: 425-890-4321				Project #: 107-0428.005		FILE No.	
				DESIGN	--	SCALE	AS SHOWN
				CADD	JL	REV.	
				CHECK	JL		
				REVIEW	--		
				FIGURE 7			



PROJECT		SoundTransit Federal Way Link Extension 23428 Pacific HWY S in Kent, WA (FL-209)		
TITLE		GPR Profiles in S-N Direction		
Global Geophysics P.O. Box 2229 Redmond, WA 98073-2229 Tel: 425-890-4321		Project #:	107-0428.005	FILE No.
		DESIGN	--	SCALE AS SHOWN
		CADD	JL	REV.
		CHECK	JL	
		REVIEW	--	
FIGURE 8				

APPENDIX B
CHEMICAL ANALYTICAL PROGRAM

APPENDIX B

CHEMICAL ANALYTICAL DATA

Analytical Methods

Chain-of-custody procedures were followed during the transport of the soil and groundwater samples to the analytical laboratory. The samples were held in cold storage pending extraction and/or analysis. The analytical results, analytical methods reference and laboratory quality control (QC) records are included in this appendix. The analytical results are also summarized in the text and tables of this report.

Analytical Data Review

The laboratory maintains an internal quality assurance program as documented in its laboratory quality assurance manual. The laboratory uses a combination of blanks, surrogate recoveries, duplicates, matrix spike recoveries, matrix spike duplicate recoveries, blank spike recoveries and blank spike duplicate recoveries to evaluate the validity of the analytical results. The laboratory also uses data quality goals for individual chemicals or groups of chemicals based on the long-term performance of the test methods. The data quality goals were included in the laboratory reports. The laboratory compared each group of samples with the existing data quality goals and noted any exceptions in the laboratory report. Data quality exceptions documented by the accredited laboratory were reviewed by GeoEngineers and are addressed in the data quality exception section of this appendix.

Analytical Data Review Summary

The following data quality exceptions were noted in the laboratory reports during our review:

- Analyte detection limits were higher than MTCA Method A cleanup levels for samples FL209-B3-10-11 and FL209-B11-304 due to the necessary dilution of the sample.
- NWTPH-Dx: the practical quantitation limits (PQLs) for lube oil-range hydrocarbons in samples FL209-B3-10-11, FL209-B5-17.5-18.5, FL209-B8-22.5-23, FL209-B8-27.5-28, and FL209-B11-3-4 are elevated due to interferences present in the samples.
- NWTPH-Dx: hydrocarbons in the diesel range in samples FL209-B6-10-11, FL209-B7-5.5-6.5, FL209-B7-8-9, FL209-B7-15-16, and FL209-B8-6-6.5 are impacting the lube oil-range results.
- PAHs EPA 8270D/SIM: sample FL209-B4-0.5-1.5 had two surrogate recoveries fall outside of control limits believed to be caused by the sample matrix.
- PAHs EPA 8270D/SIM: sample FL209-B4-5.5-6.5 was extracted and analyzed out of hold-time.
- PAHs EPA 8270D/SIM: the PQLs for benzo(a)anthracene and chrysene in sample FL209-B8-20-21 are elevated due to interferences present in the sample.

- PAHs EPA 8270D/SIM: surrogate recovery data in sample FL209-B8-20-21 are not available due to the high concentration of coeluting target compounds.
- NWTPH-Gx: hydrocarbons indicative of heavier fuels are present in sample FL209-B4-0.5-1.5 and are impacting the gasoline result.
- Total Metals EPA 6010C/7471B: due to the high concentration of mercury in a QC batch sample, the amount spiked was insufficient for meaningful MS/MSD recovery data. The Spike Blank recovery was 106%. This mercury QC exception has no correlation to the mercury detections in samples FL209-B5 through FL209-B8 because the QC sample was not from the same sample batch as samples FL209-B5 through FL209-B8.

Based on our data quality review, it is our opinion that the laboratory data qualifiers listed for the samples above are not significant with regard to the use of the data for characterization purposes. The samples/results were considered of acceptable quality for their intended use in this report.



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

June 26, 2017

Marsi Beeson
GeoEngineers, Inc.
12000 NW Naito Prkway, Suite 180
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01
Laboratory Reference No. 1706-246

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on June 21, 2017.

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,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



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

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

Date of Report: June 26, 2017
Samples Submitted: June 21, 2017
Laboratory Reference: 1706-246
Project: 4082-039-01

Case Narrative

Samples were collected on June 20, 2017 and received by the laboratory on June 21, 2017. 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.

NWTPH Gx Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Volatiles EPA 8260C Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Some MTCA Method A cleanup levels are non-achievable for sample FL209-B3-10-11' due to the necessary dilution of the sample.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: June 26, 2017
Samples Submitted: June 21, 2017
Laboratory Reference: 1706-246
Project: 4082-039-01

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL209-B1-4.5-5'	06-246-02	Soil	6-20-17	6-21-17	
FL209-B1-9.5-10-5'	06-246-04	Soil	6-20-17	6-21-17	
FL209-B2-1-2'	06-246-06	Soil	6-20-17	6-21-17	
FL209-B3-1-2'	06-246-07	Soil	6-20-17	6-21-17	
FL209-B3-10-11'	06-246-10	Soil	6-20-17	6-21-17	
FL209-B3-15.5-16'	06-246-11	Soil	6-20-17	6-21-17	



Date of Report: June 26, 2017
 Samples Submitted: June 21, 2017
 Laboratory Reference: 1706-246
 Project: 4082-039-01

NWTPH-HCID

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-B1-4.5-5'					
Laboratory ID:	06-246-02					
Gasoline Range Organics	ND	22	NWTPH-HCID	6-23-17	6-26-17	
Diesel Range Organics	ND	55	NWTPH-HCID	6-23-17	6-26-17	
Lube Oil Range Organics	ND	110	NWTPH-HCID	6-23-17	6-26-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	108	50-150				

Client ID:	FL209-B1-9.5-10.5'					
Laboratory ID:	06-246-04					
Gasoline Range Organics	ND	22	NWTPH-HCID	6-23-17	6-23-17	
Diesel Range Organics	ND	56	NWTPH-HCID	6-23-17	6-23-17	
Lube Oil Range Organics	ND	110	NWTPH-HCID	6-23-17	6-23-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	81	50-150				

Client ID:	FL209-B2-1-2'					
Laboratory ID:	06-246-06					
Gasoline Range Organics	ND	23	NWTPH-HCID	6-23-17	6-26-17	
Diesel Range Organics	ND	57	NWTPH-HCID	6-23-17	6-26-17	
Lube Oil Range Organics	ND	110	NWTPH-HCID	6-23-17	6-26-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	88	50-150				



Date of Report: June 26, 2017
 Samples Submitted: June 21, 2017
 Laboratory Reference: 1706-246
 Project: 4082-039-01

NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-B3-10-11'					
Laboratory ID:	06-246-10					
Gasoline	ND	10	NWTPH-Gx	6-22-17	6-22-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	92	63-124				
Client ID:	FL209-B3-15.5-16'					
Laboratory ID:	06-246-11					
Gasoline	ND	5.8	NWTPH-Gx	6-22-17	6-23-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	90	63-124				



Date of Report: June 26, 2017
 Samples Submitted: June 21, 2017
 Laboratory Reference: 1706-246
 Project: 4082-039-01

NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-B3-10-11'					
Laboratory ID:	06-246-10					
Diesel Fuel #2	2500	28	NWTPH-Dx	6-23-17	6-23-17	
Lube Oil Range Organics	ND	240	NWTPH-Dx	6-23-17	6-23-17	U1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>109</i>	<i>50-150</i>				

Client ID:	FL209-B3-15.5-16'					
Laboratory ID:	06-246-11					
Diesel Range Organics	ND	28	NWTPH-Dx	6-23-17	6-23-17	
Lube Oil Range Organics	ND	55	NWTPH-Dx	6-23-17	6-23-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	<i>84</i>	<i>50-150</i>				



Date of Report: June 26, 2017
 Samples Submitted: June 21, 2017
 Laboratory Reference: 1706-246
 Project: 4082-039-01

VOLATILES EPA 8260C
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B1-9.5-10.5'				
Laboratory ID:		06-246-04				
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Chloromethane	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Bromomethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Chloroethane	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Acetone	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
Iodomethane	ND	0.0082	EPA 8260C	6-22-17	6-22-17	
Carbon Disulfide	ND	0.0022	EPA 8260C	6-22-17	6-22-17	
Methylene Chloride	ND	0.010	EPA 8260C	6-22-17	6-22-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Vinyl Acetate	ND	0.0071	EPA 8260C	6-22-17	6-22-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
2-Butanone	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
Bromochloromethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Chloroform	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Benzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Trichloroethene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Dibromomethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
Toluene	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	



Date of Report: June 26, 2017
 Samples Submitted: June 21, 2017
 Laboratory Reference: 1706-246
 Project: 4082-039-01

VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B1-9.5-10.5'				
Laboratory ID:		06-246-04				
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
2-Hexanone	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Chlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Ethylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
m,p-Xylene	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
o-Xylene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Styrene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Bromoform	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Bromobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
Naphthalene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	100	73-134				
Toluene-d8	105	81-124				
4-Bromofluorobenzene	103	80-131				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B3-10-11'				
Laboratory ID:		06-246-10				
Dichlorodifluoromethane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Chloromethane	ND	0.24	EPA 8260C	6-22-17	6-22-17	
Vinyl Chloride	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Bromomethane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Chloroethane	ND	0.24	EPA 8260C	6-22-17	6-22-17	
Trichlorofluoromethane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,1-Dichloroethene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Acetone	ND	0.24	EPA 8260C	6-22-17	6-22-17	
Iodomethane	ND	0.39	EPA 8260C	6-22-17	6-22-17	
Carbon Disulfide	ND	0.11	EPA 8260C	6-22-17	6-22-17	
Methylene Chloride	ND	0.48	EPA 8260C	6-22-17	6-22-17	
(trans) 1,2-Dichloroethene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Methyl t-Butyl Ether	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,1-Dichloroethane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Vinyl Acetate	ND	0.34	EPA 8260C	6-22-17	6-22-17	
2,2-Dichloropropane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
(cis) 1,2-Dichloroethene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
2-Butanone	ND	0.24	EPA 8260C	6-22-17	6-22-17	
Bromochloromethane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Chloroform	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,1,1-Trichloroethane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Carbon Tetrachloride	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,1-Dichloropropene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Benzene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,2-Dichloroethane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Trichloroethene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,2-Dichloropropane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Dibromomethane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Bromodichloromethane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
2-Chloroethyl Vinyl Ether	ND	0.24	EPA 8260C	6-22-17	6-22-17	
(cis) 1,3-Dichloropropene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Methyl Isobutyl Ketone	ND	0.24	EPA 8260C	6-22-17	6-22-17	
Toluene	ND	0.24	EPA 8260C	6-22-17	6-22-17	
(trans) 1,3-Dichloropropene	ND	0.048	EPA 8260C	6-22-17	6-22-17	



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

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

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B3-10-11'				
Laboratory ID:		06-246-10				
1,1,2-Trichloroethane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Tetrachloroethene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,3-Dichloropropane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
2-Hexanone	ND	0.24	EPA 8260C	6-22-17	6-22-17	
Dibromochloromethane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,2-Dibromoethane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Chlorobenzene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,1,1,2-Tetrachloroethane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Ethylbenzene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
m,p-Xylene	ND	0.24	EPA 8260C	6-22-17	6-22-17	
o-Xylene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Styrene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Bromoform	ND	0.24	EPA 8260C	6-22-17	6-22-17	
Isopropylbenzene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Bromobenzene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,1,2,2-Tetrachloroethane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,2,3-Trichloropropane	ND	0.048	EPA 8260C	6-22-17	6-22-17	
n-Propylbenzene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
2-Chlorotoluene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
4-Chlorotoluene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,3,5-Trimethylbenzene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
tert-Butylbenzene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,2,4-Trimethylbenzene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
sec-Butylbenzene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,3-Dichlorobenzene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
p-Isopropyltoluene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,4-Dichlorobenzene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,2-Dichlorobenzene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
n-Butylbenzene	0.065	0.048	EPA 8260C	6-22-17	6-22-17	
1,2-Dibromo-3-chloropropane	ND	0.24	EPA 8260C	6-22-17	6-22-17	
1,2,4-Trichlorobenzene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
Hexachlorobutadiene	ND	0.24	EPA 8260C	6-22-17	6-22-17	
Naphthalene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
1,2,3-Trichlorobenzene	ND	0.048	EPA 8260C	6-22-17	6-22-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>97</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>100</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>103</i>	<i>80-131</i>				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B3-15.5-16'						
Laboratory ID: 06-246-11						
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Chloromethane	ND	0.0051	EPA 8260C	6-22-17	6-22-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Bromomethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Chloroethane	ND	0.0051	EPA 8260C	6-22-17	6-22-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Acetone	ND	0.0051	EPA 8260C	6-22-17	6-22-17	
Iodomethane	ND	0.0084	EPA 8260C	6-22-17	6-22-17	
Carbon Disulfide	ND	0.0023	EPA 8260C	6-22-17	6-22-17	
Methylene Chloride	ND	0.010	EPA 8260C	6-22-17	6-22-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Vinyl Acetate	ND	0.0073	EPA 8260C	6-22-17	6-22-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
2-Butanone	ND	0.0051	EPA 8260C	6-22-17	6-22-17	
Bromochloromethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Chloroform	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Benzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Trichloroethene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Dibromomethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
2-Chloroethyl Vinyl Ether	ND	0.0051	EPA 8260C	6-22-17	6-22-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Methyl Isobutyl Ketone	ND	0.0051	EPA 8260C	6-22-17	6-22-17	
Toluene	ND	0.0051	EPA 8260C	6-22-17	6-22-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B3-15.5-16'				
Laboratory ID:		06-246-11				
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
2-Hexanone	ND	0.0051	EPA 8260C	6-22-17	6-22-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Chlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Ethylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
m,p-Xylene	ND	0.0051	EPA 8260C	6-22-17	6-22-17	
o-Xylene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Styrene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Bromoform	ND	0.0051	EPA 8260C	6-22-17	6-22-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Bromobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2-Dibromo-3-chloropropane	ND	0.0051	EPA 8260C	6-22-17	6-22-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Hexachlorobutadiene	ND	0.0051	EPA 8260C	6-22-17	6-22-17	
Naphthalene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	110	73-134				
Toluene-d8	112	81-124				
4-Bromofluorobenzene	115	80-131				



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**TOTAL METALS
EPA 6010C**

Matrix: Soil
Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	06-246-07					
Client ID:	FL209-B3-1-2'					
Arsenic	ND	11	6010C	6-22-17	6-22-17	
Lead	22	5.4	6010C	6-22-17	6-22-17	



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**NWTPH-HCID
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0623S2					
Gasoline Range Organics	ND	20	NWTPH-HCID	6-23-17	6-23-17	
Diesel Range Organics	ND	50	NWTPH-HCID	6-23-17	6-23-17	
Lube Oil Range Organics	ND	100	NWTPH-HCID	6-23-17	6-23-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	92	50-150				



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**NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0622S1					
Gasoline	ND	5.0	NWTPH-Gx	6-22-17	6-22-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	63-124				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	06-243-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				92	92	63-124		



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**NWTPH-Dx
QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0623S1					
Diesel Range Organics	ND	25	NWTPH-Dx	6-23-17	6-23-17	
Lube Oil Range Organics	ND	50	NWTPH-Dx	6-23-17	6-23-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	103	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	06-266-01							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	
Surrogate:								
o-Terphenyl				72	80	50-150		



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METHOD BLANK QUALITY CONTROL
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0622S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Chloromethane	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Bromomethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Chloroethane	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Acetone	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
Iodomethane	ND	0.0082	EPA 8260C	6-22-17	6-22-17	
Carbon Disulfide	ND	0.0022	EPA 8260C	6-22-17	6-22-17	
Methylene Chloride	ND	0.010	EPA 8260C	6-22-17	6-22-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Vinyl Acetate	ND	0.0071	EPA 8260C	6-22-17	6-22-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
2-Butanone	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
Bromochloromethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Chloroform	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Benzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Trichloroethene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Dibromomethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
Toluene	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	



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METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0622S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
2-Hexanone	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Chlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Ethylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
m,p-Xylene	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
o-Xylene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Styrene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Bromoform	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Bromobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	6-22-17	6-22-17	
Naphthalene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	6-22-17	6-22-17	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	100	73-134				
Toluene-d8	104	81-124				
4-Bromofluorobenzene	105	80-131				



Date of Report: June 26, 2017
 Samples Submitted: June 21, 2017
 Laboratory Reference: 1706-246
 Project: 4082-039-01

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits		RPD	Limit	Flags
					Recovery				RPD		
SPIKE BLANKS											
Laboratory ID:	SB0622S1										
	SB	SBD	SB	SBD	SB	SBD					
1,1-Dichloroethene	0.0389	0.0377	0.0500	0.0500	78	75	66-127	3		15	
Benzene	0.0457	0.0452	0.0500	0.0500	91	90	76-122	1		15	
Trichloroethene	0.0476	0.0463	0.0500	0.0500	95	93	78-120	3		15	
Toluene	0.0511	0.0506	0.0500	0.0500	102	101	83-120	1		15	
Chlorobenzene	0.0473	0.0477	0.0500	0.0500	95	95	81-120	1		15	
Surrogate:											
Dibromofluoromethane					96	98	73-134				
Toluene-d8					99	98	81-124				
4-Bromofluorobenzene					100	101	80-131				



Date of Report: June 26, 2017
Samples Submitted: June 21, 2017
Laboratory Reference: 1706-246
Project: 4082-039-01

**TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL**

Date Extracted: 6-22-17
Date Analyzed: 6-22-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0622SM1

Analyte	Method	Result	PQL
Arsenic	6010C	ND	10
Lead	6010C	ND	5.0



Date of Report: June 26, 2017
Samples Submitted: June 21, 2017
Laboratory Reference: 1706-246
Project: 4082-039-01

**TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL**

Date Extracted: 6-22-17
Date Analyzed: 6-22-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-239-16

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	10	
Lead	ND	ND	NA	5.0	



Date of Report: June 26, 2017
Samples Submitted: June 21, 2017
Laboratory Reference: 1706-246
Project: 4082-039-01

**TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL**

Date Extracted: 6-22-17

Date Analyzed: 6-22-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 06-239-16

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	90.6	91	91.9	92	1	
Lead	250	232	93	231	92	0	



Date of Report: June 26, 2017
Samples Submitted: June 21, 2017
Laboratory Reference: 1706-246
Project: 4082-039-01

% MOISTURE

Date Analyzed: 6-22,23&26-17

Client ID	Lab ID	% Moisture
FL209-B1-4.5-5'	06-246-02	9
FL209-B1-9.5-10.5'	06-246-04	10
FL209-B2-1-2'	06-246-06	12
FL209-B3-1-2'	06-246-07	8
FL209-B3-10-11'	06-246-10	10
FL209-B3-15.5-16'	06-246-11	9





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





Page 1 of 2

GEOTECHNICALS

Project Name: Sound Transit

Project Manager: Markus Beck
JOHN DEEDS

Sampled by: Atton Federman / Chelsea Gohr

[illegible]

☐ Same Day ☐ 1 Day
☐ 2 Days ☒ 3 Days
☐ Standard (7 Days)
 (TPH analysis 5 Days)

☐ _____ (other)

NWTPH-HCID
NWTPH-Gx/BTEX
NWTPH-Gx
NWTPH-Dx (☐ Acid / SG Clean-up)
Volatiles 8260C
Halogenated Volatiles 8260C
EDB EPA 8011 (Waters Only)
Semivolatiles 8270D/SIM (with low-level PAHs)
PAHs 8270D/SIM (low-level)
PCBs 8082A
Organochlorine Pesticides 8081B
Organophosphorus Pesticides 8270D/SIM
Chlorinated Acid Herbicides 8151A
Total RCRA Metals
Total MTCA Metals
TCLP Metals
HEM (oil and grease) 1664A
<i>Total Lead + Arsenic</i>

% Moisture

06-246

Company

Date _____

Time

Comments/Special Instructions

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

1574

6/21/12

53.

Yes

100

[illegible]

0100

A

2/6/11

10/21/17

1710

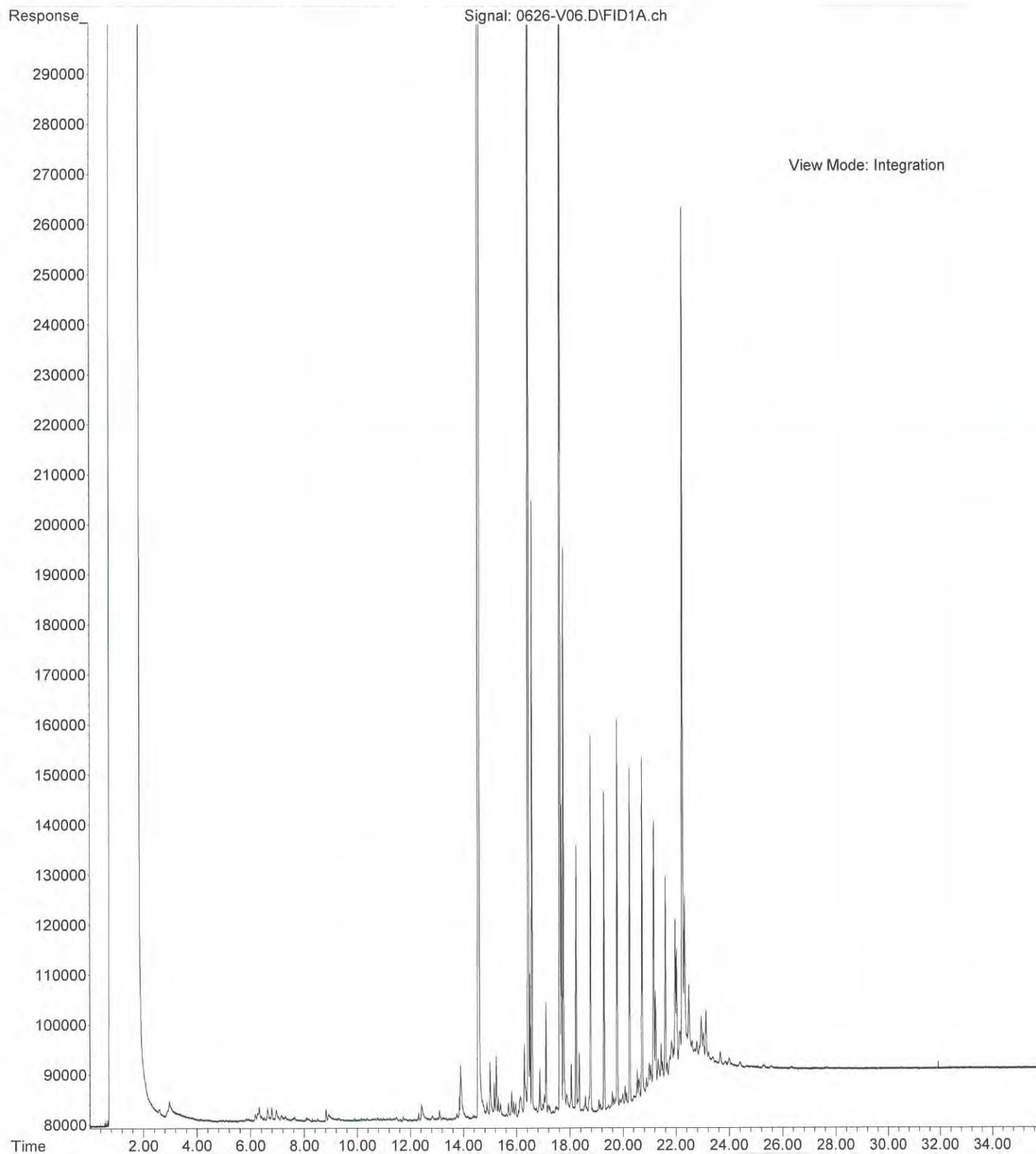
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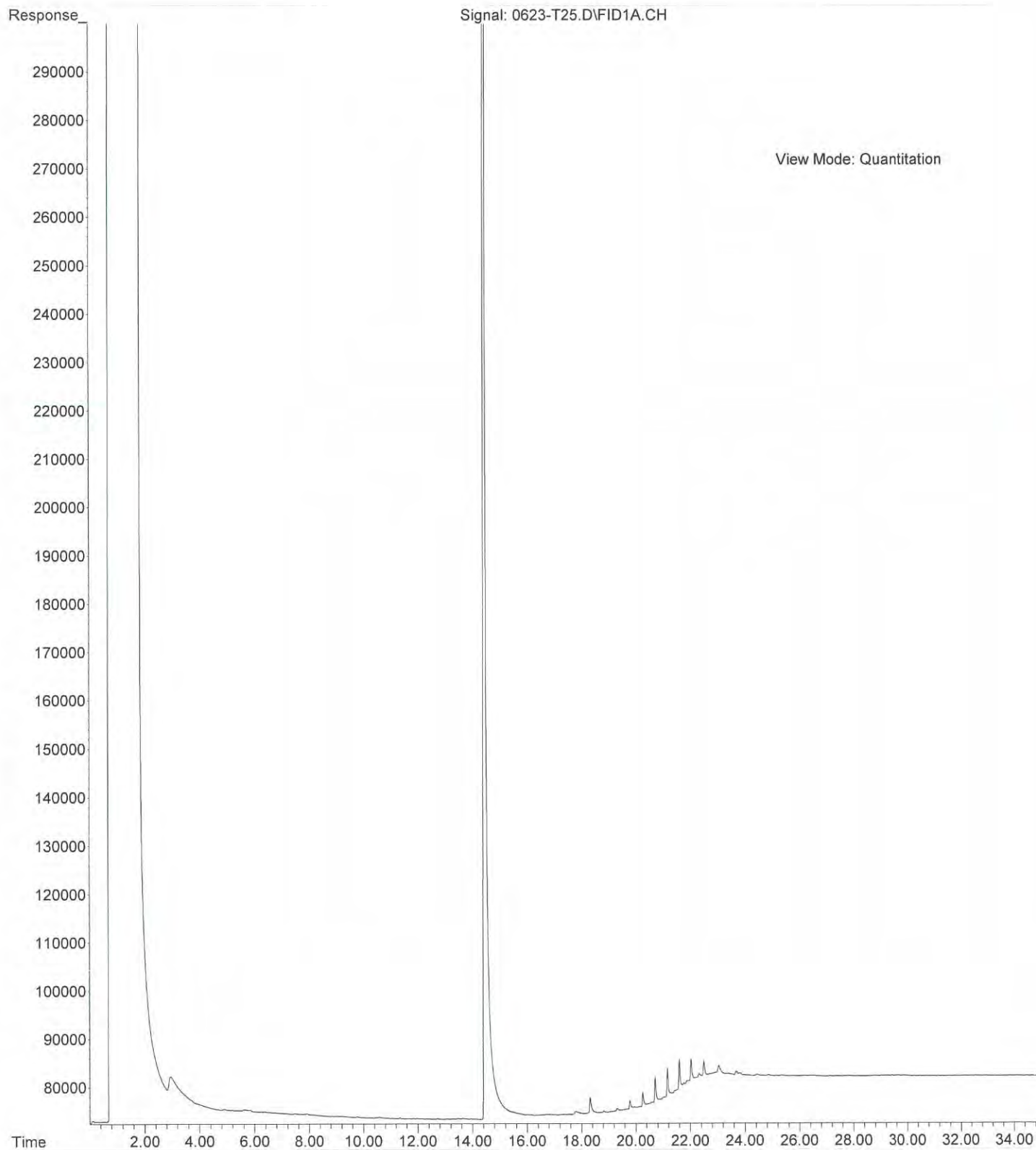
Reviewed/Date

Data Package: Standard ☐ Level III ☐ Level IV ☐Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

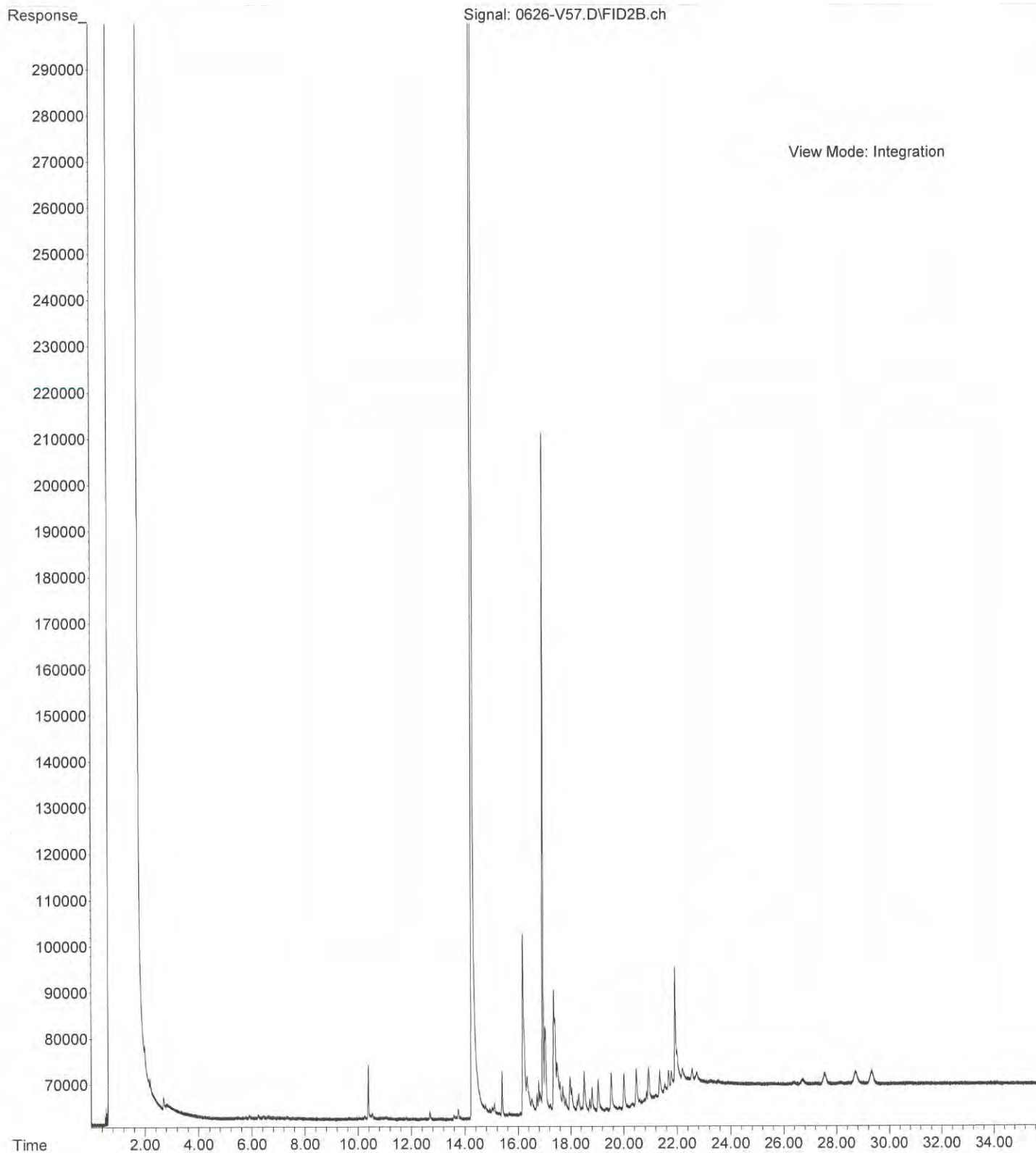
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Operator :
Acquired : 26 Jun 2017 12:10 using AcqMethod V170615F.M
Instrument : Vigo
Sample Name: 06-246-02
Misc Info :
Vial Number: 6



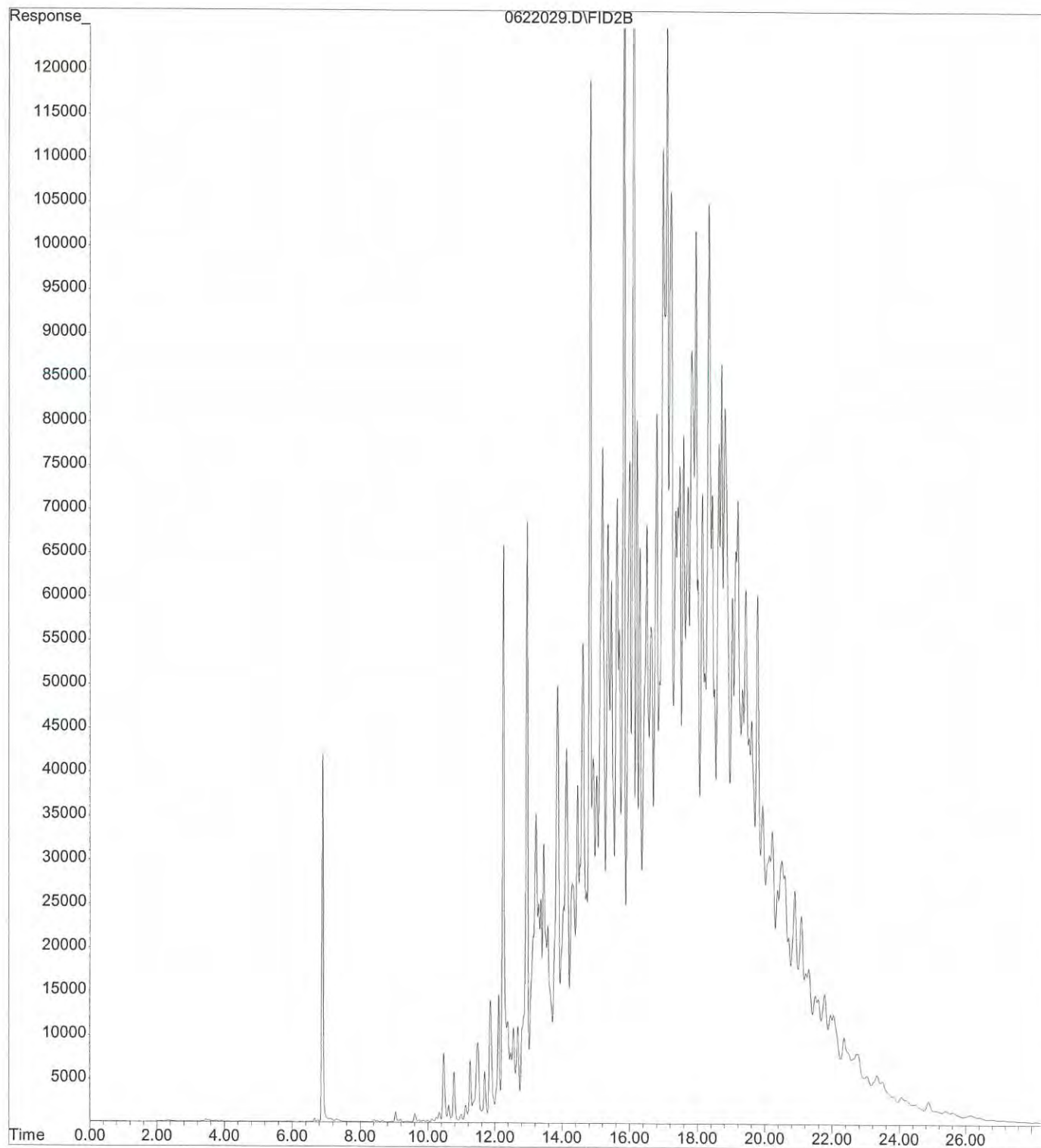
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Operator : ZT
Acquired : 24 Jun 2017 1:18 using AcqMethod T161216F.M
Instrument : Teri
Sample Name: 06-246-04
Misc Info :
Vial Number: 25



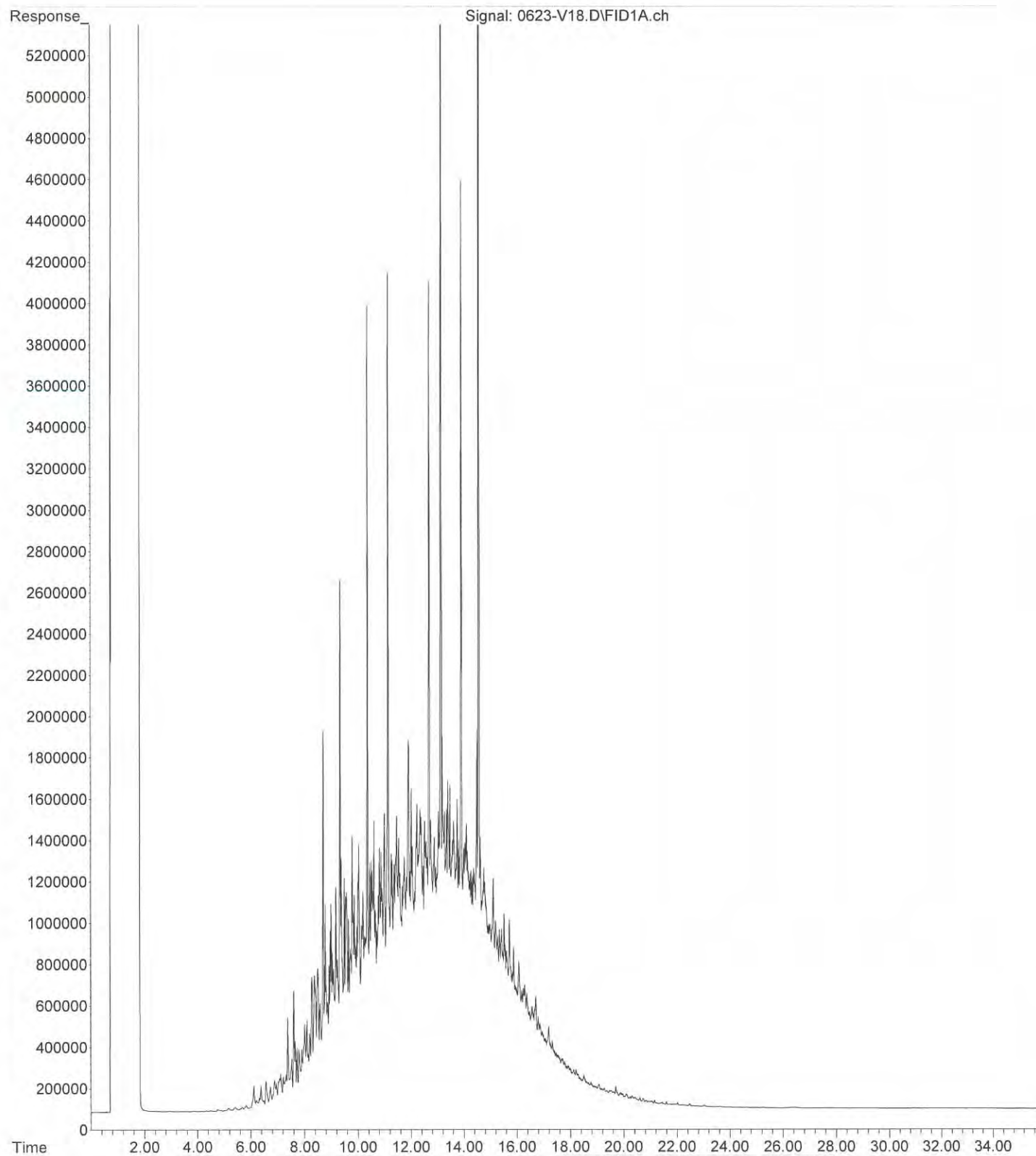
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Operator :
Acquired : 26 Jun 2017 12:53 using AcqMethod V170615F.M
Instrument : Vigo
Sample Name: 06-246-06
Misc Info :
Vial Number: 57



File : X:\BTEX\DARYL\DATA\D170622\0622029.D
Operator :
Acquired : 23 Jun 2017 1:50 using AcqMethod 170616G.M
Instrument : Daryl
Sample Name: 06-246-10s 1:100
Misc Info :
Vial Number: 29



File :X:\DIESELS\VIGO\DATA\V170623\0623-V18.D
Operator :
Acquired : 23 Jun 2017 20:06 using AcqMethod V170615F.M
Instrument : Vigo
Sample Name: 06-246-10
Misc Info :
Vial Number: 18





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

July 19, 2017

Marsi Beeson
GeoEngineers, Inc.
15055 SW Sequoia Parkway,
Suite 140
Portland, OR 97224

Re: Analytical Data for Project 4082-039-01
Laboratory Reference No. 1706-260

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on June 22, 2017.

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,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



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

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

Date of Report: July 19, 2017
Samples Submitted: June 22, 2017
Laboratory Reference: 1706-260
Project: 4082-039-01

Case Narrative

Samples were collected on June 21, 2017 and received by the laboratory on June 22, 2017. 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.

NWTPH Gx and Volatiles EPA 8260C Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

PAHs EPA 8270D/SIM Analysis

Sample FL209-B4-0.5-1.5' had two surrogates recoveries fall outside of control limits believed to be caused by the sample matrix.

Sample FL209-B4-5.5-6.5' was extracted and analyzed out of hold-time.

Please note that any other QA/QC issues associated with these extractions and analyses will be indicated with a footnote reference and discussed in detail on the Data Qualifier page.



Date of Report: July 19, 2017
Samples Submitted: June 22, 2017
Laboratory Reference: 1706-260
Project: 4082-039-01

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL209-B4-0.5-1.5'	06-260-02	Soil	6-21-17	6-22-17	
FL209-B4-5.5-6.5'	06-260-03	Soil	6-21-17	6-22-17	
FL209-B6-0.5-1.5'	06-260-07	Soil	6-21-17	6-22-17	
FL209-B6-10-11'	06-260-09	Soil	6-21-17	6-22-17	
FL209-B6-20.5-21'	06-260-11	Soil	6-21-17	6-22-17	
FL209-B6-27.5-28'	06-260-12	Soil	6-21-17	6-22-17	
FL209-DRUM-C	06-260-14	Soil	6-21-17	6-22-17	



Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-B4-0.5-1.5'					
Laboratory ID:	06-260-02					
Gasoline	720	26	NWTPH-Gx	6-26-17	6-26-17	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	78	63-124				
Client ID:	FL209-B4-5.5-6.5'					
Laboratory ID:	06-260-03					
Gasoline	ND	5.5	NWTPH-Gx	6-26-17	6-26-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	94	63-124				
Client ID:	FL209-B6-10-11'					
Laboratory ID:	06-260-09					
Gasoline	ND	9.6	NWTPH-Gx	6-26-17	6-26-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	94	63-124				
Client ID:	FL209-B6-20.5-21'					
Laboratory ID:	06-260-11					
Gasoline	ND	12	NWTPH-Gx	6-26-17	6-26-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	92	63-124				
Client ID:	FL209-B6-27.5-28'					
Laboratory ID:	06-260-12					
Gasoline	ND	5.4	NWTPH-Gx	6-26-17	6-26-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	92	63-124				
Client ID:	FL209-DRUM-C					
Laboratory ID:	06-260-14					
Gasoline	ND	12	NWTPH-Gx	6-26-17	6-26-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	94	63-124				



Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B4-0.5-1.5'						
Laboratory ID:	06-260-02					
Diesel Range Organics	1400	130	NWTPH-Dx	6-27-17	6-29-17	
Lube Oil Range Organics	1600	260	NWTPH-Dx	6-27-17	6-29-17	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	115	50-150				
Client ID: FL209-B4-5.5-6.5'						
Laboratory ID:	06-260-03					
Diesel Range Organics	41	29	NWTPH-Dx	6-27-17	6-28-17	
Lube Oil Range Organics	ND	57	NWTPH-Dx	6-27-17	6-28-17	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	105	50-150				
Client ID: FL209-B6-10-11'						
Laboratory ID:	06-260-09					
Diesel Fuel #2	1500	28	NWTPH-Dx	6-27-17	6-28-17	
Lube Oil	610	57	NWTPH-Dx	6-27-17	6-28-17	N1
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	106	50-150				
Client ID: FL209-B6-20.5-21'						
Laboratory ID:	06-260-11					
Diesel Fuel #2	370	27	NWTPH-Dx	6-27-17	6-28-17	
Lube Oil Range Organics	ND	54	NWTPH-Dx	6-27-17	6-28-17	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	103	50-150				
Client ID: FL209-B6-27.5-28'						
Laboratory ID:	06-260-12					
Diesel Range Organics	ND	27	NWTPH-Dx	6-27-17	6-28-17	
Lube Oil Range Organics	ND	55	NWTPH-Dx	6-27-17	6-28-17	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	124	50-150				
Client ID: FL209-DRUM-C						
Laboratory ID:	06-260-14					
Diesel Fuel #2	410	28	NWTPH-Dx	6-27-17	6-28-17	
Lube Oil	210	56	NWTPH-Dx	6-27-17	6-28-17	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	102	50-150				



Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

VOLATILES EPA 8260C

Page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B4-0.5-1.5'						
Laboratory ID: 06-260-02						
Dichlorodifluoromethane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Chloromethane	ND	0.25	EPA 8260C	6-26-17	6-27-17	
Vinyl Chloride	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Bromomethane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Chloroethane	ND	0.25	EPA 8260C	6-26-17	6-27-17	
Trichlorofluoromethane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
1,1-Dichloroethene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Acetone	ND	0.25	EPA 8260C	6-26-17	6-27-17	
Iodomethane	ND	0.39	EPA 8260C	6-26-17	6-27-17	
Carbon Disulfide	ND	0.11	EPA 8260C	6-26-17	6-27-17	
Methylene Chloride	ND	0.50	EPA 8260C	6-26-17	6-27-17	
(trans) 1,2-Dichloroethene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Methyl t-Butyl Ether	ND	0.050	EPA 8260C	6-26-17	6-27-17	
1,1-Dichloroethane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Vinyl Acetate	ND	0.35	EPA 8260C	6-26-17	6-27-17	
2,2-Dichloropropane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
(cis) 1,2-Dichloroethene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
2-Butanone	ND	0.25	EPA 8260C	6-26-17	6-27-17	
Bromochloromethane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Chloroform	ND	0.050	EPA 8260C	6-26-17	6-27-17	
1,1,1-Trichloroethane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Carbon Tetrachloride	ND	0.050	EPA 8260C	6-26-17	6-27-17	
1,1-Dichloropropene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Benzene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
1,2-Dichloroethane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Trichloroethene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
1,2-Dichloropropane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Dibromomethane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Bromodichloromethane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
2-Chloroethyl Vinyl Ether	ND	0.25	EPA 8260C	6-26-17	6-27-17	
(cis) 1,3-Dichloropropene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Methyl Isobutyl Ketone	ND	0.25	EPA 8260C	6-26-17	6-27-17	
Toluene	ND	0.25	EPA 8260C	6-26-17	6-27-17	
(trans) 1,3-Dichloropropene	ND	0.050	EPA 8260C	6-26-17	6-27-17	



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

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

Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

VOLATILES EPA 8260C
 Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B4-0.5-1.5'				
Laboratory ID:		06-260-02				
1,1,2-Trichloroethane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Tetrachloroethene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
1,3-Dichloropropane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
2-Hexanone	ND	0.25	EPA 8260C	6-26-17	6-27-17	
Dibromochloromethane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
1,2-Dibromoethane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Chlorobenzene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
1,1,1,2-Tetrachloroethane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Ethylbenzene	0.38	0.050	EPA 8260C	6-26-17	6-27-17	
m,p-Xylene	1.7	0.10	EPA 8260C	6-26-17	6-27-17	
o-Xylene	0.94	0.050	EPA 8260C	6-26-17	6-27-17	
Styrene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Bromoform	ND	0.25	EPA 8260C	6-26-17	6-27-17	
Isopropylbenzene	0.30	0.050	EPA 8260C	6-26-17	6-27-17	
Bromobenzene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
1,1,2,2-Tetrachloroethane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
1,2,3-Trichloropropane	ND	0.050	EPA 8260C	6-26-17	6-27-17	
n-Propylbenzene	0.48	0.050	EPA 8260C	6-26-17	6-27-17	
2-Chlorotoluene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
4-Chlorotoluene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
1,3,5-Trimethylbenzene	1.5	0.050	EPA 8260C	6-26-17	6-27-17	
tert-Butylbenzene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
1,2,4-Trimethylbenzene	4.7	0.050	EPA 8260C	6-26-17	6-27-17	
sec-Butylbenzene	0.29	0.050	EPA 8260C	6-26-17	6-27-17	
1,3-Dichlorobenzene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
p-Isopropyltoluene	0.80	0.050	EPA 8260C	6-26-17	6-27-17	
1,4-Dichlorobenzene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
1,2-Dichlorobenzene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
n-Butylbenzene	1.0	0.050	EPA 8260C	6-26-17	6-27-17	
1,2-Dibromo-3-chloropropane	ND	0.25	EPA 8260C	6-26-17	6-27-17	
1,2,4-Trichlorobenzene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
Hexachlorobutadiene	ND	0.25	EPA 8260C	6-26-17	6-27-17	
Naphthalene	6.8	0.050	EPA 8260C	6-26-17	6-27-17	
1,2,3-Trichlorobenzene	ND	0.050	EPA 8260C	6-26-17	6-27-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	95	73-134				
Toluene-d8	101	81-124				
4-Bromofluorobenzene	104	80-131				



Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B4-5.5-6.5'						
Laboratory ID: 06-260-03						
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Chloromethane	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Bromomethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Chloroethane	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Acetone	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
Iodomethane	ND	0.0064	EPA 8260C	6-26-17	6-26-17	
Carbon Disulfide	ND	0.0017	EPA 8260C	6-26-17	6-26-17	
Methylene Chloride	ND	0.010	EPA 8260C	6-26-17	6-26-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
2-Butanone	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
Bromochloromethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Chloroform	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Benzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Trichloroethene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Dibromomethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
Toluene	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	



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Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B4-5.5-6.5'				
Laboratory ID:		06-260-03				
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
2-Hexanone	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Chlorobenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Ethylbenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
m,p-Xylene	ND	0.0020	EPA 8260C	6-26-17	6-26-17	
o-Xylene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Styrene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Bromoform	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Bromobenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
Naphthalene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>117</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>116</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>112</i>	<i>80-131</i>				



Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B6-10-11'				
Laboratory ID:		06-260-09				
Dichlorodifluoromethane	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Chloromethane	ND	0.0042	EPA 8260C	6-27-17	6-27-17	
Vinyl Chloride	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Bromomethane	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Chloroethane	ND	0.0042	EPA 8260C	6-27-17	6-27-17	
Trichlorofluoromethane	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
1,1-Dichloroethene	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Acetone	0.058	0.0042	EPA 8260C	6-27-17	6-27-17	
Iodomethane	ND	0.0066	EPA 8260C	6-27-17	6-27-17	
Carbon Disulfide	ND	0.0018	EPA 8260C	6-27-17	6-27-17	
Methylene Chloride	ND	0.0084	EPA 8260C	6-27-17	6-27-17	
(trans) 1,2-Dichloroethene	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Methyl t-Butyl Ether	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
1,1-Dichloroethane	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Vinyl Acetate	ND	0.0059	EPA 8260C	6-27-17	6-27-17	
2,2-Dichloropropane	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
(cis) 1,2-Dichloroethene	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
2-Butanone	ND	0.0042	EPA 8260C	6-27-17	6-27-17	
Bromochloromethane	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Chloroform	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
1,1,1-Trichloroethane	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Carbon Tetrachloride	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
1,1-Dichloropropene	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Benzene	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
1,2-Dichloroethane	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Trichloroethene	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
1,2-Dichloropropane	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Dibromomethane	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Bromodichloromethane	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
2-Chloroethyl Vinyl Ether	ND	0.0042	EPA 8260C	6-27-17	6-27-17	
(cis) 1,3-Dichloropropene	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Methyl Isobutyl Ketone	ND	0.0042	EPA 8260C	6-27-17	6-27-17	
Toluene	ND	0.0042	EPA 8260C	6-27-17	6-27-17	
(trans) 1,3-Dichloropropene	ND	0.00084	EPA 8260C	6-27-17	6-27-17	



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Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B6-10-11'				
Laboratory ID:		06-260-09				
1,1,2-Trichloroethane	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Tetrachloroethene	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
1,3-Dichloropropane	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
2-Hexanone	ND	0.0042	EPA 8260C	6-27-17	6-27-17	
Dibromochloromethane	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
1,2-Dibromoethane	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Chlorobenzene	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
1,1,1,2-Tetrachloroethane	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Ethylbenzene	0.0015	0.00084	EPA 8260C	6-27-17	6-27-17	
m,p-Xylene	0.0039	0.0017	EPA 8260C	6-27-17	6-27-17	
o-Xylene	0.0022	0.00084	EPA 8260C	6-27-17	6-27-17	
Styrene	ND	0.00084	EPA 8260C	6-27-17	6-27-17	
Bromoform	ND	0.0042	EPA 8260C	6-27-17	6-27-17	
Isopropylbenzene	0.013	0.00084	EPA 8260C	6-27-17	6-27-17	
Bromobenzene	ND	0.055	EPA 8260C	6-26-17	6-26-17	
1,1,2,2-Tetrachloroethane	ND	0.055	EPA 8260C	6-26-17	6-26-17	
1,2,3-Trichloropropane	ND	0.055	EPA 8260C	6-26-17	6-26-17	
n-Propylbenzene	ND	0.055	EPA 8260C	6-26-17	6-26-17	
2-Chlorotoluene	ND	0.055	EPA 8260C	6-26-17	6-26-17	
4-Chlorotoluene	ND	0.055	EPA 8260C	6-26-17	6-26-17	
1,3,5-Trimethylbenzene	ND	0.055	EPA 8260C	6-26-17	6-26-17	
tert-Butylbenzene	ND	0.055	EPA 8260C	6-26-17	6-26-17	
1,2,4-Trimethylbenzene	ND	0.055	EPA 8260C	6-26-17	6-26-17	
sec-Butylbenzene	0.055	0.055	EPA 8260C	6-26-17	6-26-17	
1,3-Dichlorobenzene	ND	0.055	EPA 8260C	6-26-17	6-26-17	
p-Isopropyltoluene	0.064	0.055	EPA 8260C	6-26-17	6-26-17	
1,4-Dichlorobenzene	ND	0.055	EPA 8260C	6-26-17	6-26-17	
1,2-Dichlorobenzene	ND	0.055	EPA 8260C	6-26-17	6-26-17	
n-Butylbenzene	0.12	0.055	EPA 8260C	6-26-17	6-26-17	
1,2-Dibromo-3-chloropropane	ND	0.28	EPA 8260C	6-26-17	6-26-17	
1,2,4-Trichlorobenzene	ND	0.055	EPA 8260C	6-26-17	6-26-17	
Hexachlorobutadiene	ND	0.28	EPA 8260C	6-26-17	6-26-17	
Naphthalene	ND	0.055	EPA 8260C	6-26-17	6-26-17	
1,2,3-Trichlorobenzene	ND	0.055	EPA 8260C	6-26-17	6-26-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	109	73-134				
Toluene-d8	103	81-124				
4-Bromofluorobenzene	98	80-131				



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Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

VOLATILES EPA 8260C

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B6-20.5-21'						
Laboratory ID: 06-260-11						
Dichlorodifluoromethane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Chloromethane	ND	0.0043	EPA 8260C	6-27-17	6-27-17	
Vinyl Chloride	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Bromomethane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Chloroethane	ND	0.0043	EPA 8260C	6-27-17	6-27-17	
Trichlorofluoromethane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,1-Dichloroethene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Acetone	0.022	0.0043	EPA 8260C	6-27-17	6-27-17	
Iodomethane	ND	0.0067	EPA 8260C	6-27-17	6-27-17	
Carbon Disulfide	ND	0.0018	EPA 8260C	6-27-17	6-27-17	
Methylene Chloride	ND	0.0086	EPA 8260C	6-27-17	6-27-17	
(trans) 1,2-Dichloroethene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Methyl t-Butyl Ether	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,1-Dichloroethane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Vinyl Acetate	ND	0.0060	EPA 8260C	6-27-17	6-27-17	
2,2-Dichloropropane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
(cis) 1,2-Dichloroethene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
2-Butanone	ND	0.0043	EPA 8260C	6-27-17	6-27-17	
Bromochloromethane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Chloroform	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,1,1-Trichloroethane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Carbon Tetrachloride	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,1-Dichloropropene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Benzene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,2-Dichloroethane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Trichloroethene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,2-Dichloropropane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Dibromomethane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Bromodichloromethane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
2-Chloroethyl Vinyl Ether	ND	0.0043	EPA 8260C	6-27-17	6-27-17	
(cis) 1,3-Dichloropropene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Methyl Isobutyl Ketone	ND	0.0043	EPA 8260C	6-27-17	6-27-17	
Toluene	ND	0.0043	EPA 8260C	6-27-17	6-27-17	
(trans) 1,3-Dichloropropene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	



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Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

VOLATILES EPA 8260C

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B6-20.5-21'				
Laboratory ID:		06-260-11				
1,1,2-Trichloroethane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Tetrachloroethene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,3-Dichloropropane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
2-Hexanone	ND	0.0043	EPA 8260C	6-27-17	6-27-17	
Dibromochloromethane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,2-Dibromoethane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Chlorobenzene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,1,1,2-Tetrachloroethane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Ethylbenzene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
m,p-Xylene	0.0026	0.0017	EPA 8260C	6-27-17	6-27-17	
o-Xylene	0.0020	0.00086	EPA 8260C	6-27-17	6-27-17	
Styrene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Bromoform	ND	0.0043	EPA 8260C	6-27-17	6-27-17	
Isopropylbenzene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Bromobenzene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,1,2,2-Tetrachloroethane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,2,3-Trichloropropane	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
n-Propylbenzene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
2-Chlorotoluene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
4-Chlorotoluene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,3,5-Trimethylbenzene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
tert-Butylbenzene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,2,4-Trimethylbenzene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
sec-Butylbenzene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,3-Dichlorobenzene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
p-Isopropyltoluene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,4-Dichlorobenzene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,2-Dichlorobenzene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
n-Butylbenzene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,2-Dibromo-3-chloropropane	ND	0.0043	EPA 8260C	6-27-17	6-27-17	
1,2,4-Trichlorobenzene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
Hexachlorobutadiene	ND	0.0043	EPA 8260C	6-27-17	6-27-17	
Naphthalene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
1,2,3-Trichlorobenzene	ND	0.00086	EPA 8260C	6-27-17	6-27-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	107	73-134				
Toluene-d8	109	81-124				
4-Bromofluorobenzene	111	80-131				



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

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Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

VOLATILES EPA 8260C

Page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B6-27.5-28'						
Laboratory ID: 06-260-12						
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Chloromethane	ND	0.0060	EPA 8260C	6-26-17	6-26-17	
Vinyl Chloride	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Bromomethane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Chloroethane	ND	0.0060	EPA 8260C	6-26-17	6-26-17	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Acetone	ND	0.0060	EPA 8260C	6-26-17	6-26-17	
Iodomethane	ND	0.0077	EPA 8260C	6-26-17	6-26-17	
Carbon Disulfide	ND	0.0020	EPA 8260C	6-26-17	6-26-17	
Methylene Chloride	ND	0.012	EPA 8260C	6-26-17	6-26-17	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Methyl t-Butyl Ether	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Vinyl Acetate	ND	0.0060	EPA 8260C	6-26-17	6-26-17	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
2-Butanone	ND	0.0060	EPA 8260C	6-26-17	6-26-17	
Bromochloromethane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Chloroform	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Benzene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Trichloroethene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Dibromomethane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Bromodichloromethane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
2-Chloroethyl Vinyl Ether	ND	0.0060	EPA 8260C	6-26-17	6-26-17	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Methyl Isobutyl Ketone	ND	0.0060	EPA 8260C	6-26-17	6-26-17	
Toluene	ND	0.0060	EPA 8260C	6-26-17	6-26-17	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	



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

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Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

VOLATILES EPA 8260C

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B6-27.5-28'				
Laboratory ID:		06-260-12				
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Tetrachloroethene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
2-Hexanone	ND	0.0060	EPA 8260C	6-26-17	6-26-17	
Dibromochloromethane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Chlorobenzene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Ethylbenzene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
m,p-Xylene	0.0026	0.0024	EPA 8260C	6-26-17	6-26-17	
o-Xylene	0.0019	0.0012	EPA 8260C	6-26-17	6-26-17	
Styrene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Bromoform	ND	0.0060	EPA 8260C	6-26-17	6-26-17	
Isopropylbenzene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Bromobenzene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
n-Propylbenzene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
2-Chlorotoluene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
4-Chlorotoluene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,3,5-Trimethylbenzene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
tert-Butylbenzene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,2,4-Trimethylbenzene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
sec-Butylbenzene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
p-Isopropyltoluene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
n-Butylbenzene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,2-Dibromo-3-chloropropane	ND	0.0060	EPA 8260C	6-26-17	6-26-17	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
Hexachlorobutadiene	ND	0.0060	EPA 8260C	6-26-17	6-26-17	
Naphthalene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	6-26-17	6-26-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	112	73-134				
Toluene-d8	108	81-124				
4-Bromofluorobenzene	109	80-131				



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

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Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

VOLATILES EPA 8260C

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-DRUM-C				
Laboratory ID:		06-260-14				
Dichlorodifluoromethane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Chloromethane	ND	0.0047	EPA 8260C	6-27-17	6-27-17	
Vinyl Chloride	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Bromomethane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Chloroethane	ND	0.0047	EPA 8260C	6-27-17	6-27-17	
Trichlorofluoromethane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
1,1-Dichloroethene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Acetone	0.034	0.0047	EPA 8260C	6-27-17	6-27-17	
Iodomethane	ND	0.0074	EPA 8260C	6-27-17	6-27-17	
Carbon Disulfide	ND	0.0020	EPA 8260C	6-27-17	6-27-17	
Methylene Chloride	ND	0.0094	EPA 8260C	6-27-17	6-27-17	
(trans) 1,2-Dichloroethene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Methyl t-Butyl Ether	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
1,1-Dichloroethane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Vinyl Acetate	ND	0.0066	EPA 8260C	6-27-17	6-27-17	
2,2-Dichloropropane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
(cis) 1,2-Dichloroethene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
2-Butanone	ND	0.0047	EPA 8260C	6-27-17	6-27-17	
Bromochloromethane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Chloroform	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
1,1,1-Trichloroethane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Carbon Tetrachloride	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
1,1-Dichloropropene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Benzene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
1,2-Dichloroethane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Trichloroethene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
1,2-Dichloropropane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Dibromomethane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Bromodichloromethane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260C	6-27-17	6-27-17	
(cis) 1,3-Dichloropropene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Methyl Isobutyl Ketone	ND	0.0047	EPA 8260C	6-27-17	6-27-17	
Toluene	ND	0.0047	EPA 8260C	6-27-17	6-27-17	
(trans) 1,3-Dichloropropene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	



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Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

VOLATILES EPA 8260C

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-DRUM-C					
Laboratory ID:	06-260-14					
1,1,2-Trichloroethane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Tetrachloroethene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
1,3-Dichloropropane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
2-Hexanone	ND	0.0047	EPA 8260C	6-27-17	6-27-17	
Dibromochloromethane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
1,2-Dibromoethane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Chlorobenzene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
1,1,1,2-Tetrachloroethane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Ethylbenzene	0.0020	0.00094	EPA 8260C	6-27-17	6-27-17	
m,p-Xylene	0.0088	0.0019	EPA 8260C	6-27-17	6-27-17	
o-Xylene	0.0056	0.00094	EPA 8260C	6-27-17	6-27-17	
Styrene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Bromoform	ND	0.0047	EPA 8260C	6-27-17	6-27-17	
Isopropylbenzene	0.0069	0.00094	EPA 8260C	6-27-17	6-27-17	
Bromobenzene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
1,1,2,2-Tetrachloroethane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
1,2,3-Trichloropropane	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
n-Propylbenzene	0.013	0.00094	EPA 8260C	6-27-17	6-27-17	
2-Chlorotoluene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
4-Chlorotoluene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
1,3,5-Trimethylbenzene	0.0059	0.00094	EPA 8260C	6-27-17	6-27-17	
tert-Butylbenzene	0.0011	0.00094	EPA 8260C	6-27-17	6-27-17	
1,2,4-Trimethylbenzene	0.022	0.00094	EPA 8260C	6-27-17	6-27-17	
sec-Butylbenzene	0.017	0.00094	EPA 8260C	6-27-17	6-27-17	
1,3-Dichlorobenzene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
p-Isopropyltoluene	0.0084	0.00094	EPA 8260C	6-27-17	6-27-17	
1,4-Dichlorobenzene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
1,2-Dichlorobenzene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
n-Butylbenzene	0.021	0.00094	EPA 8260C	6-27-17	6-27-17	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260C	6-27-17	6-27-17	
1,2,4-Trichlorobenzene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Hexachlorobutadiene	ND	0.0047	EPA 8260C	6-27-17	6-27-17	
Naphthalene	0.034	0.00094	EPA 8260C	6-27-17	6-27-17	
1,2,3-Trichlorobenzene	ND	0.00094	EPA 8260C	6-27-17	6-27-17	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	106	73-134				
Toluene-d8	106	81-124				
4-Bromofluorobenzene	104	80-131				



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Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B4-0.5-1.5'						
Laboratory ID: 06-260-02						
Naphthalene	5.8	0.14	EPA 8270D/SIM	6-27-17	6-27-17	
2-Methylnaphthalene	26	0.70	EPA 8270D/SIM	6-27-17	6-29-17	
1-Methylnaphthalene	19	0.70	EPA 8270D/SIM	6-27-17	6-29-17	
Acenaphthylene	0.83	0.14	EPA 8270D/SIM	6-27-17	6-27-17	
Acenaphthene	3.0	0.14	EPA 8270D/SIM	6-27-17	6-27-17	
Fluorene	5.6	0.14	EPA 8270D/SIM	6-27-17	6-27-17	
Phenanthrene	16	0.14	EPA 8270D/SIM	6-27-17	6-27-17	
Anthracene	1.9	0.14	EPA 8270D/SIM	6-27-17	6-27-17	
Fluoranthene	0.89	0.14	EPA 8270D/SIM	6-27-17	6-27-17	
Pyrene	4.0	0.14	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[a]anthracene	1.8	0.14	EPA 8270D/SIM	6-27-17	6-27-17	
Chrysene	3.0	0.14	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[b]fluoranthene	0.26	0.14	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[j,k]fluoranthene	ND	0.14	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[a]pyrene	0.37	0.14	EPA 8270D/SIM	6-27-17	6-27-17	
Indeno(1,2,3-c,d)pyrene	ND	0.14	EPA 8270D/SIM	6-27-17	6-27-17	
Dibenz[a,h]anthracene	ND	0.14	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[g,h,i]perylene	0.35	0.14	EPA 8270D/SIM	6-27-17	6-27-17	
Surrogate:						
	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	65	32 - 122				
Pyrene-d10	---	33 - 125				F
Terphenyl-d14	---	36 - 118				F



Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B6-10-11'				
Laboratory ID:		06-260-09				
Naphthalene	0.033	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
2-Methylnaphthalene	0.24	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
1-Methylnaphthalene	0.34	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
Acenaphthylene	0.016	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
Acenaphthene	0.054	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
Fluorene	0.10	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
Phenanthrene	0.20	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
Anthracene	0.013	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
Fluoranthene	0.013	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
Pyrene	0.031	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[a]anthracene	ND	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
Chrysene	0.014	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[b]fluoranthene	ND	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[j,k]fluoranthene	ND	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[a]pyrene	ND	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
Dibenz[a,h]anthracene	ND	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[g,h,i]perylene	ND	0.0076	EPA 8270D/SIM	6-27-17	6-27-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>75</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>79</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>94</i>	<i>36 - 118</i>				



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 Laboratory Reference: 1706-260
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B6-20.5-21'						
Laboratory ID: 06-260-11						
Naphthalene	0.019	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
2-Methylnaphthalene	0.051	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
1-Methylnaphthalene	0.077	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
Acenaphthylene	0.0078	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
Acenaphthene	0.039	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
Fluorene	0.098	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
Phenanthrene	0.13	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
Anthracene	0.011	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
Fluoranthene	ND	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
Pyrene	0.011	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[a]anthracene	ND	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
Chrysene	ND	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[b]fluoranthene	ND	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[j,k]fluoranthene	ND	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[a]pyrene	ND	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
Dibenz[a,h]anthracene	ND	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[g,h,i]perylene	ND	0.0072	EPA 8270D/SIM	6-27-17	6-27-17	
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	72	32 - 122				
Pyrene-d10	80	33 - 125				
Terphenyl-d14	97	36 - 118				



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PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-DRUM-C				
Laboratory ID:		06-260-14				
Naphthalene	0.025	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
2-Methylnaphthalene	0.13	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
1-Methylnaphthalene	0.13	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
Acenaphthylene	ND	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
Acenaphthene	0.025	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
Fluorene	0.051	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
Phenanthrene	0.12	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
Anthracene	0.019	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
Fluoranthene	0.020	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
Pyrene	0.046	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[a]anthracene	0.017	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
Chrysene	0.023	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[b]fluoranthene	0.011	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[j,k]fluoranthene	ND	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[a]pyrene	0.012	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
Dibenz[a,h]anthracene	ND	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[g,h,i]perylene	0.0088	0.0075	EPA 8270D/SIM	6-27-17	6-27-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>85</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>89</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>103</i>	<i>36 - 118</i>				



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**TOTAL METALS
 EPA 6010C/7471B**

Matrix: Soil
 Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	06-260-02					
Client ID:	FL209-B4-0.5-1.5'					
Arsenic	12	11	6010C	6-23-17	6-26-17	
Barium	84	2.6	6010C	6-23-17	6-26-17	
Cadmium	14	0.53	6010C	6-23-17	6-26-17	
Chromium	29	0.53	6010C	6-23-17	6-26-17	
Lead	520	5.3	6010C	6-23-17	6-26-17	
Mercury	ND	0.26	7471B	6-26-17	6-26-17	
Selenium	ND	11	6010C	6-23-17	6-26-17	
Silver	ND	1.1	6010C	6-23-17	6-26-17	

Lab ID: 06-260-07
 Client ID: FL209-B6-0.5-1.5'

Arsenic	ND	11	6010C	6-23-17	6-26-17	
Lead	ND	5.4	6010C	6-23-17	6-26-17	



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**TOTAL METALS
 EPA 6010C/7471B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	06-260-09					
Client ID:	FL209-B6-10-11'					
Arsenic	ND	11	6010C	6-23-17	6-26-17	
Barium	55	2.8	6010C	6-23-17	6-26-17	
Cadmium	ND	0.57	6010C	6-23-17	6-26-17	
Chromium	27	0.57	6010C	6-23-17	6-26-17	
Lead	10	5.7	6010C	6-23-17	6-26-17	
Mercury	1.5	0.57	7471B	6-26-17	6-26-17	
Selenium	ND	11	6010C	6-23-17	6-26-17	
Silver	ND	1.1	6010C	6-23-17	6-26-17	

Lab ID:	06-260-11					
Client ID:	FL209-B6-20.5-21'					
Arsenic	ND	11	6010C	6-23-17	6-26-17	
Barium	36	2.7	6010C	6-23-17	6-26-17	
Cadmium	ND	0.54	6010C	6-23-17	6-26-17	
Chromium	30	0.54	6010C	6-23-17	6-26-17	
Lead	ND	5.4	6010C	6-23-17	6-26-17	
Mercury	ND	0.27	7471B	6-26-17	6-26-17	
Selenium	ND	11	6010C	6-23-17	6-26-17	
Silver	ND	1.1	6010C	6-23-17	6-26-17	



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**TOTAL METALS
 EPA 6010C/7471B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	06-260-14					
Client ID:	FL209-DRUM-C					
Arsenic	ND	11	6010C	6-23-17	6-26-17	
Barium	58	2.8	6010C	6-23-17	6-26-17	
Cadmium	ND	0.56	6010C	6-23-17	6-26-17	
Chromium	37	0.56	6010C	6-23-17	6-26-17	
Lead	12	5.6	6010C	6-23-17	6-26-17	
Mercury	ND	0.28	7471B	6-26-17	6-26-17	
Selenium	ND	11	6010C	6-23-17	6-26-17	
Silver	ND	1.1	6010C	6-23-17	6-26-17	



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TCLP LEAD
EPA 1311/6010C

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

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	06-260-02					
Client ID:	FL209-B4-0.5-1.5'					
Lead	0.31	0.20	6010C	7-6-17	7-6-17	



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**SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A**

Matrix: Soil
Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	06-260-11					
Client ID:	FL209-B6-20.5-21'					
Hexavalent Chromium	ND	1.1	7196A mod	6-29-17	6-29-17	



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 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B4-5.5-6.5'						
Laboratory ID: 06-260-03						
Naphthalene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
2-Methylnaphthalene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
1-Methylnaphthalene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
Acenaphthylene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
Acenaphthene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
Fluorene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
Phenanthrene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
Anthracene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
Fluoranthene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
Pyrene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
Benzo[a]anthracene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
Chrysene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
Benzo[b]fluoranthene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
Benzo(j,k)fluoranthene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
Benzo[a]pyrene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
Dibenz[a,h]anthracene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
Benzo[g,h,i]perylene	ND	0.0076	EPA 8270D/SIM	7-17-17	7-17-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>54</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>42</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>46</i>	<i>36 - 118</i>				



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Project: 4082-039-01

**TOTAL METALS
EPA 6010C**

Matrix: Soil
Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	06-260-03					
Client ID:	FL209-B4-5.5-6.5'					
Cadmium	ND	0.57	6010C	7-12-17	7-12-17	
Lead	ND	5.7	6010C	7-12-17	7-12-17	



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**NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0626S2					
Gasoline	ND	5.0	NWTPH-Gx	6-26-17	6-26-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	91	63-124				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	06-260-12							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				92	94	63-124		



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**NWTPH-Dx
QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0627S1					
Diesel Range Organics	ND	25	NWTPH-Dx	6-27-17	6-27-17	
Lube Oil Range Organics	ND	50	NWTPH-Dx	6-27-17	6-27-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	106	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	06-260-11									
	ORIG	DUP								
Diesel Fuel #2	340	178	NA	NA		NA	NA	63	NA	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						103	83	50-150		



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**VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0626S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Chloromethane	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Bromomethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Chloroethane	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Acetone	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
Iodomethane	ND	0.0064	EPA 8260C	6-26-17	6-26-17	
Carbon Disulfide	ND	0.0017	EPA 8260C	6-26-17	6-26-17	
Methylene Chloride	ND	0.010	EPA 8260C	6-26-17	6-26-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
2-Butanone	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
Bromochloromethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Chloroform	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Benzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Trichloroethene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Dibromomethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
Toluene	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	



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VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0626S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
2-Hexanone	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Chlorobenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Ethylbenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
m,p-Xylene	ND	0.0020	EPA 8260C	6-26-17	6-26-17	
o-Xylene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Styrene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Bromoform	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Bromobenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	6-26-17	6-26-17	
Naphthalene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	6-26-17	6-26-17	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	99	73-134				
Toluene-d8	104	81-124				
4-Bromofluorobenzene	103	80-131				



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VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0627S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Chloromethane	ND	0.0050	EPA 8260C	6-27-17	6-27-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Bromomethane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Chloroethane	ND	0.0050	EPA 8260C	6-27-17	6-27-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Acetone	ND	0.0050	EPA 8260C	6-27-17	6-27-17	
Iodomethane	ND	0.0078	EPA 8260C	6-27-17	6-27-17	
Carbon Disulfide	ND	0.0021	EPA 8260C	6-27-17	6-27-17	
Methylene Chloride	ND	0.010	EPA 8260C	6-27-17	6-27-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Vinyl Acetate	ND	0.0070	EPA 8260C	6-27-17	6-27-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
2-Butanone	ND	0.0050	EPA 8260C	6-27-17	6-27-17	
Bromochloromethane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Chloroform	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Benzene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Trichloroethene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Dibromomethane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	6-27-17	6-27-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	6-27-17	6-27-17	
Toluene	ND	0.0050	EPA 8260C	6-27-17	6-27-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	



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VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0627S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
2-Hexanone	ND	0.0050	EPA 8260C	6-27-17	6-27-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Chlorobenzene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Ethylbenzene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
m,p-Xylene	ND	0.0020	EPA 8260C	6-27-17	6-27-17	
o-Xylene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Styrene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Bromoform	ND	0.0050	EPA 8260C	6-27-17	6-27-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Bromobenzene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	6-27-17	6-27-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	6-27-17	6-27-17	
Naphthalene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	6-27-17	6-27-17	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	103	73-134				
Toluene-d8	105	81-124				
4-Bromofluorobenzene	108	80-131				



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 Project: 4082-039-01

**VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limits		Limit	
SPIKE BLANKS										
Laboratory ID:	SB0626S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0586	0.0583	0.0500	0.0500	117	117	66-127	1	15	
Benzene	0.0512	0.0524	0.0500	0.0500	102	105	76-122	2	15	
Trichloroethene	0.0519	0.0522	0.0500	0.0500	104	104	78-120	1	15	
Toluene	0.0537	0.0555	0.0500	0.0500	107	111	83-120	3	15	
Chlorobenzene	0.0485	0.0486	0.0500	0.0500	97	97	81-120	0	15	
Surrogate:										
Dibromofluoromethane					97	96	73-134			
Toluene-d8					97	101	81-124			
4-Bromofluorobenzene					100	101	80-131			



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**VOLATILES 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:	SB0627S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0607	0.0597	0.0500	0.0500	121	119	66-127	2	15	
Benzene	0.0552	0.0540	0.0500	0.0500	110	108	76-122	2	15	
Trichloroethene	0.0558	0.0557	0.0500	0.0500	112	111	78-120	0	15	
Toluene	0.0572	0.0568	0.0500	0.0500	114	114	83-120	1	15	
Chlorobenzene	0.0508	0.0502	0.0500	0.0500	102	100	81-120	1	15	
Surrogate:										
Dibromofluoromethane					100	97	73-134			
Toluene-d8					103	100	81-124			
4-Bromofluorobenzene					105	102	80-131			



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**PAHs EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0627S1						
Naphthalene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
Fluorene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
Anthracene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
Pyrene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
Chrysene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	6-27-17	6-27-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	90	32 - 122				
Pyrene-d10	93	33 - 125				
Terphenyl-d14	104	36 - 118				



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 Laboratory Reference: 1706-260
 Project: 4082-039-01

**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:	06-265-01											
	MS	MSD	MS	MSD		MS	MSD					
Naphthalene	0.0689	0.0650	0.0833	0.0833	ND	83	78	39 - 112	6		27	
Acenaphthylene	0.0728	0.0704	0.0833	0.0833	ND	87	85	40 - 121	3		34	
Acenaphthene	0.0694	0.0652	0.0833	0.0833	ND	83	78	44 - 113	6		28	
Fluorene	0.0769	0.0713	0.0833	0.0833	ND	92	86	43 - 119	8		27	
Phenanthrene	0.0764	0.0730	0.0833	0.0833	ND	92	88	35 - 124	5		30	
Anthracene	0.0789	0.0766	0.0833	0.0833	ND	95	92	30 - 140	3		26	
Fluoranthene	0.0821	0.0787	0.0833	0.0833	ND	99	94	29 - 136	4		32	
Pyrene	0.0816	0.0782	0.0833	0.0833	ND	98	94	35 - 128	4		33	
Benzo[a]anthracene	0.0852	0.0844	0.0833	0.0833	ND	102	101	30 - 143	1		31	
Chrysene	0.0824	0.0757	0.0833	0.0833	ND	99	91	32 - 129	8		33	
Benzo[b]fluoranthene	0.0824	0.0915	0.0833	0.0833	ND	99	110	23 - 140	10		29	
Benzo(j,k)fluoranthene	0.0836	0.0767	0.0833	0.0833	ND	100	92	32 - 119	9		30	
Benzo[a]pyrene	0.0829	0.0877	0.0833	0.0833	ND	100	105	31 - 131	6		32	
Indeno(1,2,3-c,d)pyrene	0.0844	0.0804	0.0833	0.0833	ND	101	97	31 - 130	5		28	
Dibenz[a,h]anthracene	0.0794	0.0726	0.0833	0.0833	ND	95	87	40 - 119	9		27	
Benzo[g,h,i]perylene	0.0832	0.0816	0.0833	0.0833	ND	100	98	39 - 119	2		29	
Surrogate:												
2-Fluorobiphenyl						92	87	32 - 122				
Pyrene-d10						93	86	33 - 125				
Terphenyl-d14						104	98	36 - 118				



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

Date Extracted: 6-23&26-17

Date Analyzed: 6-26-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0623SM1&MB0626S1

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



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 Laboratory Reference: 1706-260
 Project: 4082-039-01

**TOTAL METALS
 EPA 6010C/7471B
 DUPLICATE QUALITY CONTROL**

Date Extracted: 6-23&26-17

Date Analyzed: 6-26-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 06-270-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	10	
Barium	30.1	30.4	1	2.5	
Cadmium	ND	ND	NA	0.50	
Chromium	10.4	10.6	2	0.50	
Lead	ND	ND	NA	5.0	
Mercury	ND	ND	NA	0.25	
Selenium	ND	ND	NA	10	
Silver	ND	ND	NA	1.0	



Date of Report: July 19, 2017
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 Project: 4082-039-01

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

Date Extracted: 6-23&26-17

Date Analyzed: 6-26-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 06-270-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	90.8	91	94.7	95	4	
Barium	100	124	94	129	98	4	
Cadmium	50.0	45.2	90	45.9	92	1	
Chromium	100	102	92	104	94	2	
Lead	250	233	93	237	95	2	
Mercury	0.500	0.514	103	0.504	101	2	
Selenium	100	91.1	91	93.6	94	3	
Silver	25.0	20.3	81	20.8	83	2	



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Project: 4082-039-01

**TCLP LEAD
EPA 1311/6010C
METHOD BLANK QUALITY CONTROL**

Date Prepared: 7-5-17
Date Extracted: 7-6-17
Date Analyzed: 7-6-17

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

Lab ID: MB0706TM1

Analyte	Method	Result	PQL
Lead	6010C	ND	0.20



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Laboratory Reference: 1706-260
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**TCLP LEAD
EPA 1311/6010C
DUPLICATE QUALITY CONTROL**

Date Prepared: 7-5-17

Date Extracted: 7-6-17

Date Analyzed: 7-6-17

Matrix: TCLP Extract

Units: mg/L (ppm)

Lab ID: 06-369-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	ND	ND	NA	0.20	



Date of Report: July 19, 2017
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**TCLP LEAD
 EPA 1311/6010C
 MS/MSD QUALITY CONTROL**

Date Prepared: 7-5-17

Date Extracted: 7-6-17

Date Analyzed: 7-6-17

Matrix: TCLP Extract

Units: mg/L (ppm)

Lab ID: 06-369-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	10.0	8.93	89	8.93	89	0	



Date of Report: July 19, 2017
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Project: 4082-039-01

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

Date Extracted: 6-29-17
Date Analyzed: 6-29-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0629S1

Analyte	Method	Result	PQL
Hexavalent Chromium	7196A mod	ND	1.0



Date of Report: July 19, 2017
Samples Submitted: June 22, 2017
Laboratory Reference: 1706-260
Project: 4082-039-01

**SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
DUPLICATE QUALITY CONTROL**

Date Extracted: 6-29-17
Date Analyzed: 6-29-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-278-02

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



Date of Report: July 19, 2017
Samples Submitted: June 22, 2017
Laboratory Reference: 1706-260
Project: 4082-039-01

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

Date Extracted: 6-29-17
Date Analyzed: 6-29-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-278-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Hexavalent Chromium	5.00	4.82	96	4.86	97	1	



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 Project: 4082-039-01

**PAHs EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0717S1						
Naphthalene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
Fluorene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
Anthracene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
Pyrene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
Chrysene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	7-17-17	7-17-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	90	32 - 122				
Pyrene-d10	88	33 - 125				
Terphenyl-d14	101	36 - 118				



Date of Report: July 19, 2017
 Samples Submitted: June 22, 2017
 Laboratory Reference: 1706-260
 Project: 4082-039-01

**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:	07-089-15											
	MS	MSD	MS	MSD		MS	MSD					
Naphthalene	0.0669	0.0617	0.0833	0.0833	ND	80	74	39 - 112	8		27	
Acenaphthylene	0.0712	0.0643	0.0833	0.0833	ND	85	77	40 - 121	10		34	
Acenaphthene	0.0710	0.0635	0.0833	0.0833	ND	85	76	44 - 113	11		28	
Fluorene	0.0718	0.0617	0.0833	0.0833	ND	86	74	43 - 119	15		27	
Phenanthrene	0.0716	0.0620	0.0833	0.0833	ND	86	74	35 - 124	14		30	
Anthracene	0.0769	0.0665	0.0833	0.0833	ND	92	80	30 - 140	15		26	
Fluoranthene	0.0740	0.0643	0.0833	0.0833	ND	89	77	29 - 136	14		32	
Pyrene	0.0741	0.0645	0.0833	0.0833	ND	89	77	35 - 128	14		33	
Benzo[a]anthracene	0.0794	0.0684	0.0833	0.0833	ND	95	82	30 - 143	15		31	
Chrysene	0.0774	0.0675	0.0833	0.0833	ND	93	81	32 - 129	14		33	
Benzo[b]fluoranthene	0.0712	0.0614	0.0833	0.0833	ND	85	74	23 - 140	15		29	
Benzo(j,k)fluoranthene	0.0788	0.0683	0.0833	0.0833	ND	95	82	32 - 119	14		30	
Benzo[a]pyrene	0.0727	0.0628	0.0833	0.0833	ND	87	75	31 - 131	15		32	
Indeno(1,2,3-c,d)pyrene	0.0727	0.0636	0.0833	0.0833	ND	87	76	31 - 130	13		28	
Dibenz[a,h]anthracene	0.0738	0.0634	0.0833	0.0833	ND	89	76	40 - 119	15		27	
Benzo[g,h,i]perylene	0.0775	0.0663	0.0833	0.0833	ND	93	80	39 - 119	16		29	
Surrogate:												
2-Fluorobiphenyl						77	69	32 - 122				
Pyrene-d10						74	67	33 - 125				
Terphenyl-d14						85	77	36 - 118				



Date of Report: July 19, 2017
Samples Submitted: June 22, 2017
Laboratory Reference: 1706-260
Project: 4082-039-01

**TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL**

Date Extracted: 7-12-17
Date Analyzed: 7-12-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0712SM1

Analyte	Method	Result	PQL
Cadmium	6010C	ND	0.50
Lead	6010C	ND	5.0



Date of Report: July 19, 2017
Samples Submitted: June 22, 2017
Laboratory Reference: 1706-260
Project: 4082-039-01

**TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL**

Date Extracted: 7-12-17

Date Analyzed: 7-12-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 07-050-18

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Cadmium	ND	ND	NA	0.50	
Lead	6.45	5.20	21	5.0	C



Date of Report: July 19, 2017
Samples Submitted: June 22, 2017
Laboratory Reference: 1706-260
Project: 4082-039-01

**TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL**

Date Extracted: 7-12-17

Date Analyzed: 7-12-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 07-050-18

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Cadmium	50.0	45.8	92	45.2	90	1	
Lead	250	233	91	232	90	1	



Date of Report: July 19, 2017
Samples Submitted: June 22, 2017
Laboratory Reference: 1706-260
Project: 4082-039-01

% MOISTURE

Date Analyzed: 6-23&26-17

Client ID	Lab ID	% Moisture
FL209-B4-0.5-1.5'	06-260-02	5
FL209-B4-5.5-6.5'	06-260-03	13
FL209-B6-0.5-1.5'	06-260-07	8
FL209-B6-10-11'	06-260-09	12
FL209-B6-20.5-21'	06-260-11	8
FL209-B6-27.5-28'	06-260-12	8
FL209-DRUM-C	06-260-14	11





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





**OnSite
Environmental Inc.**

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

Geotronics

Project Number: 4082-039-01

Project Name:

Sound Transr-FL209

Project Manager:

JOHN DEER, / MAR 5 198

Sampled by:

AMON FREDEALLY / CHESEY JOHN

☐ Same Day ☐ 1 Day

☐ 2 Days ☒ 3 Days

☐ Standard (7 Days)
 (TPH analysis 5 Days)

☐ _____
(other)

Turnaround Request
(in working days)

Laboratory Number:

06-260

Page 1 of 2

Company:

Geo Engineers

Project Number:

4082-039-01

Project Name:

Sound Transit - FL209

Project Manager:

John Deese / MariSSa Brown

Sampled by:

Amon Freedley / Chesey Gorr

Turnaround Request (in working days)

(Check One)

☐ Same Day

☐ 1 Day

☐ 2 Days

☒ 3 Days

☐ Standard (7 Days) (TPH analysis 5 Days)

☐ (other)

Number of Containers

NWTPH-HCID

NWTPH-Gx/BTEX

NWTPH-Gx

NWTPH-Dx (☐ Acid / SG Clean-up)

Volatiles 8260C

Halogenated Volatiles 8260C

EDB EPA 8011 (Waters Only)

Semivolatiles 8270D/SIM (with low-level PAHs) PAHs

PAHs 8270D/SIM (low-level)

PCBs 8082A

Organochlorine Pesticides 8081B

Organophosphorus Pesticides 8270D/SIM

Chlorinated Acid Herbicides 8151A

Total RCRA Metals

Total MTCA Metals

TCLP Metals LEAD

HEM (oil and grease) 1664A

TOTAL AS, Pb

TOTAL Cd, Pb

% Moisture

Lab ID

Sample Identification

Date Sampled

Time Sampled

Matrix

1

FL209-B3-17.5-18.5'

6/21/17

0840

Soil

5

2

FL209-B4-0.5-1.5'

6/21/17

1005

Soil

6

3

FL209-B4-5.5-6.5'

6/21/17

1030

Soil

6

4

FL209-B4-8-9'

6/21/17

1049

Soil

4

5

FL209-B4-15-15.5'

6/21/17

1120

Soil

5

6

FL209-B4-17.5-18'

6/21/17

1135

Soil

5

7

FL209-B6-0.5-1.5'

6/21/17

13:15

Soil

6

8

FL209-B6-5.5-6.5'

6/21/17

13:35

Soil

6

9

FL209-B6-10-11'

6/21/17

13:55

Soil

6

10

FL209-B6-15-16'

6/21/17

14:20

Soil

6

Relinquished

Signature

Company

Date

Time

Comments/Special Instructions

Relinquished

[Signature]

Geo

6/21/17

9:00am

☒ Added 6/23/17. DB (3 day TPH)

Received

[Signature]

ALPHA

6-22-17

9am

☐ Added 6/29/17. DB (5TA)

Relinquished

[Signature]

ALPHA

6-22-17

10:12am

☐ Added 7/10/17. DB (5TA)

Received

[Signature]

[Signature]

6-22-17

1412

Relinquished

Received

Data Package: Standard ☐ Level III ☐ Level IV ☐

Reviewed/Date

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

CIVIL-QUALITY, INC.

Analytical Laboratory Testing Services

14648 NE 95th Street • Redmond, WA 98052

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

06-260



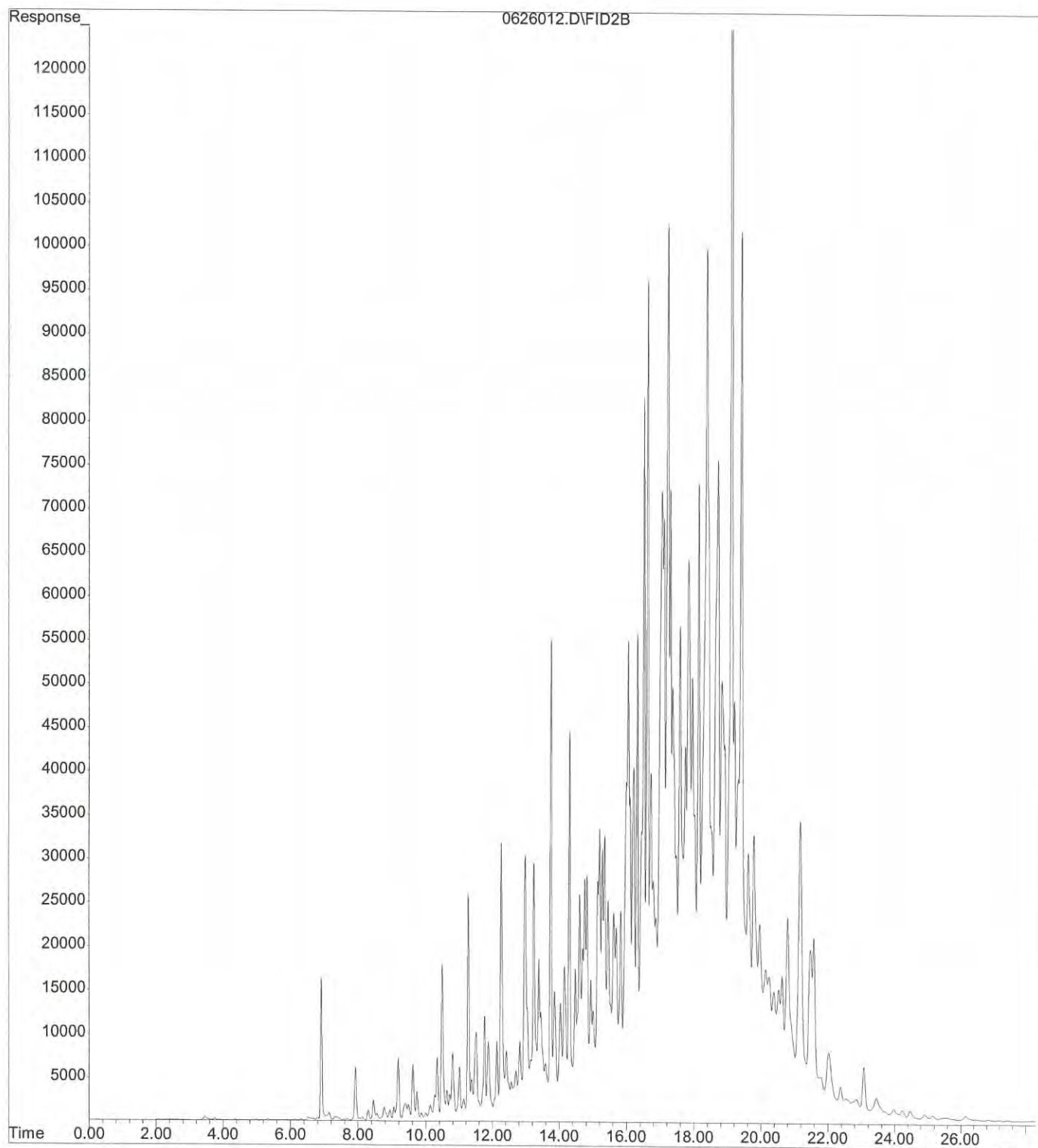
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Chain of Custody

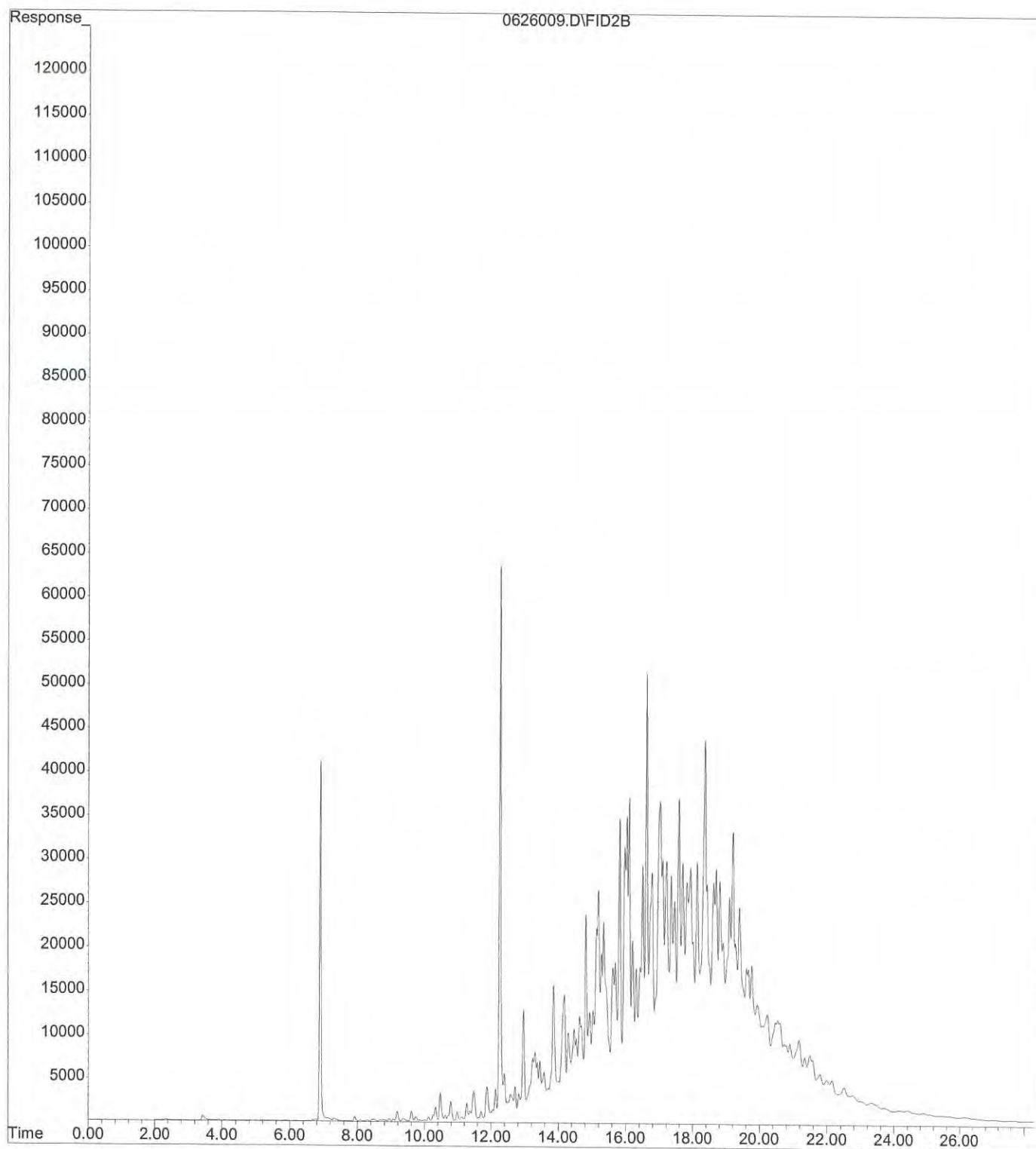
Page 2 of 2

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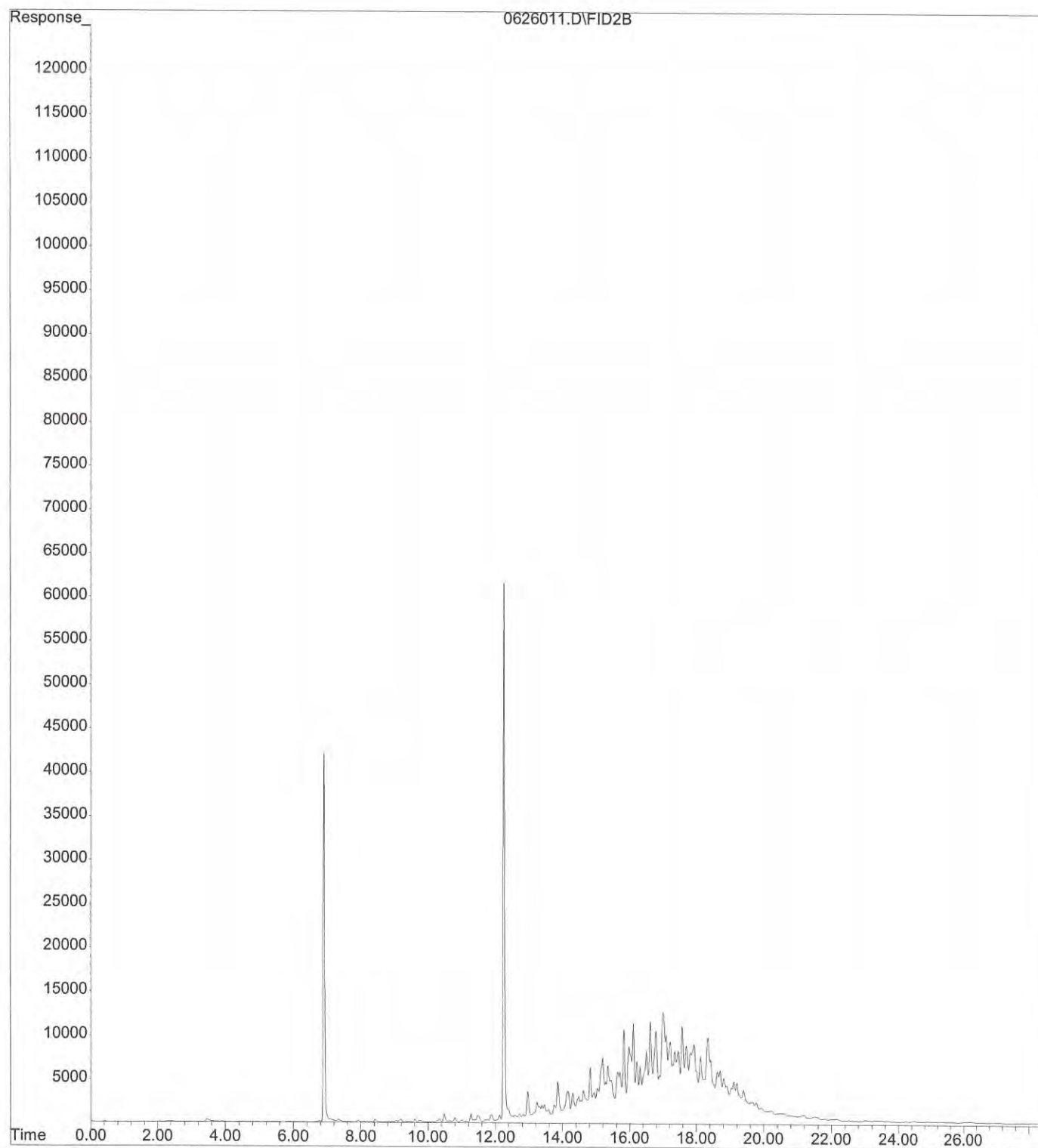
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Operator :
Acquired : 26 Jun 2017 15:04 using AcqMethod 170616G.M
Instrument : Daryl
Sample Name: 06-260-02s 1:250
Misc Info :
Vial Number: 12



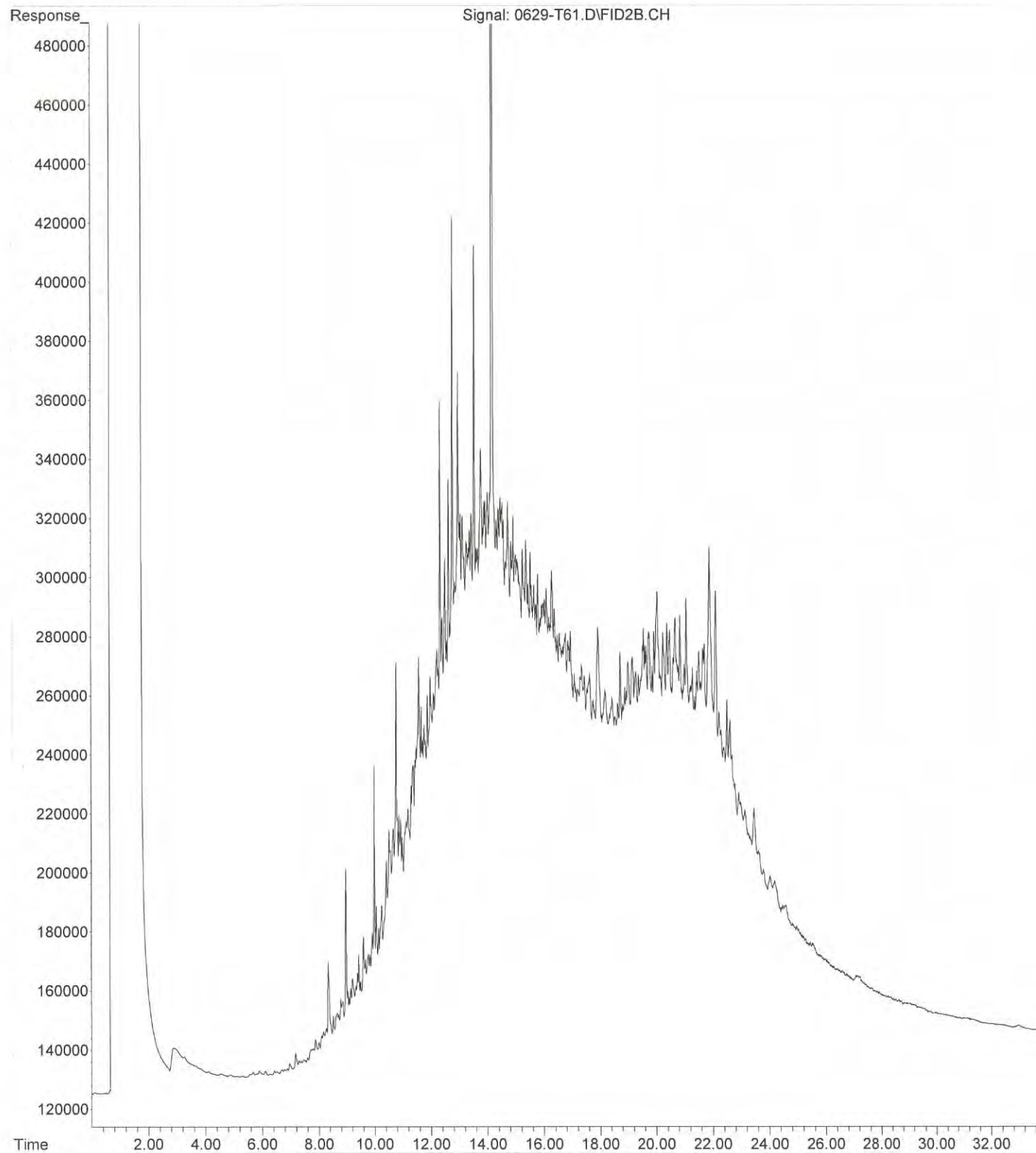
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Operator :
Acquired : 26 Jun 2017 13:23 using AcqMethod 170616G.M
Instrument : Daryl
Sample Name: 06-260-09s 1:100
Misc Info :
Vial Number: 9



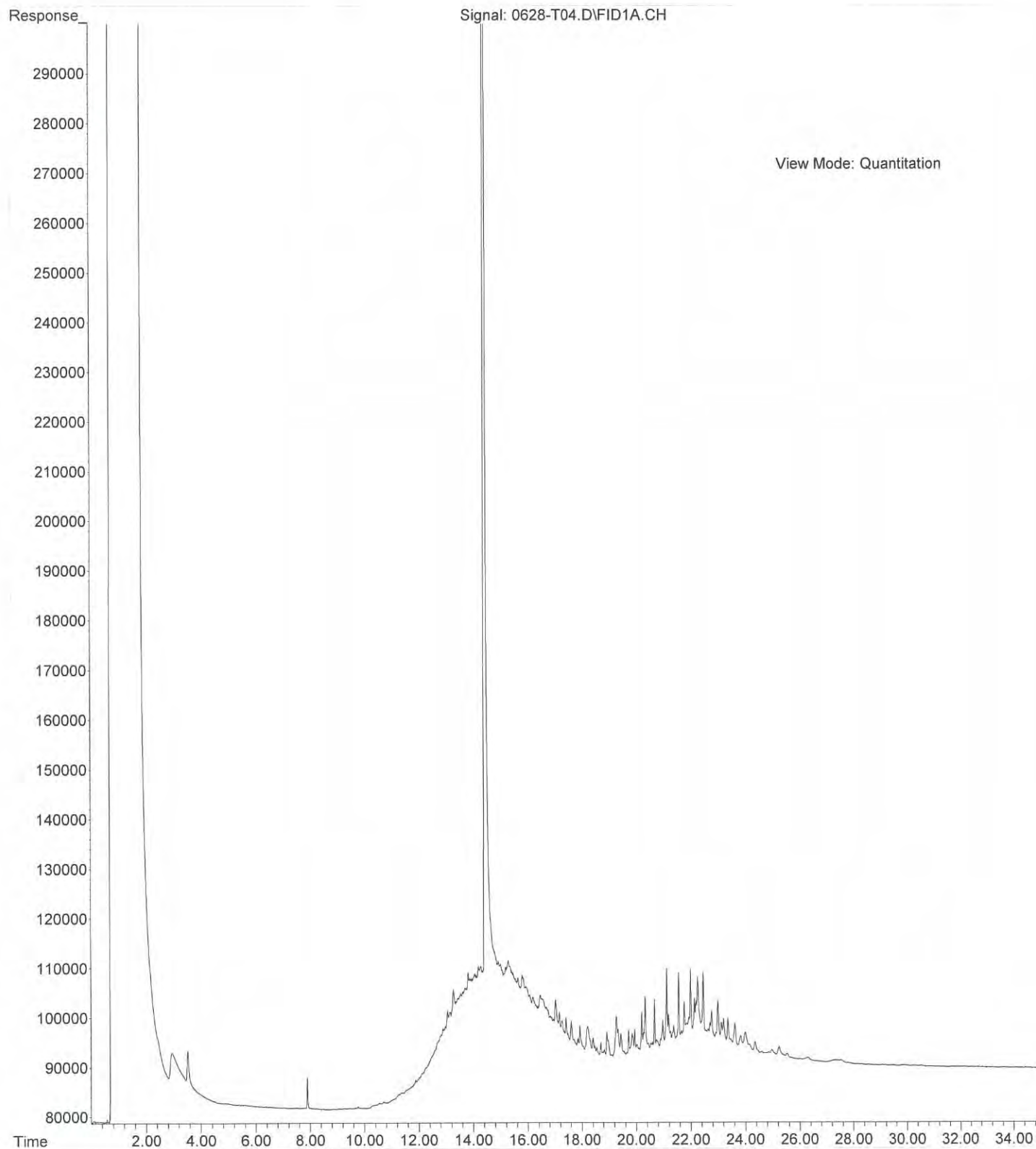
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Operator :
Acquired : 26 Jun 2017 14:30 using AcqMethod 170616G.M
Instrument : Daryl
Sample Name: 06-260-14s 1:100
Misc Info :
Vial Number: 11



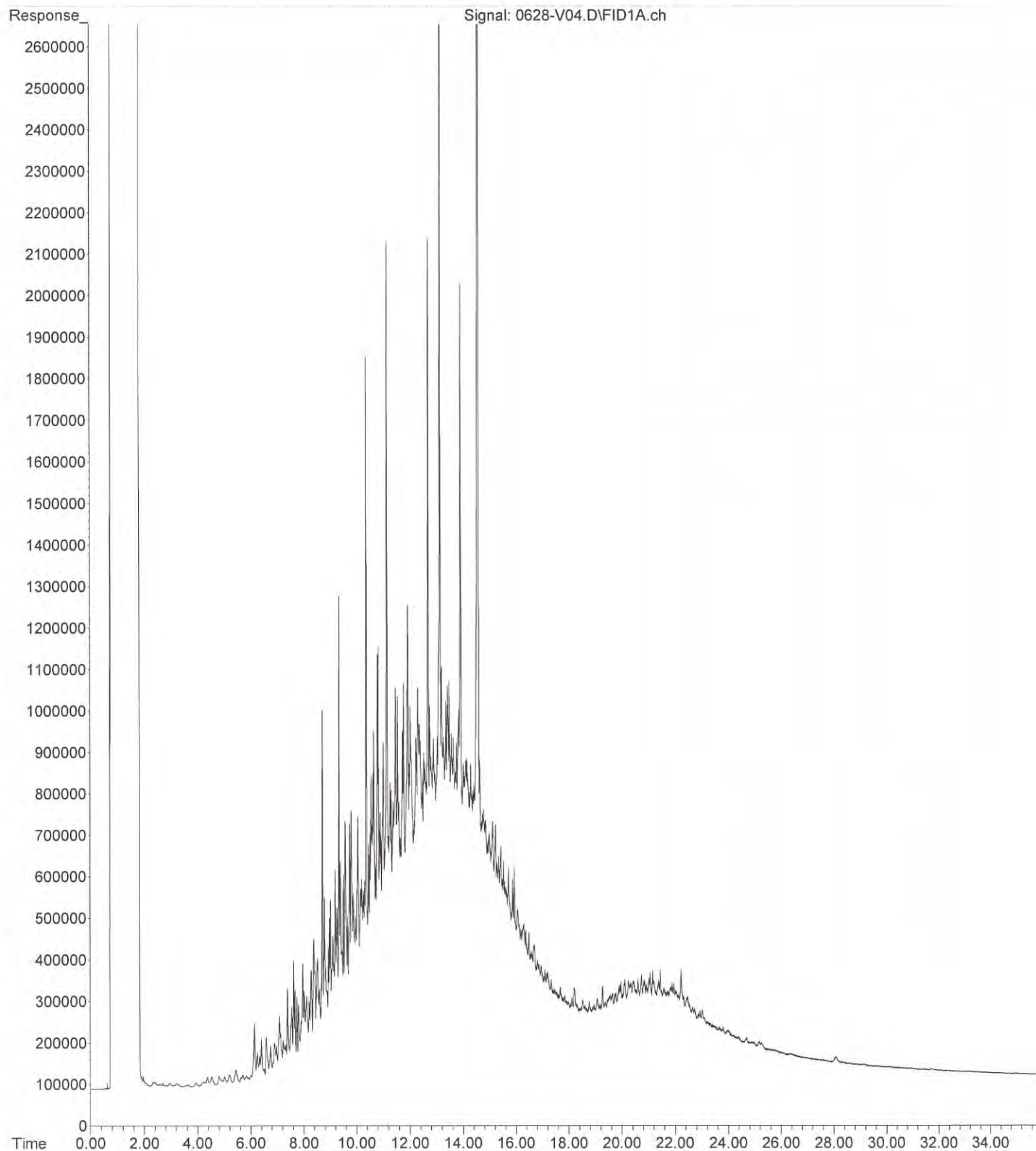
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Operator : ZT
Acquired : 29 Jun 2017 14:33 using AcqMethod T161216F.M
Instrument : Teri
Sample Name: 06-260-02 5X
Misc Info :
Vial Number: 61



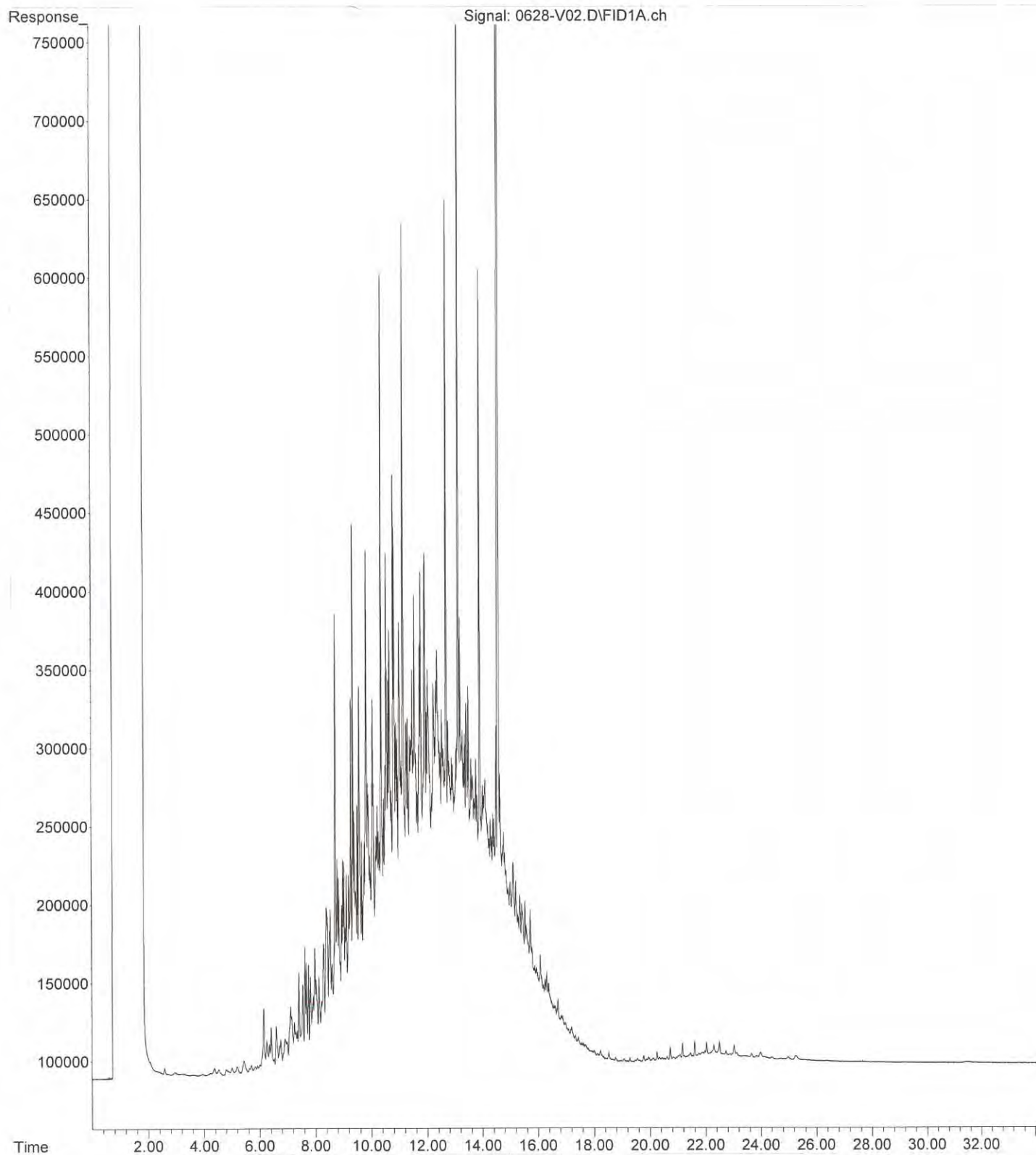
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Operator : ZT
Acquired : 28 Jun 2017 15:47 using AcqMethod T161216F.M
Instrument : Teri
Sample Name: 06-260-03
Misc Info :
Vial Number: 4



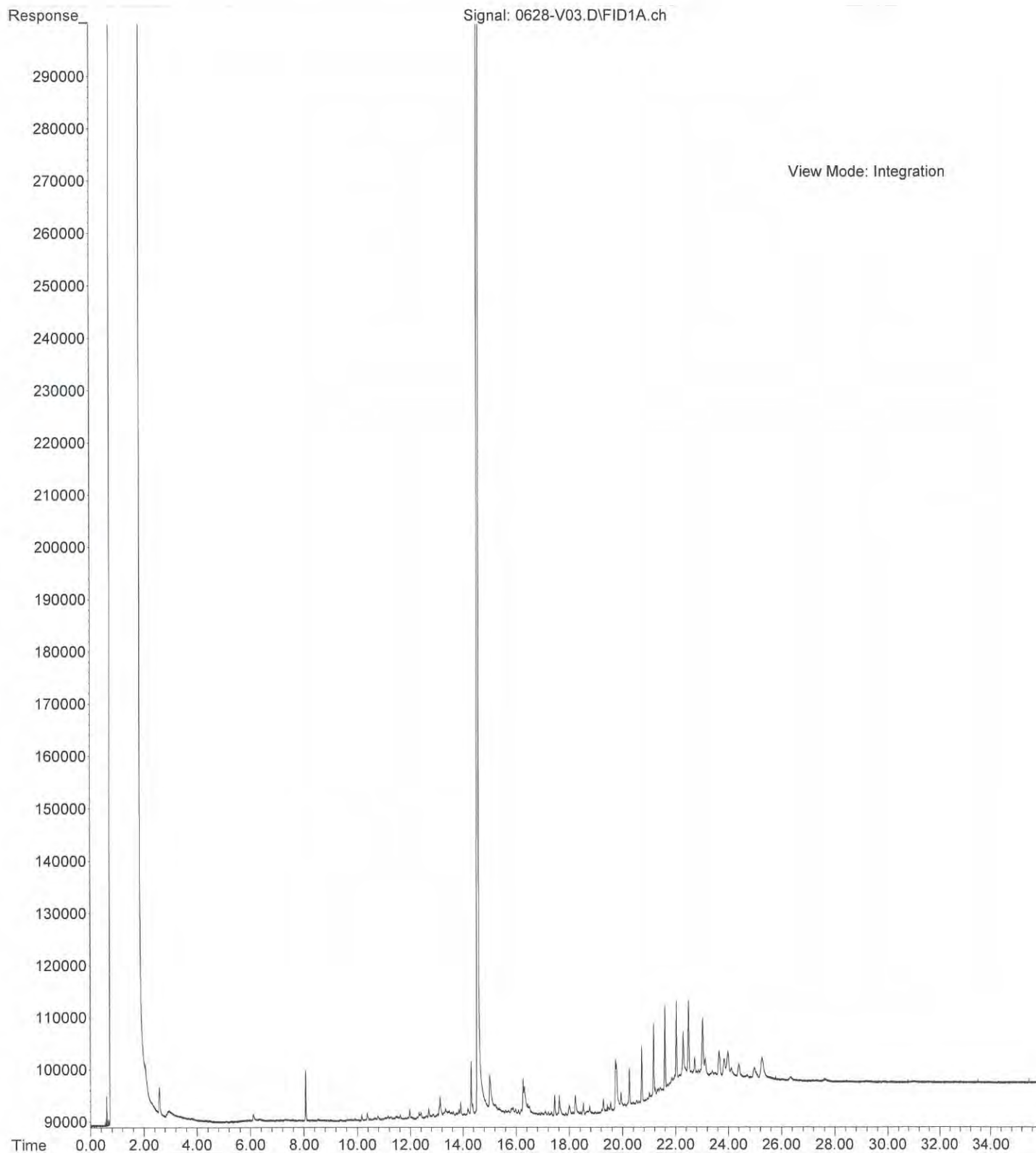
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Operator :
Acquired : 28 Jun 2017 15:08 using AcqMethod V170615F.M
Instrument : Vigo
Sample Name: 06-260-09
Misc Info :
Vial Number: 4



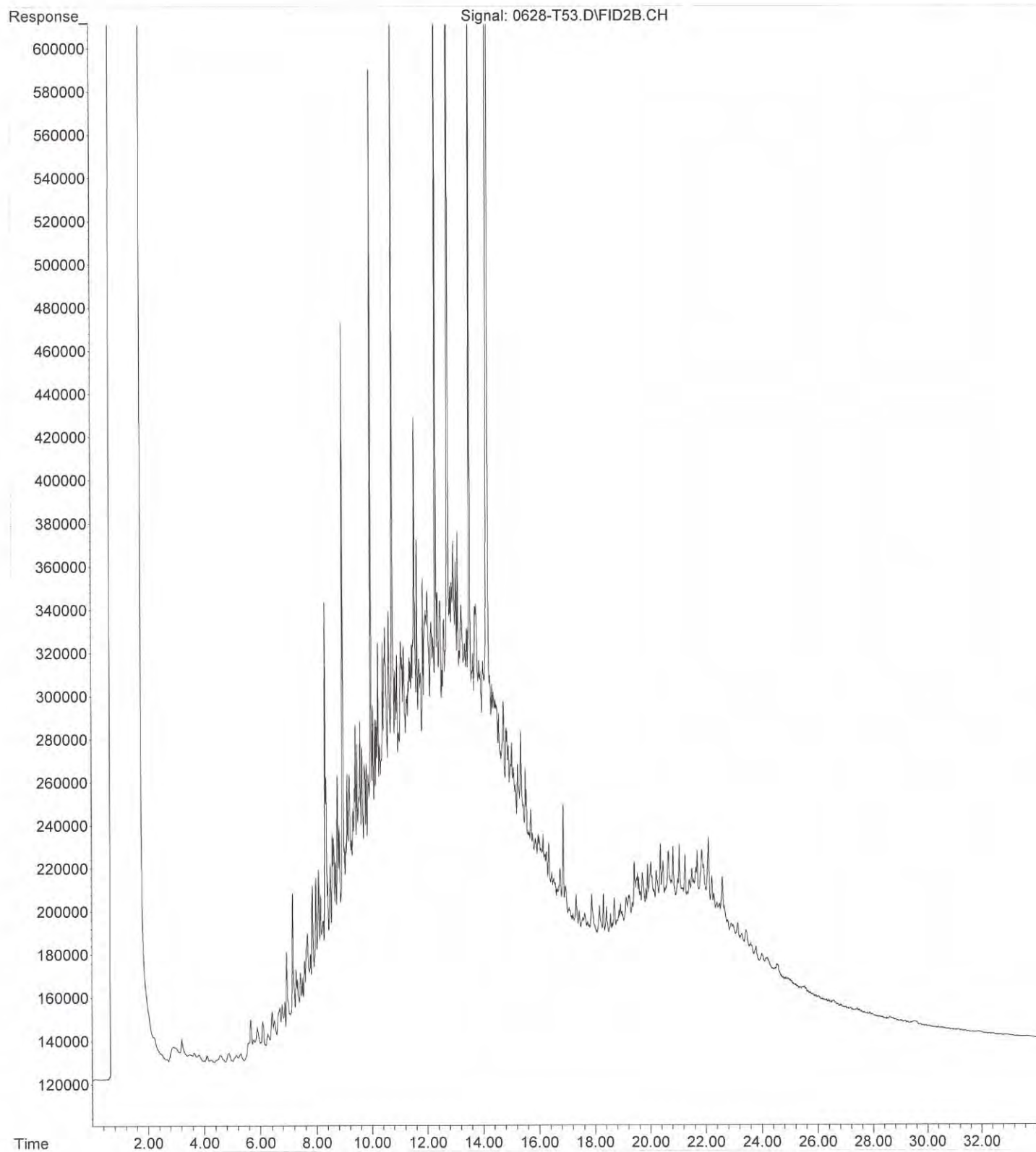
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Operator :
Acquired : 28 Jun 2017 13:36 using AcqMethod V170615F.M
Instrument : Vigo
Sample Name: 06-260-11
Misc Info : SV3-23-03
Vial Number: 2



File :X:\DIESELS\VIGO\DATA\V170628\0628-V03.D
Operator :
Acquired : 28 Jun 2017 14:25 using AcqMethod V170615F.M
Instrument : Vigo
Sample Name: 06-260-12
Misc Info : SV3-22-03
Vial Number: 3



File :X:\DIESELS\TERI\DATA\T170628.SEC\0628-T53.D
Operator : ZT
Acquired : 28 Jun 2017 15:04 using AcqMethod T161216F.M
Instrument : Teri
Sample Name: 06-260-14
Misc Info :
Vial Number: 53





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

July 24, 2017

Marsi Beeson
GeoEngineers, Inc.
12000 NW Naito Prkway, Suite 180
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01
Laboratory Reference No. 1707-045

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on July 7, 2017.

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,

A handwritten signature in black ink, appearing to read 'DB', with a long horizontal stroke extending to the right.

David Baumeister
Project Manager

Enclosures



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

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

Date of Report: July 24, 2017
Samples Submitted: July 7, 2017
Laboratory Reference: 1707-045
Project: 4082-039-01

Case Narrative

Samples were collected on July 6, 2017 and received by the laboratory on July 7, 2017. 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.

NWTPH Gx/BTEX and Volatiles EPA 8260C Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

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: July 24, 2017
 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL209-B5-1-2	07-045-01	Soil	7-6-17	7-7-17	
FL209-B5-6-6.5	07-045-02	Soil	7-6-17	7-7-17	
FL209-B5-8-9	07-045-03	Soil	7-6-17	7-7-17	
FL209-B5-10.5-11.5	07-045-04	Soil	7-6-17	7-7-17	
FL209-B5-13-14	07-045-05	Soil	7-6-17	7-7-17	
FL209-B5-17.5-18.5	07-045-07	Soil	7-6-17	7-7-17	
FL209-B5-22.5-23	07-045-08	Soil	7-6-17	7-7-17	
FL209-B7-1-2	07-045-09	Soil	7-6-17	7-7-17	
FL209-B7-5.5-6.5	07-045-10	Soil	7-6-17	7-7-17	
FL209-B7-8-9	07-045-11	Soil	7-6-17	7-7-17	
FL209-B7-10.5-11.5	07-045-12	Soil	7-6-17	7-7-17	
FL209-B7-12.5-13.5	07-045-13	Soil	7-6-17	7-7-17	
FL209-B7-15-16	07-045-14	Soil	7-6-17	7-7-17	
FL209-B7-20-20.5	07-045-15	Soil	7-6-17	7-7-17	
FL209-B8-1-2	07-045-16	Soil	7-6-17	7-7-17	
FL209-B8-6-6.5	07-045-17	Soil	7-6-17	7-7-17	
FL209-B8-8-9	07-045-18	Soil	7-6-17	7-7-17	
FL209-B8-10-11	07-045-19	Soil	7-6-17	7-7-17	
FL209-B8-15-16	07-045-21	Soil	7-6-17	7-7-17	
FL209-B8-20-21	07-045-23	Soil	7-6-17	7-7-17	
FL209-B8-22.5-23	07-045-24	Soil	7-6-17	7-7-17	



Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B5-1-2						
Laboratory ID: 07-045-01						
Benzene	ND	0.020	EPA 8021B	7-12-17	7-12-17	
Toluene	ND	0.063	EPA 8021B	7-12-17	7-12-17	
Ethyl Benzene	ND	0.063	EPA 8021B	7-12-17	7-12-17	
m,p-Xylene	ND	0.063	EPA 8021B	7-12-17	7-12-17	
o-Xylene	ND	0.063	EPA 8021B	7-12-17	7-12-17	
Gasoline	ND	6.3	NWTPH-Gx	7-12-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	84	63-124				
Client ID: FL209-B5-6-6.5						
Laboratory ID: 07-045-02						
Gasoline	ND	4.9	NWTPH-Gx	7-12-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	63-124				
Client ID: FL209-B5-13-14						
Laboratory ID: 07-045-05						
Gasoline	ND	25	NWTPH-Gx	7-12-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	76	63-124				
Client ID: FL209-B5-17.5-18.5						
Laboratory ID: 07-045-07						
Gasoline	ND	5.5	NWTPH-Gx	7-12-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	82	63-124				
Client ID: FL209-B5-22.5-23						
Laboratory ID: 07-045-08						
Gasoline	ND	5.9	NWTPH-Gx	7-12-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	91	63-124				



Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-B7-1-2					
Laboratory ID:	07-045-09					
Benzene	ND	0.020	EPA 8021B	7-12-17	7-12-17	
Toluene	ND	0.056	EPA 8021B	7-12-17	7-12-17	
Ethyl Benzene	ND	0.056	EPA 8021B	7-12-17	7-12-17	
m,p-Xylene	ND	0.056	EPA 8021B	7-12-17	7-12-17	
o-Xylene	ND	0.056	EPA 8021B	7-12-17	7-12-17	
Gasoline	ND	5.6	NWTPH-Gx	7-12-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	63-124				
Client ID:	FL209-B7-5.5-6.5					
Laboratory ID:	07-045-10					
Benzene	ND	0.024	EPA 8021B	7-12-17	7-15-17	
Toluene	ND	0.12	EPA 8021B	7-12-17	7-15-17	
Ethyl Benzene	ND	0.12	EPA 8021B	7-12-17	7-15-17	
m,p-Xylene	ND	0.12	EPA 8021B	7-12-17	7-15-17	
o-Xylene	ND	0.12	EPA 8021B	7-12-17	7-15-17	
Gasoline	ND	12	NWTPH-Gx	7-12-17	7-15-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	78	63-124				
Client ID:	FL209-B7-10.5-11.5					
Laboratory ID:	07-045-12					
Gasoline	ND	26	NWTPH-Gx	7-12-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	79	63-124				
Client ID:	FL209-B7-12.5-13.5					
Laboratory ID:	07-045-13					
Benzene	ND	0.020	EPA 8021B	7-12-17	7-15-17	
Toluene	ND	0.097	EPA 8021B	7-12-17	7-15-17	
Ethyl Benzene	ND	0.097	EPA 8021B	7-12-17	7-15-17	
m,p-Xylene	ND	0.097	EPA 8021B	7-12-17	7-15-17	
o-Xylene	ND	0.097	EPA 8021B	7-12-17	7-15-17	
Gasoline	ND	9.7	NWTPH-Gx	7-12-17	7-15-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	78	63-124				



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NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B7-15-16						
Laboratory ID: 07-045-14						
Benzene	ND	0.022	EPA 8021B	7-12-17	7-12-17	
Toluene	ND	0.11	EPA 8021B	7-12-17	7-12-17	
Ethyl Benzene	ND	0.11	EPA 8021B	7-12-17	7-12-17	
m,p-Xylene	ND	0.11	EPA 8021B	7-12-17	7-12-17	
o-Xylene	ND	0.11	EPA 8021B	7-12-17	7-12-17	
Gasoline	ND	11	NWTPH-Gx	7-12-17	7-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	81	63-124				
Client ID: FL209-B8-1-2						
Laboratory ID: 07-045-16						
Benzene	ND	0.020	EPA 8021B	7-12-17	7-12-17	
Toluene	ND	0.053	EPA 8021B	7-12-17	7-12-17	
Ethyl Benzene	ND	0.053	EPA 8021B	7-12-17	7-12-17	
m,p-Xylene	ND	0.053	EPA 8021B	7-12-17	7-12-17	
o-Xylene	ND	0.053	EPA 8021B	7-12-17	7-12-17	
Gasoline	ND	5.3	NWTPH-Gx	7-12-17	7-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	83	63-124				
Client ID: FL209-B8-6-6.5						
Laboratory ID: 07-045-17						
Benzene	ND	0.020	EPA 8021B	7-12-17	7-12-17	
Toluene	ND	0.097	EPA 8021B	7-12-17	7-12-17	
Ethyl Benzene	ND	0.097	EPA 8021B	7-12-17	7-12-17	
m,p-Xylene	ND	0.097	EPA 8021B	7-12-17	7-12-17	
o-Xylene	ND	0.097	EPA 8021B	7-12-17	7-12-17	
Gasoline	ND	9.7	NWTPH-Gx	7-12-17	7-12-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Fluorobenzene</i>	84	63-124				



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NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B8-10-11						
Laboratory ID: 07-045-19						
Benzene	ND	0.020	EPA 8021B	7-12-17	7-15-17	
Toluene	ND	0.10	EPA 8021B	7-12-17	7-15-17	
Ethyl Benzene	0.11	0.10	EPA 8021B	7-12-17	7-15-17	
m,p-Xylene	0.11	0.10	EPA 8021B	7-12-17	7-15-17	
o-Xylene	ND	0.10	EPA 8021B	7-12-17	7-15-17	
Gasoline	ND	10	NWTPH-Gx	7-12-17	7-15-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	76	63-124				
Client ID: FL209-B8-15-16						
Laboratory ID: 07-045-21						
Gasoline	ND	24	NWTPH-Gx	7-12-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	76	63-124				
Client ID: FL209-B8-20-21						
Laboratory ID: 07-045-23						
Gasoline	ND	28	NWTPH-Gx	7-12-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	74	63-124				
Client ID: FL209-B8-22.5-23						
Laboratory ID: 07-045-24						
Benzene	ND	0.020	EPA 8021B	7-12-17	7-15-17	
Toluene	ND	0.089	EPA 8021B	7-12-17	7-15-17	
Ethyl Benzene	ND	0.089	EPA 8021B	7-12-17	7-15-17	
m,p-Xylene	ND	0.089	EPA 8021B	7-12-17	7-15-17	
o-Xylene	ND	0.089	EPA 8021B	7-12-17	7-15-17	
Gasoline	ND	8.9	NWTPH-Gx	7-12-17	7-15-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	74	63-124				



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NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B5-1-2						
Laboratory ID: 07-045-01						
Diesel Range Organics	ND	27	NWTPH-Dx	7-11-17	7-12-17	
Lube Oil Range Organics	ND	53	NWTPH-Dx	7-11-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	87	50-150				
Client ID: FL209-B5-6-6.5						
Laboratory ID: 07-045-02						
Diesel Fuel #2	450	28	NWTPH-Dx	7-11-17	7-12-17	
Lube Oil	540	56	NWTPH-Dx	7-11-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	91	50-150				
Client ID: FL209-B5-13-14						
Laboratory ID: 07-045-05						
Diesel Fuel #2	5100	140	NWTPH-Dx	7-11-17	7-13-17	
Lube Oil Range Organics	ND	270	NWTPH-Dx	7-11-17	7-13-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	99	50-150				
Client ID: FL209-B5-17.5-18.5						
Laboratory ID: 07-045-07						
Diesel Fuel #2	1400	27	NWTPH-Dx	7-11-17	7-12-17	
Lube Oil Range Organics	ND	60	NWTPH-Dx	7-11-17	7-12-17	U1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	98	50-150				
Client ID: FL209-B5-22.5-23						
Laboratory ID: 07-045-08						
Diesel Range Organics	ND	26	NWTPH-Dx	7-11-17	7-12-17	
Lube Oil Range Organics	ND	53	NWTPH-Dx	7-11-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	85	50-150				
Client ID: FL209-B7-1-2						
Laboratory ID: 07-045-09						
Diesel Range Organics	ND	26	NWTPH-Dx	7-11-17	7-12-17	
Lube Oil Range Organics	ND	53	NWTPH-Dx	7-11-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	79	50-150				



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NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B7-5.5-6.5						
Laboratory ID:	07-045-10					
Diesel Fuel #2	1400	28	NWTPH-Dx	7-11-17	7-12-17	
Lube Oil	730	56	NWTPH-Dx	7-11-17	7-12-17	N1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	97	50-150				
Client ID: FL209-B7-10.5-11.5						
Laboratory ID:	07-045-12					
Diesel Fuel #2	5900	140	NWTPH-Dx	7-11-17	7-14-17	
Lube Oil	1200	280	NWTPH-Dx	7-11-17	7-14-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	107	50-150				
Client ID: FL209-B7-12.5-13.5						
Laboratory ID:	07-045-13					
Diesel Fuel #2	69	27	NWTPH-Dx	7-11-17	7-13-17	
Lube Oil Range Organics	ND	54	NWTPH-Dx	7-11-17	7-13-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	115	50-150				
Client ID: FL209-B7-15-16						
Laboratory ID:	07-045-14					
Diesel Fuel #2	180	27	NWTPH-Dx	7-11-17	7-13-17	
Lube Oil	82	54	NWTPH-Dx	7-11-17	7-13-17	N1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	104	50-150				
Client ID: FL209-B8-1-2						
Laboratory ID:	07-045-16					
Diesel Range Organics	ND	27	NWTPH-Dx	7-11-17	7-12-17	
Lube Oil Range Organics	ND	54	NWTPH-Dx	7-11-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	85	50-150				
Client ID: FL209-B8-6-6.5						
Laboratory ID:	07-045-17					
Diesel Fuel #2	890	28	NWTPH-Dx	7-11-17	7-12-17	
Lube Oil	370	57	NWTPH-Dx	7-11-17	7-12-17	N1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	102	50-150				



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NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-B8-10-11					
Laboratory ID:	07-045-19					
Diesel Fuel #2	1700	27	NWTPH-Dx	7-11-17	7-13-17	
Lube Oil Range Organics	ND	54	NWTPH-Dx	7-11-17	7-13-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	131	50-150				
Client ID:	FL209-B8-15-16					
Laboratory ID:	07-045-21					
Diesel Fuel #2	2800	28	NWTPH-Dx	7-11-17	7-12-17	
Lube Oil Range Organics	ND	55	NWTPH-Dx	7-11-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	121	50-150				
Client ID:	FL209-B8-20-21					
Laboratory ID:	07-045-23					
Diesel Fuel #2	9300	140	NWTPH-Dx	7-11-17	7-13-17	
Lube Oil Range Organics	ND	270	NWTPH-Dx	7-11-17	7-13-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	109	50-150				
Client ID:	FL209-B8-22.5-23					
Laboratory ID:	07-045-24					
Diesel Fuel #2	1400	27	NWTPH-Dx	7-11-17	7-12-17	
Lube Oil Range Organics	ND	170	NWTPH-Dx	7-11-17	7-12-17	U1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	100	50-150				



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NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-B5-8-9					
Laboratory ID:	07-045-03					
Diesel Fuel #2	620	28	NWTPH-Dx	7-20-17	7-20-17	
Lube Oil	250	57	NWTPH-Dx	7-20-17	7-20-17	N1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	89	50-150				

Client ID:	FL209-B5-10.5-11.5					
Laboratory ID:	07-045-04					
Diesel Fuel #2	2400	28	NWTPH-Dx	7-20-17	7-20-17	
Lube Oil Range Organics	ND	55	NWTPH-Dx	7-20-17	7-20-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	101	50-150				

Client ID:	FL209-B7-8-9					
Laboratory ID:	07-045-11					
Diesel Fuel #2	960	28	NWTPH-Dx	7-20-17	7-20-17	
Lube Oil	380	56	NWTPH-Dx	7-20-17	7-20-17	N1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	87	50-150				

Client ID:	FL209-B7-20-20.5					
Laboratory ID:	07-045-15					
Diesel Range Organics	ND	27	NWTPH-Dx	7-20-17	7-20-17	
Lube Oil Range Organics	ND	55	NWTPH-Dx	7-20-17	7-20-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	71	50-150				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B5-6-6.5				
Laboratory ID:		07-045-02				
Dichlorodifluoromethane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Chloromethane	ND	0.0042	EPA 8260C	7-10-17	7-10-17	
Vinyl Chloride	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Bromomethane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Chloroethane	ND	0.0042	EPA 8260C	7-10-17	7-10-17	
Trichlorofluoromethane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloroethene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Acetone	0.027	0.0083	EPA 8260C	7-10-17	7-10-17	
Iodomethane	ND	0.0042	EPA 8260C	7-10-17	7-10-17	
Carbon Disulfide	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Methylene Chloride	ND	0.0083	EPA 8260C	7-10-17	7-10-17	
(trans) 1,2-Dichloroethene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Methyl t-Butyl Ether	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloroethane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Vinyl Acetate	ND	0.0042	EPA 8260C	7-10-17	7-10-17	
2,2-Dichloropropane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
(cis) 1,2-Dichloroethene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
2-Butanone	ND	0.0042	EPA 8260C	7-10-17	7-10-17	
Bromochloromethane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Chloroform	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,1,1-Trichloroethane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Carbon Tetrachloride	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloropropene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Benzene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,2-Dichloroethane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Trichloroethene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,2-Dichloropropane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Dibromomethane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Bromodichloromethane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
2-Chloroethyl Vinyl Ether	ND	0.0042	EPA 8260C	7-10-17	7-10-17	
(cis) 1,3-Dichloropropene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Methyl Isobutyl Ketone	ND	0.0042	EPA 8260C	7-10-17	7-10-17	
Toluene	ND	0.0042	EPA 8260C	7-10-17	7-10-17	
(trans) 1,3-Dichloropropene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B5-6-6.5				
Laboratory ID:		07-045-02				
1,1,2-Trichloroethane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Tetrachloroethene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,3-Dichloropropane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
2-Hexanone	ND	0.0042	EPA 8260C	7-10-17	7-10-17	
Dibromochloromethane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,2-Dibromoethane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Chlorobenzene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,1,1,2-Tetrachloroethane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Ethylbenzene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
m,p-Xylene	ND	0.0017	EPA 8260C	7-10-17	7-10-17	
o-Xylene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Styrene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Bromoform	ND	0.0042	EPA 8260C	7-10-17	7-10-17	
Isopropylbenzene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Bromobenzene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,1,2,2-Tetrachloroethane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,2,3-Trichloropropane	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
n-Propylbenzene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
2-Chlorotoluene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
4-Chlorotoluene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,3,5-Trimethylbenzene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
tert-Butylbenzene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,2,4-Trimethylbenzene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
sec-Butylbenzene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,3-Dichlorobenzene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
p-Isopropyltoluene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,4-Dichlorobenzene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,2-Dichlorobenzene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
n-Butylbenzene	0.0011	0.00083	EPA 8260C	7-10-17	7-10-17	
1,2-Dibromo-3-chloropropane	ND	0.0042	EPA 8260C	7-10-17	7-10-17	
1,2,4-Trichlorobenzene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
Hexachlorobutadiene	ND	0.0042	EPA 8260C	7-10-17	7-10-17	
Naphthalene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
1,2,3-Trichlorobenzene	ND	0.00083	EPA 8260C	7-10-17	7-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	125	73-134				
Toluene-d8	108	81-124				
4-Bromofluorobenzene	99	80-131				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B5-13-14				
Laboratory ID:		07-045-05				
Dichlorodifluoromethane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Chloromethane	ND	0.24	EPA 8260C	7-10-17	7-10-17	
Vinyl Chloride	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Bromomethane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Chloroethane	ND	0.24	EPA 8260C	7-10-17	7-10-17	
Trichlorofluoromethane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloroethene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Acetone	ND	0.48	EPA 8260C	7-10-17	7-10-17	
Iodomethane	ND	0.24	EPA 8260C	7-10-17	7-10-17	
Carbon Disulfide	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Methylene Chloride	ND	0.48	EPA 8260C	7-10-17	7-10-17	
(trans) 1,2-Dichloroethene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Methyl t-Butyl Ether	ND	0.048	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloroethane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Vinyl Acetate	ND	0.24	EPA 8260C	7-10-17	7-10-17	
2,2-Dichloropropane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
(cis) 1,2-Dichloroethene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
2-Butanone	ND	0.24	EPA 8260C	7-10-17	7-10-17	
Bromochloromethane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Chloroform	ND	0.048	EPA 8260C	7-10-17	7-10-17	
1,1,1-Trichloroethane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Carbon Tetrachloride	ND	0.048	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloropropene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Benzene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
1,2-Dichloroethane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Trichloroethene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
1,2-Dichloropropane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Dibromomethane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Bromodichloromethane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
2-Chloroethyl Vinyl Ether	ND	0.24	EPA 8260C	7-10-17	7-10-17	
(cis) 1,3-Dichloropropene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Methyl Isobutyl Ketone	ND	0.24	EPA 8260C	7-10-17	7-10-17	
Toluene	ND	0.24	EPA 8260C	7-10-17	7-10-17	
(trans) 1,3-Dichloropropene	ND	0.048	EPA 8260C	7-10-17	7-10-17	



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

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

Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B5-13-14						
Laboratory ID: 07-045-05						
1,1,2-Trichloroethane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Tetrachloroethene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
1,3-Dichloropropane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
2-Hexanone	ND	0.24	EPA 8260C	7-10-17	7-10-17	
Dibromochloromethane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
1,2-Dibromoethane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Chlorobenzene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
1,1,1,2-Tetrachloroethane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Ethylbenzene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
m,p-Xylene	ND	0.096	EPA 8260C	7-10-17	7-10-17	
o-Xylene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Styrene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Bromoform	ND	0.24	EPA 8260C	7-10-17	7-10-17	
Isopropylbenzene	0.22	0.048	EPA 8260C	7-10-17	7-10-17	
Bromobenzene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
1,1,2,2-Tetrachloroethane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
1,2,3-Trichloropropane	ND	0.048	EPA 8260C	7-10-17	7-10-17	
n-Propylbenzene	0.64	0.048	EPA 8260C	7-10-17	7-10-17	
2-Chlorotoluene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
4-Chlorotoluene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
1,3,5-Trimethylbenzene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
tert-Butylbenzene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
1,2,4-Trimethylbenzene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
sec-Butylbenzene	0.50	0.048	EPA 8260C	7-10-17	7-10-17	
1,3-Dichlorobenzene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
p-Isopropyltoluene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
1,4-Dichlorobenzene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
1,2-Dichlorobenzene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
n-Butylbenzene	1.2	0.048	EPA 8260C	7-10-17	7-10-17	
1,2-Dibromo-3-chloropropane	ND	0.24	EPA 8260C	7-10-17	7-10-17	
1,2,4-Trichlorobenzene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
Hexachlorobutadiene	ND	0.24	EPA 8260C	7-10-17	7-10-17	
Naphthalene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
1,2,3-Trichlorobenzene	ND	0.048	EPA 8260C	7-10-17	7-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>104</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>102</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>102</i>	<i>80-131</i>				



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 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B5-17.5-18.5						
Laboratory ID: 07-045-07						
Dichlorodifluoromethane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Chloromethane	ND	0.0044	EPA 8260C	7-10-17	7-10-17	
Vinyl Chloride	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Bromomethane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Chloroethane	ND	0.0044	EPA 8260C	7-10-17	7-10-17	
Trichlorofluoromethane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloroethene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Acetone	0.031	0.0089	EPA 8260C	7-10-17	7-10-17	
Iodomethane	ND	0.0044	EPA 8260C	7-10-17	7-10-17	
Carbon Disulfide	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Methylene Chloride	ND	0.0089	EPA 8260C	7-10-17	7-10-17	
(trans) 1,2-Dichloroethene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Methyl t-Butyl Ether	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloroethane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Vinyl Acetate	ND	0.0044	EPA 8260C	7-10-17	7-10-17	
2,2-Dichloropropane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
(cis) 1,2-Dichloroethene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
2-Butanone	ND	0.0044	EPA 8260C	7-10-17	7-10-17	
Bromochloromethane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Chloroform	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
1,1,1-Trichloroethane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Carbon Tetrachloride	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloropropene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Benzene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
1,2-Dichloroethane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Trichloroethene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
1,2-Dichloropropane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Dibromomethane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Bromodichloromethane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
2-Chloroethyl Vinyl Ether	ND	0.0044	EPA 8260C	7-10-17	7-10-17	
(cis) 1,3-Dichloropropene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Methyl Isobutyl Ketone	ND	0.0044	EPA 8260C	7-10-17	7-10-17	
Toluene	ND	0.0044	EPA 8260C	7-10-17	7-10-17	
(trans) 1,3-Dichloropropene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B5-17.5-18.5						
Laboratory ID: 07-045-07						
1,1,2-Trichloroethane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Tetrachloroethene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
1,3-Dichloropropane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
2-Hexanone	ND	0.0044	EPA 8260C	7-10-17	7-10-17	
Dibromochloromethane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
1,2-Dibromoethane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Chlorobenzene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
1,1,1,2-Tetrachloroethane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Ethylbenzene	0.0024	0.00089	EPA 8260C	7-10-17	7-10-17	
m,p-Xylene	0.0060	0.0018	EPA 8260C	7-10-17	7-10-17	
o-Xylene	0.0015	0.00089	EPA 8260C	7-10-17	7-10-17	
Styrene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Bromoform	ND	0.0044	EPA 8260C	7-10-17	7-10-17	
Isopropylbenzene	0.055	0.00089	EPA 8260C	7-10-17	7-10-17	
Bromobenzene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
1,1,2,2-Tetrachloroethane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
1,2,3-Trichloropropane	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
n-Propylbenzene	0.12	0.00089	EPA 8260C	7-10-17	7-10-17	
2-Chlorotoluene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
4-Chlorotoluene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
1,3,5-Trimethylbenzene	0.012	0.00089	EPA 8260C	7-10-17	7-10-17	
tert-Butylbenzene	0.0034	0.00089	EPA 8260C	7-10-17	7-10-17	
1,2,4-Trimethylbenzene	0.11	0.00089	EPA 8260C	7-10-17	7-10-17	
sec-Butylbenzene	0.067	0.00089	EPA 8260C	7-10-17	7-10-17	
1,3-Dichlorobenzene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
p-Isopropyltoluene	0.043	0.00089	EPA 8260C	7-10-17	7-10-17	
1,4-Dichlorobenzene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
1,2-Dichlorobenzene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
n-Butylbenzene	0.081	0.00089	EPA 8260C	7-10-17	7-10-17	
1,2-Dibromo-3-chloropropane	ND	0.0044	EPA 8260C	7-10-17	7-10-17	
1,2,4-Trichlorobenzene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
Hexachlorobutadiene	ND	0.0044	EPA 8260C	7-10-17	7-10-17	
Naphthalene	0.022	0.00089	EPA 8260C	7-10-17	7-10-17	
1,2,3-Trichlorobenzene	ND	0.00089	EPA 8260C	7-10-17	7-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	119	73-134				
Toluene-d8	123	81-124				
4-Bromofluorobenzene	127	80-131				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B5-22.5-23						
Laboratory ID: 07-045-08						
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Chloromethane	ND	0.0057	EPA 8260C	7-10-17	7-10-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Bromomethane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Chloroethane	ND	0.0057	EPA 8260C	7-10-17	7-10-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Acetone	ND	0.011	EPA 8260C	7-10-17	7-10-17	
Iodomethane	ND	0.0057	EPA 8260C	7-10-17	7-10-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Methylene Chloride	ND	0.011	EPA 8260C	7-10-17	7-10-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Vinyl Acetate	ND	0.0057	EPA 8260C	7-10-17	7-10-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
2-Butanone	ND	0.0057	EPA 8260C	7-10-17	7-10-17	
Bromochloromethane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Chloroform	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Benzene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Trichloroethene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Dibromomethane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
2-Chloroethyl Vinyl Ether	ND	0.0057	EPA 8260C	7-10-17	7-10-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Methyl Isobutyl Ketone	ND	0.0057	EPA 8260C	7-10-17	7-10-17	
Toluene	ND	0.0057	EPA 8260C	7-10-17	7-10-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B5-22.5-23						
Laboratory ID: 07-045-08						
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
2-Hexanone	ND	0.0057	EPA 8260C	7-10-17	7-10-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Chlorobenzene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Ethylbenzene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
m,p-Xylene	ND	0.0023	EPA 8260C	7-10-17	7-10-17	
o-Xylene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Styrene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Bromoform	ND	0.0057	EPA 8260C	7-10-17	7-10-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Bromobenzene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
n-Propylbenzene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,2,4-Trimethylbenzene	0.0013	0.0011	EPA 8260C	7-10-17	7-10-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
1,2-Dibromo-3-chloropropane	ND	0.0057	EPA 8260C	7-10-17	7-10-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
Hexachlorobutadiene	ND	0.0057	EPA 8260C	7-10-17	7-10-17	
Naphthalene	0.0026	0.0011	EPA 8260C	7-10-17	7-10-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	7-10-17	7-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>120</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>115</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>113</i>	<i>80-131</i>				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B7-10.5-11.5						
Laboratory ID: 07-045-12						
Dichlorodifluoromethane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Chloromethane	ND	0.25	EPA 8260C	7-10-17	7-10-17	
Vinyl Chloride	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Bromomethane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Chloroethane	ND	0.25	EPA 8260C	7-10-17	7-10-17	
Trichlorofluoromethane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloroethene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Acetone	ND	0.49	EPA 8260C	7-10-17	7-10-17	
Iodomethane	ND	0.25	EPA 8260C	7-10-17	7-10-17	
Carbon Disulfide	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Methylene Chloride	ND	0.49	EPA 8260C	7-10-17	7-10-17	
(trans) 1,2-Dichloroethene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Methyl t-Butyl Ether	ND	0.049	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloroethane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Vinyl Acetate	ND	0.25	EPA 8260C	7-10-17	7-10-17	
2,2-Dichloropropane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
(cis) 1,2-Dichloroethene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
2-Butanone	ND	0.25	EPA 8260C	7-10-17	7-10-17	
Bromochloromethane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Chloroform	ND	0.049	EPA 8260C	7-10-17	7-10-17	
1,1,1-Trichloroethane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Carbon Tetrachloride	ND	0.049	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloropropene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Benzene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
1,2-Dichloroethane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Trichloroethene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
1,2-Dichloropropane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Dibromomethane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Bromodichloromethane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
2-Chloroethyl Vinyl Ether	ND	0.25	EPA 8260C	7-10-17	7-10-17	
(cis) 1,3-Dichloropropene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Methyl Isobutyl Ketone	ND	0.25	EPA 8260C	7-10-17	7-10-17	
Toluene	ND	0.25	EPA 8260C	7-10-17	7-10-17	
(trans) 1,3-Dichloropropene	ND	0.049	EPA 8260C	7-10-17	7-10-17	



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

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Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B7-10.5-11.5						
Laboratory ID: 07-045-12						
1,1,2-Trichloroethane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Tetrachloroethene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
1,3-Dichloropropane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
2-Hexanone	ND	0.25	EPA 8260C	7-10-17	7-10-17	
Dibromochloromethane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
1,2-Dibromoethane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Chlorobenzene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
1,1,1,2-Tetrachloroethane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Ethylbenzene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
m,p-Xylene	ND	0.098	EPA 8260C	7-10-17	7-10-17	
o-Xylene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Styrene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Bromoform	ND	0.25	EPA 8260C	7-10-17	7-10-17	
Isopropylbenzene	0.091	0.049	EPA 8260C	7-10-17	7-10-17	
Bromobenzene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
1,1,2,2-Tetrachloroethane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
1,2,3-Trichloropropane	ND	0.049	EPA 8260C	7-10-17	7-10-17	
n-Propylbenzene	0.17	0.049	EPA 8260C	7-10-17	7-10-17	
2-Chlorotoluene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
4-Chlorotoluene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
1,3,5-Trimethylbenzene	0.098	0.049	EPA 8260C	7-10-17	7-10-17	
tert-Butylbenzene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
1,2,4-Trimethylbenzene	0.17	0.049	EPA 8260C	7-10-17	7-10-17	
sec-Butylbenzene	0.22	0.049	EPA 8260C	7-10-17	7-10-17	
1,3-Dichlorobenzene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
p-Isopropyltoluene	0.16	0.049	EPA 8260C	7-10-17	7-10-17	
1,4-Dichlorobenzene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
1,2-Dichlorobenzene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
n-Butylbenzene	0.36	0.049	EPA 8260C	7-10-17	7-10-17	
1,2-Dibromo-3-chloropropane	ND	0.25	EPA 8260C	7-10-17	7-10-17	
1,2,4-Trichlorobenzene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
Hexachlorobutadiene	ND	0.25	EPA 8260C	7-10-17	7-10-17	
Naphthalene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
1,2,3-Trichlorobenzene	ND	0.049	EPA 8260C	7-10-17	7-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	109	73-134				
Toluene-d8	104	81-124				
4-Bromofluorobenzene	103	80-131				



Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
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 Project: 4082-039-01

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B8-15-16				
Laboratory ID:		07-045-21				
Dichlorodifluoromethane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Chloromethane	ND	0.25	EPA 8260C	7-10-17	7-10-17	
Vinyl Chloride	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Bromomethane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Chloroethane	ND	0.25	EPA 8260C	7-10-17	7-10-17	
Trichlorofluoromethane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloroethene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Acetone	ND	0.51	EPA 8260C	7-10-17	7-10-17	
Iodomethane	ND	0.25	EPA 8260C	7-10-17	7-10-17	
Carbon Disulfide	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Methylene Chloride	ND	0.51	EPA 8260C	7-10-17	7-10-17	
(trans) 1,2-Dichloroethene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Methyl t-Butyl Ether	ND	0.051	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloroethane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Vinyl Acetate	ND	0.25	EPA 8260C	7-10-17	7-10-17	
2,2-Dichloropropane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
(cis) 1,2-Dichloroethene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
2-Butanone	ND	0.25	EPA 8260C	7-10-17	7-10-17	
Bromochloromethane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Chloroform	ND	0.051	EPA 8260C	7-10-17	7-10-17	
1,1,1-Trichloroethane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Carbon Tetrachloride	ND	0.051	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloropropene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Benzene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
1,2-Dichloroethane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Trichloroethene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
1,2-Dichloropropane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Dibromomethane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Bromodichloromethane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
2-Chloroethyl Vinyl Ether	ND	0.25	EPA 8260C	7-10-17	7-10-17	
(cis) 1,3-Dichloropropene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Methyl Isobutyl Ketone	ND	0.25	EPA 8260C	7-10-17	7-10-17	
Toluene	ND	0.25	EPA 8260C	7-10-17	7-10-17	
(trans) 1,3-Dichloropropene	ND	0.051	EPA 8260C	7-10-17	7-10-17	



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Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B8-15-16						
Laboratory ID: 07-045-21						
1,1,2-Trichloroethane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Tetrachloroethene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
1,3-Dichloropropane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
2-Hexanone	3.0	0.25	EPA 8260C	7-10-17	7-10-17	
Dibromochloromethane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
1,2-Dibromoethane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Chlorobenzene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
1,1,1,2-Tetrachloroethane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Ethylbenzene	0.076	0.051	EPA 8260C	7-10-17	7-10-17	
m,p-Xylene	ND	0.10	EPA 8260C	7-10-17	7-10-17	
o-Xylene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Styrene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Bromoform	ND	0.25	EPA 8260C	7-10-17	7-10-17	
Isopropylbenzene	0.25	0.051	EPA 8260C	7-10-17	7-10-17	
Bromobenzene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
1,1,2,2-Tetrachloroethane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
1,2,3-Trichloropropane	ND	0.051	EPA 8260C	7-10-17	7-10-17	
n-Propylbenzene	0.34	0.051	EPA 8260C	7-10-17	7-10-17	
2-Chlorotoluene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
4-Chlorotoluene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
1,3,5-Trimethylbenzene	0.57	0.051	EPA 8260C	7-10-17	7-10-17	
tert-Butylbenzene	0.058	0.051	EPA 8260C	7-10-17	7-10-17	
1,2,4-Trimethylbenzene	0.071	0.051	EPA 8260C	7-10-17	7-10-17	
sec-Butylbenzene	1.2	0.051	EPA 8260C	7-10-17	7-10-17	
1,3-Dichlorobenzene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
p-Isopropyltoluene	0.51	0.051	EPA 8260C	7-10-17	7-10-17	
1,4-Dichlorobenzene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
1,2-Dichlorobenzene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
n-Butylbenzene	1.2	0.051	EPA 8260C	7-10-17	7-10-17	
1,2-Dibromo-3-chloropropane	ND	0.25	EPA 8260C	7-10-17	7-10-17	
1,2,4-Trichlorobenzene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
Hexachlorobutadiene	ND	0.25	EPA 8260C	7-10-17	7-10-17	
Naphthalene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
1,2,3-Trichlorobenzene	ND	0.051	EPA 8260C	7-10-17	7-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	102	73-134				
Toluene-d8	100	81-124				
4-Bromofluorobenzene	95	80-131				



Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
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 Project: 4082-039-01

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B8-20-21				
Laboratory ID:		07-045-23				
Dichlorodifluoromethane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Chloromethane	ND	0.27	EPA 8260C	7-10-17	7-10-17	
Vinyl Chloride	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Bromomethane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Chloroethane	ND	0.27	EPA 8260C	7-10-17	7-10-17	
Trichlorofluoromethane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloroethene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Acetone	ND	0.53	EPA 8260C	7-10-17	7-10-17	
Iodomethane	ND	0.27	EPA 8260C	7-10-17	7-10-17	
Carbon Disulfide	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Methylene Chloride	ND	0.53	EPA 8260C	7-10-17	7-10-17	
(trans) 1,2-Dichloroethene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Methyl t-Butyl Ether	ND	0.053	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloroethane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Vinyl Acetate	ND	0.27	EPA 8260C	7-10-17	7-10-17	
2,2-Dichloropropane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
(cis) 1,2-Dichloroethene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
2-Butanone	ND	0.27	EPA 8260C	7-10-17	7-10-17	
Bromochloromethane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Chloroform	ND	0.053	EPA 8260C	7-10-17	7-10-17	
1,1,1-Trichloroethane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Carbon Tetrachloride	ND	0.053	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloropropene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Benzene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
1,2-Dichloroethane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Trichloroethene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
1,2-Dichloropropane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Dibromomethane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Bromodichloromethane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
2-Chloroethyl Vinyl Ether	ND	0.27	EPA 8260C	7-10-17	7-10-17	
(cis) 1,3-Dichloropropene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Methyl Isobutyl Ketone	ND	0.27	EPA 8260C	7-10-17	7-10-17	
Toluene	ND	0.27	EPA 8260C	7-10-17	7-10-17	
(trans) 1,3-Dichloropropene	ND	0.053	EPA 8260C	7-10-17	7-10-17	



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 Project: 4082-039-01

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B8-20-21				
Laboratory ID:		07-045-23				
1,1,2-Trichloroethane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Tetrachloroethene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
1,3-Dichloropropane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
2-Hexanone	ND	0.27	EPA 8260C	7-10-17	7-10-17	
Dibromochloromethane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
1,2-Dibromoethane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Chlorobenzene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
1,1,1,2-Tetrachloroethane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Ethylbenzene	0.89	0.053	EPA 8260C	7-10-17	7-10-17	
m,p-Xylene	0.47	0.11	EPA 8260C	7-10-17	7-10-17	
o-Xylene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Styrene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Bromoform	ND	0.27	EPA 8260C	7-10-17	7-10-17	
Isopropylbenzene	0.92	0.053	EPA 8260C	7-10-17	7-10-17	
Bromobenzene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
1,1,2,2-Tetrachloroethane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
1,2,3-Trichloropropane	ND	0.053	EPA 8260C	7-10-17	7-10-17	
n-Propylbenzene	1.5	0.053	EPA 8260C	7-10-17	7-10-17	
2-Chlorotoluene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
4-Chlorotoluene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
1,3,5-Trimethylbenzene	0.88	0.053	EPA 8260C	7-10-17	7-10-17	
tert-Butylbenzene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
1,2,4-Trimethylbenzene	5.1	0.053	EPA 8260C	7-10-17	7-10-17	
sec-Butylbenzene	1.6	0.053	EPA 8260C	7-10-17	7-10-17	
1,3-Dichlorobenzene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
p-Isopropyltoluene	0.86	0.053	EPA 8260C	7-10-17	7-10-17	
1,4-Dichlorobenzene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
1,2-Dichlorobenzene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
n-Butylbenzene	2.1	0.053	EPA 8260C	7-10-17	7-10-17	
1,2-Dibromo-3-chloropropane	ND	0.27	EPA 8260C	7-10-17	7-10-17	
1,2,4-Trichlorobenzene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
Hexachlorobutadiene	ND	0.27	EPA 8260C	7-10-17	7-10-17	
Naphthalene	2.0	0.053	EPA 8260C	7-10-17	7-10-17	
1,2,3-Trichlorobenzene	ND	0.053	EPA 8260C	7-10-17	7-10-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	102	73-134				
Toluene-d8	103	81-124				
4-Bromofluorobenzene	99	80-131				



Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B7-15-16				
Laboratory ID:		07-045-14				
Dichlorodifluoromethane	ND	0.0016	EPA 8260C	7-19-17	7-19-17	
Chloromethane	ND	0.0047	EPA 8260C	7-19-17	7-19-17	
Vinyl Chloride	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Bromomethane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Chloroethane	ND	0.0047	EPA 8260C	7-19-17	7-19-17	
Trichlorofluoromethane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,1-Dichloroethene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Acetone	0.035	0.0095	EPA 8260C	7-19-17	7-19-17	Y
Iodomethane	ND	0.0047	EPA 8260C	7-19-17	7-19-17	
Carbon Disulfide	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Methylene Chloride	ND	0.0095	EPA 8260C	7-19-17	7-19-17	
(trans) 1,2-Dichloroethene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Methyl t-Butyl Ether	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,1-Dichloroethane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Vinyl Acetate	ND	0.0047	EPA 8260C	7-19-17	7-19-17	
2,2-Dichloropropane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
(cis) 1,2-Dichloroethene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
2-Butanone	ND	0.0047	EPA 8260C	7-19-17	7-19-17	
Bromochloromethane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Chloroform	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,1,1-Trichloroethane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Carbon Tetrachloride	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,1-Dichloropropene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Benzene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,2-Dichloroethane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Trichloroethene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,2-Dichloropropane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Dibromomethane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Bromodichloromethane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260C	7-19-17	7-19-17	
(cis) 1,3-Dichloropropene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Methyl Isobutyl Ketone	ND	0.0047	EPA 8260C	7-19-17	7-19-17	
Toluene	ND	0.0047	EPA 8260C	7-19-17	7-19-17	
(trans) 1,3-Dichloropropene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	



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

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

Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B7-15-16						
Laboratory ID: 07-045-14						
1,1,2-Trichloroethane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Tetrachloroethene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,3-Dichloropropane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
2-Hexanone	ND	0.0047	EPA 8260C	7-19-17	7-19-17	
Dibromochloromethane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,2-Dibromoethane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Chlorobenzene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,1,1,2-Tetrachloroethane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Ethylbenzene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
m,p-Xylene	ND	0.0019	EPA 8260C	7-19-17	7-19-17	
o-Xylene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Styrene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Bromoform	ND	0.0047	EPA 8260C	7-19-17	7-19-17	
Isopropylbenzene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Bromobenzene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,1,2,2-Tetrachloroethane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,2,3-Trichloropropane	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
n-Propylbenzene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
2-Chlorotoluene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
4-Chlorotoluene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,3,5-Trimethylbenzene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
tert-Butylbenzene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,2,4-Trimethylbenzene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
sec-Butylbenzene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,3-Dichlorobenzene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
p-Isopropyltoluene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,4-Dichlorobenzene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,2-Dichlorobenzene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
n-Butylbenzene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260C	7-19-17	7-19-17	
1,2,4-Trichlorobenzene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
Hexachlorobutadiene	ND	0.0047	EPA 8260C	7-19-17	7-19-17	
Naphthalene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
1,2,3-Trichlorobenzene	ND	0.00095	EPA 8260C	7-19-17	7-19-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>119</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>117</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>114</i>	<i>80-131</i>				



Date of Report: July 24, 2017
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 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B5-13-14				
Laboratory ID:		07-045-05				
Naphthalene	0.76	0.15	EPA 8270D/SIM	7-10-17	7-14-17	
2-Methylnaphthalene	30	0.37	EPA 8270D/SIM	7-10-17	7-17-17	
1-Methylnaphthalene	23	0.37	EPA 8270D/SIM	7-10-17	7-17-17	
Acenaphthylene	0.54	0.15	EPA 8270D/SIM	7-10-17	7-14-17	
Acenaphthene	2.0	0.15	EPA 8270D/SIM	7-10-17	7-14-17	
Fluorene	3.4	0.15	EPA 8270D/SIM	7-10-17	7-14-17	
Phenanthrene	6.5	0.15	EPA 8270D/SIM	7-10-17	7-14-17	
Anthracene	0.60	0.15	EPA 8270D/SIM	7-10-17	7-14-17	
Fluoranthene	ND	0.15	EPA 8270D/SIM	7-10-17	7-14-17	
Pyrene	0.36	0.15	EPA 8270D/SIM	7-10-17	7-14-17	
Benzo[a]anthracene	0.018	0.0073	EPA 8270D/SIM	7-10-17	7-13-17	
Chrysene	0.040	0.0073	EPA 8270D/SIM	7-10-17	7-13-17	
Benzo[b]fluoranthene	ND	0.0073	EPA 8270D/SIM	7-10-17	7-13-17	
Benzo[j,k]fluoranthene	ND	0.0073	EPA 8270D/SIM	7-10-17	7-13-17	
Benzo[a]pyrene	ND	0.0073	EPA 8270D/SIM	7-10-17	7-13-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0073	EPA 8270D/SIM	7-10-17	7-13-17	
Dibenz[a,h]anthracene	ND	0.0073	EPA 8270D/SIM	7-10-17	7-13-17	
Benzo[g,h,i]perylene	ND	0.0073	EPA 8270D/SIM	7-10-17	7-13-17	
<i>Surrogate:</i>		<i>Percent Recovery</i>	<i>Control Limits</i>			
<i>2-Fluorobiphenyl</i>		<i>120</i>	<i>32 - 122</i>			
<i>Pyrene-d10</i>		<i>124</i>	<i>33 - 125</i>			
<i>Terphenyl-d14</i>		<i>116</i>	<i>36 - 118</i>			



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 Laboratory Reference: 1707-045
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B7-12.5-13.5						
Laboratory ID: 07-045-13						
Naphthalene	ND	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
2-Methylnaphthalene	0.089	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
1-Methylnaphthalene	0.11	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
Acenaphthylene	ND	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
Acenaphthene	0.015	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
Fluorene	0.032	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
Phenanthrene	0.070	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
Anthracene	0.0083	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
Fluoranthene	ND	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
Pyrene	0.0081	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
Benzo[a]anthracene	ND	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
Chrysene	ND	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
Benzo[b]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
Benzo[j,k]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
Benzo[a]pyrene	ND	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
Dibenz[a,h]anthracene	ND	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
Benzo[g,h,i]perylene	ND	0.0072	EPA 8270D/SIM	7-10-17	7-13-17	
Surrogate:						
	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	83	32 - 122				
Pyrene-d10	88	33 - 125				
Terphenyl-d14	106	36 - 118				



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 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B5-6-6.5						
Laboratory ID: 07-045-02						
Naphthalene	0.015	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
2-Methylnaphthalene	0.040	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
1-Methylnaphthalene	0.015	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
Acenaphthylene	ND	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
Acenaphthene	ND	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
Fluorene	0.012	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
Phenanthrene	0.039	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
Anthracene	0.014	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
Fluoranthene	0.017	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
Pyrene	0.046	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[a]anthracene	0.014	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
Chrysene	0.032	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[b]fluoranthene	0.018	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[j,k]fluoranthene	ND	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[a]pyrene	0.017	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
Indeno(1,2,3-c,d)pyrene	0.014	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
Dibenz[a,h]anthracene	ND	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[g,h,i]perylene	0.020	0.0074	EPA 8270D/SIM	7-19-17	7-22-17	
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	58	32 - 122				
Pyrene-d10	70	33 - 125				
Terphenyl-d14	91	36 - 118				



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PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B5-8-9				
Laboratory ID:		07-045-03				
Naphthalene	0.082	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
2-Methylnaphthalene	0.68	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
1-Methylnaphthalene	0.84	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Acenaphthylene	0.036	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Acenaphthene	0.12	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Fluorene	0.23	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Phenanthrene	0.36	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Anthracene	0.052	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Fluoranthene	0.023	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Pyrene	0.083	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[a]anthracene	0.017	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Chrysene	0.039	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[b]fluoranthene	0.014	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[j,k]fluoranthene	ND	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[a]pyrene	0.014	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Indeno(1,2,3-c,d)pyrene	0.0090	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Dibenz[a,h]anthracene	ND	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[g,h,i]perylene	0.013	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
<i>Surrogate:</i>		<i>Percent Recovery</i>	<i>Control Limits</i>			
<i>2-Fluorobiphenyl</i>		69	32 - 122			
<i>Pyrene-d10</i>		61	33 - 125			
<i>Terphenyl-d14</i>		82	36 - 118			



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PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B5-10.5-11.5						
Laboratory ID: 07-045-04						
Naphthalene	0.36	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
2-Methylnaphthalene	7.9	0.073	EPA 8270D/SIM	7-19-17	7-24-17	
1-Methylnaphthalene	7.4	0.073	EPA 8270D/SIM	7-19-17	7-24-17	
Acenaphthylene	0.42	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Acenaphthene	0.80	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Fluorene	2.2	0.073	EPA 8270D/SIM	7-19-17	7-24-17	
Phenanthrene	4.2	0.073	EPA 8270D/SIM	7-19-17	7-24-17	
Anthracene	0.18	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Fluoranthene	0.025	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Pyrene	0.058	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[a]anthracene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Chrysene	0.023	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[b]fluoranthene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[j,k]fluoranthene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[a]pyrene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Dibenz[a,h]anthracene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[g,h,i]perylene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Surrogate:						
	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	45	32 - 122				
Pyrene-d10	78	33 - 125				
Terphenyl-d14	111	36 - 118				



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PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B5-17.5-18.5						
Laboratory ID: 07-045-07						
Naphthalene	0.092	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
2-Methylnaphthalene	1.1	0.072	EPA 8270D/SIM	7-19-17	7-24-17	
1-Methylnaphthalene	1.3	0.072	EPA 8270D/SIM	7-19-17	7-24-17	
Acenaphthylene	0.044	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Acenaphthene	0.18	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Fluorene	0.36	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Phenanthrene	0.72	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Anthracene	0.064	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Fluoranthene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Pyrene	0.027	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[a]anthracene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Chrysene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[b]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[j,k]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[a]pyrene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Dibenz[a,h]anthracene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[g,h,i]perylene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>94</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>76</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>89</i>	<i>36 - 118</i>				



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PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B5-22.5-23						
Laboratory ID: 07-045-08						
Naphthalene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
2-Methylnaphthalene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
1-Methylnaphthalene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
Acenaphthylene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
Acenaphthene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
Fluorene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
Phenanthrene	0.024	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
Anthracene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
Fluoranthene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
Pyrene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[a]anthracene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
Chrysene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[b]fluoranthene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo(j,k)fluoranthene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[a]pyrene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
Dibenz[a,h]anthracene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[g,h,i]perylene	ND	0.0070	EPA 8270D/SIM	7-19-17	7-21-17	
Surrogate:						
	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	85	32 - 122				
Pyrene-d10	81	33 - 125				
Terphenyl-d14	86	36 - 118				



Date of Report: July 24, 2017
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PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B7-10.5-11.5						
Laboratory ID: 07-045-12						
Naphthalene	0.40	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
2-Methylnaphthalene	2.9	0.075	EPA 8270D/SIM	7-19-17	7-24-17	
1-Methylnaphthalene	4.9	0.075	EPA 8270D/SIM	7-19-17	7-24-17	
Acenaphthylene	0.29	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Acenaphthene	0.86	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Fluorene	1.4	0.075	EPA 8270D/SIM	7-19-17	7-24-17	
Phenanthrene	2.2	0.075	EPA 8270D/SIM	7-19-17	7-24-17	
Anthracene	0.26	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Fluoranthene	0.085	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Pyrene	0.35	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[a]anthracene	0.12	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Chrysene	0.19	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[b]fluoranthene	0.025	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[j,k]fluoranthene	ND	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[a]pyrene	0.027	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Indeno(1,2,3-c,d)pyrene	0.011	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Dibenz[a,h]anthracene	ND	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[g,h,i]perylene	0.021	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Surrogate:						
	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	103	32 - 122				
Pyrene-d10	77	33 - 125				
Terphenyl-d14	87	36 - 118				



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 Laboratory Reference: 1707-045
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B7-15-16						
Laboratory ID: 07-045-14						
Naphthalene	0.0081	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
2-Methylnaphthalene	0.092	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
1-Methylnaphthalene	0.12	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
Acenaphthylene	ND	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
Acenaphthene	0.022	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
Fluorene	0.057	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
Phenanthrene	0.098	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
Anthracene	0.012	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
Fluoranthene	ND	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
Pyrene	0.012	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
Benzo[a]anthracene	ND	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
Chrysene	0.0076	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
Benzo[b]fluoranthene	ND	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
Benzo[j,k]fluoranthene	ND	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
Benzo[a]pyrene	ND	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
Dibenz[a,h]anthracene	ND	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
Benzo[g,h,i]perylene	ND	0.0071	EPA 8270D/SIM	7-19-17	7-24-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>85</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>79</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>92</i>	<i>36 - 118</i>				



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PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B8-6-6.5						
Laboratory ID: 07-045-17						
Naphthalene	0.037	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
2-Methylnaphthalene	0.085	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
1-Methylnaphthalene	0.031	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Acenaphthylene	ND	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Acenaphthene	0.0088	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Fluorene	0.023	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Phenanthrene	0.059	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Anthracene	0.017	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Fluoranthene	0.055	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Pyrene	0.069	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[a]anthracene	0.042	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Chrysene	0.049	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[b]fluoranthene	0.048	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[j,k]fluoranthene	0.016	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[a]pyrene	0.040	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Indeno(1,2,3-c,d)pyrene	0.029	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Dibenz[a,h]anthracene	ND	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
Benzo[g,h,i]perylene	0.030	0.0075	EPA 8270D/SIM	7-19-17	7-22-17	
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	75	32 - 122				
Pyrene-d10	70	33 - 125				
Terphenyl-d14	93	36 - 118				



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PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B8-10-11				
Laboratory ID:		07-045-19				
Naphthalene	0.18	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
2-Methylnaphthalene	0.022	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
1-Methylnaphthalene	0.28	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Acenaphthylene	0.094	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Acenaphthene	0.25	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Fluorene	0.82	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Phenanthrene	0.79	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Anthracene	0.090	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Fluoranthene	0.010	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Pyrene	0.069	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[a]anthracene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Chrysene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[b]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[j,k]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[a]pyrene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Dibenz[a,h]anthracene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[g,h,i]perylene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>89</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>81</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>109</i>	<i>36 - 118</i>				



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PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B8-15-16						
Laboratory ID: 07-045-21						
Naphthalene	0.33	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
2-Methylnaphthalene	1.9	0.073	EPA 8270D/SIM	7-19-17	7-24-17	
1-Methylnaphthalene	1.3	0.073	EPA 8270D/SIM	7-19-17	7-24-17	
Acenaphthylene	0.063	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Acenaphthene	0.35	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Fluorene	0.73	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Phenanthrene	0.67	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Anthracene	0.077	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Fluoranthene	0.0094	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Pyrene	0.066	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[a]anthracene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Chrysene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[b]fluoranthene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[j,k]fluoranthene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[a]pyrene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Dibenz[a,h]anthracene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[g,h,i]perylene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	75	32 - 122				
Pyrene-d10	78	33 - 125				
Terphenyl-d14	108	36 - 118				



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PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B8-20-21				
Laboratory ID:		07-045-23				
Naphthalene	4.9	0.15	EPA 8270D/SIM	7-19-17	7-24-17	
2-Methylnaphthalene	17	0.15	EPA 8270D/SIM	7-19-17	7-24-17	
1-Methylnaphthalene	9.6	0.15	EPA 8270D/SIM	7-19-17	7-24-17	
Acenaphthylene	0.29	0.15	EPA 8270D/SIM	7-19-17	7-24-17	
Acenaphthene	2.0	0.15	EPA 8270D/SIM	7-19-17	7-24-17	
Fluorene	4.4	0.15	EPA 8270D/SIM	7-19-17	7-24-17	
Phenanthrene	3.9	0.15	EPA 8270D/SIM	7-19-17	7-24-17	
Anthracene	0.52	0.15	EPA 8270D/SIM	7-19-17	7-24-17	
Fluoranthene	ND	0.15	EPA 8270D/SIM	7-19-17	7-24-17	
Pyrene	0.48	0.15	EPA 8270D/SIM	7-19-17	7-24-17	
Benzo[a]anthracene	ND	0.015	EPA 8270D/SIM	7-19-17	7-21-17	U1
Chrysene	ND	0.012	EPA 8270D/SIM	7-19-17	7-21-17	U1
Benzo[b]fluoranthene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[j,k]fluoranthene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[a]pyrene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Dibenz[a,h]anthracene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[g,h,i]perylene	ND	0.0073	EPA 8270D/SIM	7-19-17	7-21-17	
<i>Surrogate:</i>		<i>Percent Recovery</i>	<i>Control Limits</i>			
2-Fluorobiphenyl	---		32 - 122			F
Pyrene-d10	---		33 - 125			F
Terphenyl-d14	---		36 - 118			F



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PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B8-22.5-23						
Laboratory ID: 07-045-24						
Naphthalene	0.36	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
2-Methylnaphthalene	1.4	0.072	EPA 8270D/SIM	7-19-17	7-24-17	
1-Methylnaphthalene	0.83	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Acenaphthylene	0.041	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Acenaphthene	0.24	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Fluorene	0.47	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Phenanthrene	0.45	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Anthracene	0.044	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Fluoranthene	0.0079	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Pyrene	0.048	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[a]anthracene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Chrysene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[b]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[j,k]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[a]pyrene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Dibenz[a,h]anthracene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
Benzo[g,h,i]perylene	ND	0.0072	EPA 8270D/SIM	7-19-17	7-21-17	
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	96	32 - 122				
Pyrene-d10	81	33 - 125				
Terphenyl-d14	115	36 - 118				



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 Project: 4082-039-01

**TOTAL METALS
 EPA 6010C/7471B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	07-045-01					
Client ID:	FL209-B5-1-2					
Arsenic	ND	11	6010C	7-10-17	7-10-17	
Lead	ND	5.3	6010C	7-10-17	7-10-17	

Lab ID:	07-045-02					
Client ID:	FL209-B5-6-6.5					
Arsenic	ND	11	6010C	7-10-17	7-10-17	
Barium	63	2.8	6010C	7-10-17	7-10-17	
Cadmium	ND	0.56	6010C	7-10-17	7-10-17	
Chromium	28	0.56	6010C	7-10-17	7-10-17	
Lead	15	5.6	6010C	7-10-17	7-10-17	
Mercury	1.5	1.4	7471B	7-11-17	7-11-17	
Selenium	ND	11	6010C	7-10-17	7-10-17	
Silver	ND	1.1	6010C	7-10-17	7-10-17	



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**TOTAL METALS
 EPA 6010C/7471B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	07-045-05					
Client ID:	FL209-B5-13-14					
Arsenic	ND	11	6010C	7-10-17	7-10-17	
Barium	33	2.7	6010C	7-10-17	7-10-17	
Cadmium	ND	0.55	6010C	7-10-17	7-10-17	
Chromium	25	0.55	6010C	7-10-17	7-10-17	
Lead	ND	5.5	6010C	7-10-17	7-10-17	
Mercury	ND	0.27	7471B	7-11-17	7-11-17	
Selenium	ND	11	6010C	7-10-17	7-10-17	
Silver	ND	1.1	6010C	7-10-17	7-10-17	

Lab ID:	07-045-07					
Client ID:	FL209-B5-17.5-18.5					
Arsenic	ND	11	6010C	7-10-17	7-10-17	
Barium	38	2.7	6010C	7-10-17	7-10-17	
Cadmium	ND	0.54	6010C	7-10-17	7-10-17	
Chromium	28	0.54	6010C	7-10-17	7-10-17	
Lead	ND	5.4	6010C	7-10-17	7-10-17	
Mercury	ND	0.27	7471B	7-11-17	7-11-17	
Selenium	ND	11	6010C	7-10-17	7-10-17	
Silver	ND	1.1	6010C	7-10-17	7-10-17	



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**TOTAL METALS
 EPA 6010C/7471B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	07-045-08					
Client ID:	FL209-B5-22.5-23					
Arsenic	ND	11	6010C	7-10-17	7-10-17	
Barium	41	2.6	6010C	7-10-17	7-10-17	
Cadmium	ND	0.53	6010C	7-10-17	7-10-17	
Chromium	22	0.53	6010C	7-10-17	7-10-17	
Lead	ND	5.3	6010C	7-10-17	7-10-17	
Mercury	ND	0.26	7471B	7-11-17	7-11-17	
Selenium	ND	11	6010C	7-10-17	7-10-17	
Silver	ND	1.1	6010C	7-10-17	7-10-17	

Lab ID: 07-045-09
 Client ID: FL209-B7-1-2

Arsenic	ND	11	6010C	7-10-17	7-10-17	
Lead	ND	5.3	6010C	7-10-17	7-10-17	



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 Project: 4082-039-01

**TOTAL METALS
 EPA 6010C/7471B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	07-045-10					
Client ID:	FL209-B7-5.5-6.5					
Arsenic	ND	11	6010C	7-10-17	7-10-17	
Barium	65	2.8	6010C	7-10-17	7-10-17	
Cadmium	ND	0.56	6010C	7-10-17	7-10-17	
Chromium	32	0.56	6010C	7-10-17	7-10-17	
Lead	15	5.6	6010C	7-10-17	7-10-17	
Mercury	2.5	1.4	7471B	7-11-17	7-11-17	
Selenium	ND	11	6010C	7-10-17	7-10-17	
Silver	ND	1.1	6010C	7-10-17	7-10-17	

Lab ID:	07-045-12					
Client ID:	FL209-B7-10.5-11.5					
Arsenic	ND	11	6010C	7-10-17	7-10-17	
Barium	60	2.8	6010C	7-10-17	7-10-17	
Cadmium	ND	0.56	6010C	7-10-17	7-10-17	
Chromium	24	0.56	6010C	7-10-17	7-10-17	
Lead	ND	5.6	6010C	7-10-17	7-10-17	
Mercury	ND	0.28	7471B	7-11-17	7-11-17	
Selenium	ND	11	6010C	7-10-17	7-10-17	
Silver	ND	1.1	6010C	7-10-17	7-10-17	



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**TOTAL METALS
 EPA 6010C/7471B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	07-045-13					
Client ID:	FL209-B7-12.5-13.5					
Arsenic	ND	11	6010C	7-10-17	7-10-17	
Barium	32	2.7	6010C	7-10-17	7-10-17	
Cadmium	ND	0.54	6010C	7-10-17	7-10-17	
Chromium	26	0.54	6010C	7-10-17	7-10-17	
Lead	ND	5.4	6010C	7-10-17	7-10-17	
Mercury	ND	0.27	7471B	7-11-17	7-11-17	
Selenium	ND	11	6010C	7-10-17	7-10-17	
Silver	ND	1.1	6010C	7-10-17	7-10-17	

Lab ID:	07-045-17					
Client ID:	FL209-B8-6-6.5					
Arsenic	ND	11	6010C	7-10-17	7-10-17	
Barium	59	2.8	6010C	7-10-17	7-10-17	
Cadmium	ND	0.57	6010C	7-10-17	7-10-17	
Chromium	25	0.57	6010C	7-10-17	7-10-17	
Lead	12	5.7	6010C	7-10-17	7-10-17	
Mercury	2.8	1.4	7471B	7-11-17	7-11-17	
Selenium	ND	11	6010C	7-10-17	7-10-17	
Silver	ND	1.1	6010C	7-10-17	7-10-17	



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**TOTAL METALS
 EPA 6010C/7471B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	07-045-19					
Client ID:	FL209-B8-10-11					
Arsenic	ND	11	6010C	7-10-17	7-10-17	
Barium	31	2.7	6010C	7-10-17	7-10-17	
Cadmium	ND	0.54	6010C	7-10-17	7-10-17	
Chromium	21	0.54	6010C	7-10-17	7-10-17	
Lead	ND	5.4	6010C	7-10-17	7-10-17	
Mercury	ND	0.27	7471B	7-11-17	7-11-17	
Selenium	ND	11	6010C	7-10-17	7-10-17	
Silver	ND	1.1	6010C	7-10-17	7-10-17	

Lab ID:	07-045-21					
Client ID:	FL209-B8-15-16					
Arsenic	ND	11	6010C	7-10-17	7-10-17	
Barium	39	2.7	6010C	7-10-17	7-10-17	
Cadmium	ND	0.55	6010C	7-10-17	7-10-17	
Chromium	18	0.55	6010C	7-10-17	7-10-17	
Lead	ND	5.5	6010C	7-10-17	7-10-17	
Mercury	ND	0.27	7471B	7-11-17	7-11-17	
Selenium	ND	11	6010C	7-10-17	7-10-17	
Silver	ND	1.1	6010C	7-10-17	7-10-17	



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**TOTAL METALS
 EPA 6010C/7471B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	07-045-23					
Client ID:	FL209-B8-20-21					
Arsenic	ND	11	6010C	7-10-17	7-10-17	
Barium	52	2.7	6010C	7-10-17	7-10-17	
Cadmium	ND	0.55	6010C	7-10-17	7-10-17	
Chromium	24	0.55	6010C	7-10-17	7-10-17	
Lead	ND	5.5	6010C	7-10-17	7-10-17	
Mercury	ND	0.27	7471B	7-11-17	7-11-17	
Selenium	ND	11	6010C	7-10-17	7-10-17	
Silver	ND	1.1	6010C	7-10-17	7-10-17	



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**SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A**

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date	Date	Flags
				Prepared	Analyzed	
Lab ID:	07-045-10					
Client ID:	FL209-B7-5.5-6.5					
Hexavalent Chromium	ND	1.1	7196A mod	7-24-17	7-24-17	



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**TOTAL MERCURY
EPA 7471B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	07-045-09					
Client ID:	FL209-B7-1-2					
Mercury	ND	0.26	7471B	7-19-17	7-19-17	
Lab ID:	07-045-11					
Client ID:	FL209-B7-8-9					
Mercury	1.4	0.56	7471B	7-19-17	7-19-17	
Lab ID:	07-045-16					
Client ID:	FL209-B8-1-2					
Mercury	ND	0.27	7471B	7-19-17	7-19-17	
Lab ID:	07-045-18					
Client ID:	FL209-B8-8-9					
Mercury	ND	0.27	7471B	7-19-17	7-19-17	



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**NWTPH-Gx/BTEX
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0712S1					
Benzene	ND	0.020	EPA 8021B	7-12-17	7-12-17	
Toluene	ND	0.050	EPA 8021B	7-12-17	7-12-17	
Ethyl Benzene	ND	0.050	EPA 8021B	7-12-17	7-12-17	
m,p-Xylene	ND	0.050	EPA 8021B	7-12-17	7-12-17	
o-Xylene	ND	0.050	EPA 8021B	7-12-17	7-12-17	
Gasoline	ND	5.0	NWTPH-Gx	7-12-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	85	63-124				
Laboratory ID:	MB0712S2					
Benzene	ND	0.020	EPA 8021B	7-12-17	7-12-17	
Toluene	ND	0.050	EPA 8021B	7-12-17	7-12-17	
Ethyl Benzene	ND	0.050	EPA 8021B	7-12-17	7-12-17	
m,p-Xylene	ND	0.050	EPA 8021B	7-12-17	7-12-17	
o-Xylene	ND	0.050	EPA 8021B	7-12-17	7-12-17	
Gasoline	ND	5.0	NWTPH-Gx	7-12-17	7-12-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	63-124				



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**NWTPH-Gx/BTEX
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	07-054-06									
	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						88	86	63-124		
DUPLICATE										
Laboratory ID:	07-075-01									
	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						83	82	63-124		
DUPLICATE										
Laboratory ID:	SB0712S1									
	SB	SBD	SB	SBD		SB	SBD			
Benzene	0.842	0.827	1.00	1.00		84	83	70-124	2	12
Toluene	0.860	0.844	1.00	1.00		86	84	73-119	2	12
Ethyl Benzene	0.854	0.846	1.00	1.00		85	85	74-117	1	12
m,p-Xylene	0.866	0.858	1.00	1.00		87	86	75-117	1	13
o-Xylene	0.875	0.862	1.00	1.00		88	86	75-116	1	12
Surrogate:										
Fluorobenzene						85	83	63-124		



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**NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0711S3					
Diesel Range Organics	ND	25	NWTPH-Dx	7-11-17	7-13-17	
Lube Oil Range Organics	ND	50	NWTPH-Dx	7-11-17	7-13-17	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	97	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	07-045-23									
	ORIG	DUP								
Diesel Fuel #2	8490	4740	NA	NA		NA	NA	57	NA	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	NA	U1
Surrogate:										
o-Terphenyl						109	136	50-150		
Laboratory ID:	07-045-24									
	ORIG	DUP								
Diesel Fuel #2	1290	1130	NA	NA		NA	NA	13	NA	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	NA	U1
Surrogate:										
o-Terphenyl						100	104	50-150		



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**NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0720S1					
Diesel Range Organics	ND	25	NWTPH-Dx	7-20-17	7-20-17	
Lube Oil Range Organics	ND	50	NWTPH-Dx	7-20-17	7-20-17	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	95	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	07-179-01							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	
Surrogate:								
<i>o</i> -Terphenyl				71	85	50-150		



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VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0710S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Chloromethane	ND	0.0050	EPA 8260C	7-10-17	7-10-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Bromomethane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Chloroethane	ND	0.0050	EPA 8260C	7-10-17	7-10-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Acetone	ND	0.010	EPA 8260C	7-10-17	7-10-17	
Iodomethane	ND	0.0050	EPA 8260C	7-10-17	7-10-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Methylene Chloride	ND	0.010	EPA 8260C	7-10-17	7-10-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	7-10-17	7-10-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
2-Butanone	ND	0.0050	EPA 8260C	7-10-17	7-10-17	
Bromochloromethane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Chloroform	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Benzene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Trichloroethene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Dibromomethane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	7-10-17	7-10-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	7-10-17	7-10-17	
Toluene	ND	0.0050	EPA 8260C	7-10-17	7-10-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	



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METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0710S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
2-Hexanone	ND	0.0050	EPA 8260C	7-10-17	7-10-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Chlorobenzene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Ethylbenzene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
m,p-Xylene	ND	0.0020	EPA 8260C	7-10-17	7-10-17	
o-Xylene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Styrene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Bromoform	ND	0.0050	EPA 8260C	7-10-17	7-10-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Bromobenzene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	7-10-17	7-10-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	7-10-17	7-10-17	
Naphthalene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-10-17	7-10-17	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	122	73-134				
Toluene-d8	113	81-124				
4-Bromofluorobenzene	118	80-131				



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VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits		RPD	RPD Limit	Flags
					Recovery				RPD		
SPIKE BLANKS											
Laboratory ID:	SB0710S1										
	SB	SBD	SB	SBD	SB	SBD					
1,1-Dichloroethene	0.0539	0.0573	0.0500	0.0500	108	115	66-127	6	15		
Benzene	0.0549	0.0534	0.0500	0.0500	110	107	76-122	3	15		
Trichloroethene	0.0506	0.0500	0.0500	0.0500	101	100	78-120	1	15		
Toluene	0.0554	0.0543	0.0500	0.0500	111	109	83-120	2	15		
Chlorobenzene	0.0473	0.0475	0.0500	0.0500	95	95	81-120	0	15		
Surrogate:											
Dibromofluoromethane					97	100	73-134				
Toluene-d8					96	95	81-124				
4-Bromofluorobenzene					97	96	80-131				



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VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0719S1					
Dichlorodifluoromethane	ND	0.0017	EPA 8260C	7-19-17	7-19-17	
Chloromethane	ND	0.0050	EPA 8260C	7-19-17	7-19-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Bromomethane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Chloroethane	ND	0.0050	EPA 8260C	7-19-17	7-19-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Acetone	ND	0.010	EPA 8260C	7-19-17	7-19-17	
Iodomethane	ND	0.0050	EPA 8260C	7-19-17	7-19-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Methylene Chloride	ND	0.010	EPA 8260C	7-19-17	7-19-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	7-19-17	7-19-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
2-Butanone	ND	0.0050	EPA 8260C	7-19-17	7-19-17	
Bromochloromethane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Chloroform	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Benzene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Trichloroethene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Dibromomethane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	7-19-17	7-19-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	7-19-17	7-19-17	
Toluene	ND	0.0050	EPA 8260C	7-19-17	7-19-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	



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

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Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

**VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0719S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
2-Hexanone	ND	0.0050	EPA 8260C	7-19-17	7-19-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Chlorobenzene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Ethylbenzene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
m,p-Xylene	ND	0.0020	EPA 8260C	7-19-17	7-19-17	
o-Xylene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Styrene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Bromoform	ND	0.0050	EPA 8260C	7-19-17	7-19-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Bromobenzene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	7-19-17	7-19-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	7-19-17	7-19-17	
Naphthalene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-19-17	7-19-17	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	121	73-134				
Toluene-d8	119	81-124				
4-Bromofluorobenzene	119	80-131				



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Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

**VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limits		Limit	
SPIKE BLANKS										
Laboratory ID:	SB0719S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0531	0.0554	0.0500	0.0500	106	111	66-127	4	15	
Benzene	0.0512	0.0525	0.0500	0.0500	102	105	76-122	3	15	
Trichloroethene	0.0518	0.0540	0.0500	0.0500	104	108	78-120	4	15	
Toluene	0.0533	0.0563	0.0500	0.0500	107	113	83-120	5	15	
Chlorobenzene	0.0463	0.0481	0.0500	0.0500	93	96	81-120	4	15	
Surrogate:										
Dibromofluoromethane					108	106	73-134			
Toluene-d8					106	107	81-124			
4-Bromofluorobenzene					104	102	80-131			



Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

**PAHs EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0710S1						
Naphthalene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
Fluorene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
Anthracene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
Pyrene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
Chrysene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
Benzo(j,k)fluoranthene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	7-10-17	7-14-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	96	32 - 122				
Pyrene-d10	94	33 - 125				
Terphenyl-d14	111	36 - 118				



Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

**PAHs EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0710S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0739	0.0836	0.0833	0.0833	89	100	58 - 114	12	18	
Acenaphthylene	0.0779	0.0776	0.0833	0.0833	94	93	54 - 127	0	15	
Acenaphthene	0.0781	0.0836	0.0833	0.0833	94	100	58 - 119	7	15	
Fluorene	0.0821	0.0877	0.0833	0.0833	99	105	60 - 123	7	15	
Phenanthrene	0.0779	0.0800	0.0833	0.0833	94	96	54 - 120	3	15	
Anthracene	0.0879	0.0847	0.0833	0.0833	106	102	55 - 152	4	15	
Fluoranthene	0.0864	0.0875	0.0833	0.0833	104	105	56 - 129	1	15	
Pyrene	0.0845	0.0862	0.0833	0.0833	101	103	60 - 126	2	15	
Benzo[a]anthracene	0.0871	0.0871	0.0833	0.0833	105	105	56 - 137	0	15	
Chrysene	0.0889	0.0902	0.0833	0.0833	107	108	59 - 122	1	15	
Benzo[b]fluoranthene	0.0874	0.0874	0.0833	0.0833	105	105	46 - 133	0	21	
Benzo(j,k)fluoranthene	0.0958	0.0983	0.0833	0.0833	115	118	47 - 129	3	21	
Benzo[a]pyrene	0.0914	0.0825	0.0833	0.0833	110	99	54 - 132	10	15	
Indeno(1,2,3-c,d)pyrene	0.0910	0.0905	0.0833	0.0833	109	109	54 - 129	1	15	
Dibenz[a,h]anthracene	0.0912	0.0923	0.0833	0.0833	109	111	59 - 122	1	15	
Benzo[g,h,i]perylene	0.0907	0.0921	0.0833	0.0833	109	111	57 - 125	2	16	
Surrogate:										
2-Fluorobiphenyl					98	106	32 - 122			
Pyrene-d10					96	96	33 - 125			
Terphenyl-d14					112	112	36 - 118			



Date of Report: July 24, 2017
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 Laboratory Reference: 1707-045
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**PAHs EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0719S2						
Naphthalene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
Fluorene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
Anthracene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
Pyrene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
Chrysene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	7-19-17	7-20-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	105	32 - 122				
Pyrene-d10	97	33 - 125				
Terphenyl-d14	104	36 - 118				



Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

**PAHs EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0719S2									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0853	0.0890	0.0833	0.0833	102	107	58 - 114	4	18	
Acenaphthylene	0.0947	0.0873	0.0833	0.0833	114	105	54 - 127	8	15	
Acenaphthene	0.0920	0.0847	0.0833	0.0833	110	102	58 - 119	8	15	
Fluorene	0.100	0.0963	0.0833	0.0833	120	116	60 - 123	4	15	
Phenanthrene	0.0930	0.0897	0.0833	0.0833	112	108	54 - 120	4	15	
Anthracene	0.0995	0.0968	0.0833	0.0833	119	116	55 - 152	3	15	
Fluoranthene	0.0955	0.0914	0.0833	0.0833	115	110	56 - 129	4	15	
Pyrene	0.0957	0.0917	0.0833	0.0833	115	110	60 - 126	4	15	
Benzo[a]anthracene	0.106	0.103	0.0833	0.0833	127	124	56 - 137	3	15	
Chrysene	0.0958	0.0926	0.0833	0.0833	115	111	59 - 122	3	15	
Benzo[b]fluoranthene	0.0931	0.0880	0.0833	0.0833	112	106	46 - 133	6	21	
Benzo(j,k)fluoranthene	0.0950	0.0942	0.0833	0.0833	114	113	47 - 129	1	21	
Benzo[a]pyrene	0.0930	0.0900	0.0833	0.0833	112	108	54 - 132	3	15	
Indeno(1,2,3-c,d)pyrene	0.0876	0.0841	0.0833	0.0833	105	101	54 - 129	4	15	
Dibenz[a,h]anthracene	0.0975	0.0936	0.0833	0.0833	117	112	59 - 122	4	15	
Benzo[g,h,i]perylene	0.0896	0.0864	0.0833	0.0833	108	104	57 - 125	4	16	
Surrogate:										
2-Fluorobiphenyl					106	102	32 - 122			
Pyrene-d10					99	96	33 - 125			
Terphenyl-d14					103	103	36 - 118			



Date of Report: July 24, 2017
Samples Submitted: July 7, 2017
Laboratory Reference: 1707-045
Project: 4082-039-01

**TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL**

Date Extracted: 7-10-17
Date Analyzed: 7-10-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0710SM1

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



Date of Report: July 24, 2017
Samples Submitted: July 7, 2017
Laboratory Reference: 1707-045
Project: 4082-039-01

**TOTAL MERCURY
EPA 7471B
METHOD BLANK QUALITY CONTROL**

Date Extracted: 7-11-17

Date Analyzed: 7-11-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0711S2

Analyte	Method	Result	PQL
Mercury	7471B	ND	0.25



Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

**TOTAL METALS
 EPA 6010C
 DUPLICATE QUALITY CONTROL**

Date Extracted: 7-10-17
 Date Analyzed: 7-10-17

 Matrix: Soil
 Units: mg/kg (ppm)

 Lab ID: 07-045-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	10	
Barium	43.6	42.8	2	2.5	
Cadmium	ND	ND	NA	0.50	
Chromium	26.4	26.7	1	0.50	
Lead	ND	ND	NA	5.0	
Selenium	ND	ND	NA	10	
Silver	ND	ND	NA	1.0	



Date of Report: July 24, 2017
Samples Submitted: July 7, 2017
Laboratory Reference: 1707-045
Project: 4082-039-01

**TOTAL MERCURY
EPA 7471B
DUPLICATE QUALITY CONTROL**

Date Extracted: 7-11-17
Date Analyzed: 7-11-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 06-271-10

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



Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

**TOTAL METALS
 EPA 6010C
 MS/MSD QUALITY CONTROL**

Date Extracted: 7-10-17

Date Analyzed: 7-10-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 07-045-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	90.4	90	90.6	91	0	
Barium	100	135	91	129	85	4	
Cadmium	50.0	42.1	84	42.5	85	1	
Chromium	100	111	84	111	85	0	
Lead	250	229	92	231	93	1	
Selenium	100	92.7	93	91.9	92	1	
Silver	25.0	20.5	82	20.7	83	1	



Date of Report: July 24, 2017
Samples Submitted: July 7, 2017
Laboratory Reference: 1707-045
Project: 4082-039-01

TOTAL MERCURY
EPA 7471B
MS/MSD QUALITY CONTROL

Date Extracted: 7-11-17

Date Analyzed: 7-11-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 06-271-10

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.500	0.505	101	0.505	101	0	



Date of Report: July 24, 2017
Samples Submitted: July 7, 2017
Laboratory Reference: 1707-045
Project: 4082-039-01

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

Date Extracted: 7-24-17
Date Analyzed: 7-24-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0724S1

Analyte	Method	Result	PQL
Hexavalent Chromium	7196A mod	ND	1.0



Date of Report: July 24, 2017
Samples Submitted: July 7, 2017
Laboratory Reference: 1707-045
Project: 4082-039-01

**SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
DUPLICATE QUALITY CONTROL**

Date Extracted: 7-24-17
Date Analyzed: 7-24-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 07-045-10

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



Date of Report: July 24, 2017
Samples Submitted: July 7, 2017
Laboratory Reference: 1707-045
Project: 4082-039-01

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

Date Extracted: 7-24-17
Date Analyzed: 7-24-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 07-045-10

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Hexavalent Chromium	5.00	4.09	82	4.38	88	7	



Date of Report: July 24, 2017
Samples Submitted: July 7, 2017
Laboratory Reference: 1707-045
Project: 4082-039-01

**TOTAL MERCURY
EPA 7471B
METHOD BLANK QUALITY CONTROL**

Date Extracted: 7-19-17

Date Analyzed: 7-19-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0719S1

Analyte	Method	Result	PQL
Mercury	7471B	ND	0.25



Date of Report: July 24, 2017
Samples Submitted: July 7, 2017
Laboratory Reference: 1707-045
Project: 4082-039-01

**TOTAL MERCURY
EPA 7471B
DUPLICATE QUALITY CONTROL**

Date Extracted: 7-19-17
Date Analyzed: 7-19-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 07-085-13

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



Date of Report: July 24, 2017
Samples Submitted: July 7, 2017
Laboratory Reference: 1707-045
Project: 4082-039-01

TOTAL MERCURY
EPA 7471B
MS/MSD QUALITY CONTROL

Date Extracted: 7-19-17

Date Analyzed: 7-19-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 07-085-13

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Mercury	0.500	0.495	99	0.498	100	1	



Date of Report: July 24, 2017
 Samples Submitted: July 7, 2017
 Laboratory Reference: 1707-045
 Project: 4082-039-01

% MOISTURE

Date Analyzed: 7-10,11,19&20-17

Client ID	Lab ID	% Moisture
FL209-B5-1-2	07-045-01	6
FL209-B5-6-6.5	07-045-02	10
FL209-B5-8-9	07-045-03	11
FL209-B5-10.5-11.5	07-045-04	9
FL209-B5-13-14	07-045-05	9
FL209-B5-17.5-18.5	07-045-07	7
FL209-B5-22.5-23	07-045-08	5
FL209-B7-1-2	07-045-09	5
FL209-B7-5.5-6.5	07-045-10	11
FL209-B7-8-9	07-045-11	10
FL209-B7-10.5-11.5	07-045-12	11
FL209-B7-12.5-13.5	07-045-13	7
FL209-B7-15-16	07-045-14	7
FL209-B7-20-20.5	07-045-15	9
FL209-B8-1-2	07-045-16	7
FL209-B8-6-6.5	07-045-17	12
FL209-B8-8-9	07-045-18	9
FL209-B8-10-11	07-045-19	7
FL209-B8-15-16	07-045-21	9
FL209-B8-20-21	07-045-23	9
FL209-B8-22.5-23	07-045-24	7





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





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Chain of Custody

Page 1 of 3

Company: GEI		Turnaround Request (in working days)		Laboratory Number: 07-045																
Project Number: 4082-039-01		☐ Same Day ☐ 1 Day ☐ 2 Days ☐ 3 Days																		
Project Name: Sand Transit		☒ Standard (7 Days) (TPH analysis 5 Days)																		
Project Manager: Tricia DeLeon		☐ (other)																		
Sampled by: Chelsea Ghr/Pauli Robinson																				
Lab ID		Date Sampled		Time Sampled		Matrix		Number of Containers												
Sample Identification																				
1	FL209-B5-1-2	7/6/17	9:55	Soil	5	NWTPH-HCID														
2	FL209-B5-6-6.5		10:15			NWTPH-Gx/BTEX														
3	FL209-B5-8-9		10:30			NWTPH-Gx														
4	FL209-B5-10.5-11.5		10:35			NWTPH-Dx (☐ Acid / SG Clean-up)														
5	FL209-B5-13-14		10:50			Volatiles 8260C														
6	FL209-B5-15.5-16.5		11:10			Halogenated Volatiles 8260C														
7	FL209-B5-17.5-18.5		11:25			EDB EPA 8011 (Waters Only)														
8	FL209-B5-22.5-23		12:00			Semivolatiles 8270D/SIM (with low-level PAHs)														
9	FL209-B7-1-2		13:05			PAHs 8270D/SIM (low-level)														
10	FL209-B7-5.5-6.5		13:30			PCBs 8082A														
Signature		Company		Date		Time		Comments/Special Instructions												
Relinquished		GEI		7/7/17		8:50am		X-added 7/7/17 PM												
Received		ALPHA		7-7-17		8:50am		Added 7/9/17 DB (3 day TAT)												
Relinquished		ALPHA		7-7-17		10:38A														
Received		QBE		7/7/17		1038														
Relinquished																				
Received																				
Reviewed/Date		Reviewed/Date						Data Package: Standard ☐ Level III ☐ Level IV ☐												
								Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐												



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Chain of Custody

Turnaround Request
(in working days)
(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

☒ Standard (7 Days)
(TPH analysis 5 Days)

☐ _____ (other)

Laboratory Number:

07-045

Company: GE

Project Number: 4082-039-01

Project Name: Sand Transit

Project Manager: Tricia Deane

Sampled by: Wesley Gohr / Paul Dobnik

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
11	FL209-B7-8-9	7/6/17	1345	Soil	5
12	FL209-B7-10.5-11.5		1400		
13	FL209-B7-12.5-13.5		1410		
14	FL209-B7-15-16		1435		
15	FL209-B7-20-20.5		1515		
16	FL209-B8-1-2		1605		
17	FL209-B8-6-6.5		1620		
18	FL209-B8-8-9		1630		
19	FL209-B8-10-11		135		
20	FL209-B8-12.5-13.5		1645		

NWTPH-HCID	
NWTPH-Gx/BTEX	
NWTPH-Gx	
NWTPH-Dx (☐ Acid / SG Clean-up)	
Volatiles 8260C	
Halogenated Volatiles 8260C	
EDB EPA 8011 (Waters Only)	
Semivolatiles 8270D/SIM (with low-level PAHs)	
PAHs 8270D/SIM (low-level)	
PCBs 8082A	
Organochlorine Pesticides 8081B	
Organophosphorus Pesticides 8270D/SIM	
Chlorinated Acid Herbicides 8151A	
Total RCRA Metals	
Total MTCA Metals	
TCLP Metals	
HEM (oil and grease) 1664A	
TOTAL MERCURY	
% Moisture	

Signature	Company	Date	Time	Comments/Special Instructions
<u>[Signature]</u>	<u>GE</u>	<u>7/7/17</u>	<u>8:50am</u>	
<u>[Signature]</u>	<u>ALPHA</u>	<u>7-7-17</u>	<u>8:50am</u>	
<u>[Signature]</u>	<u>ALPHA</u>	<u>7-7-17</u>	<u>10:37A</u>	
<u>[Signature]</u>	<u>OK</u>	<u>7/7/17</u>	<u>1037</u>	

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

Reviewed/Date

Data Package: Standard ☐ Level III ☐ Level IV ☐

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



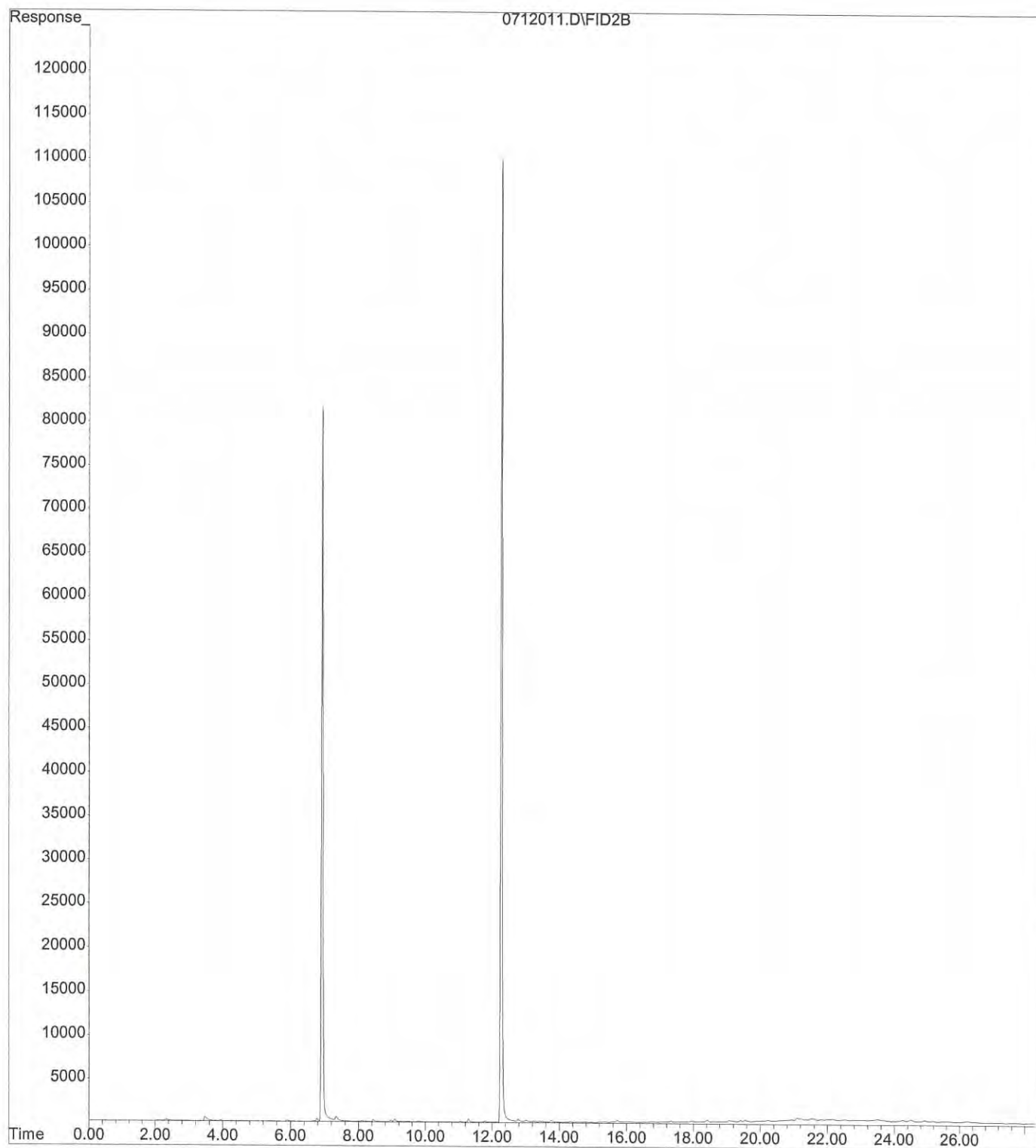
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Chain of Custody

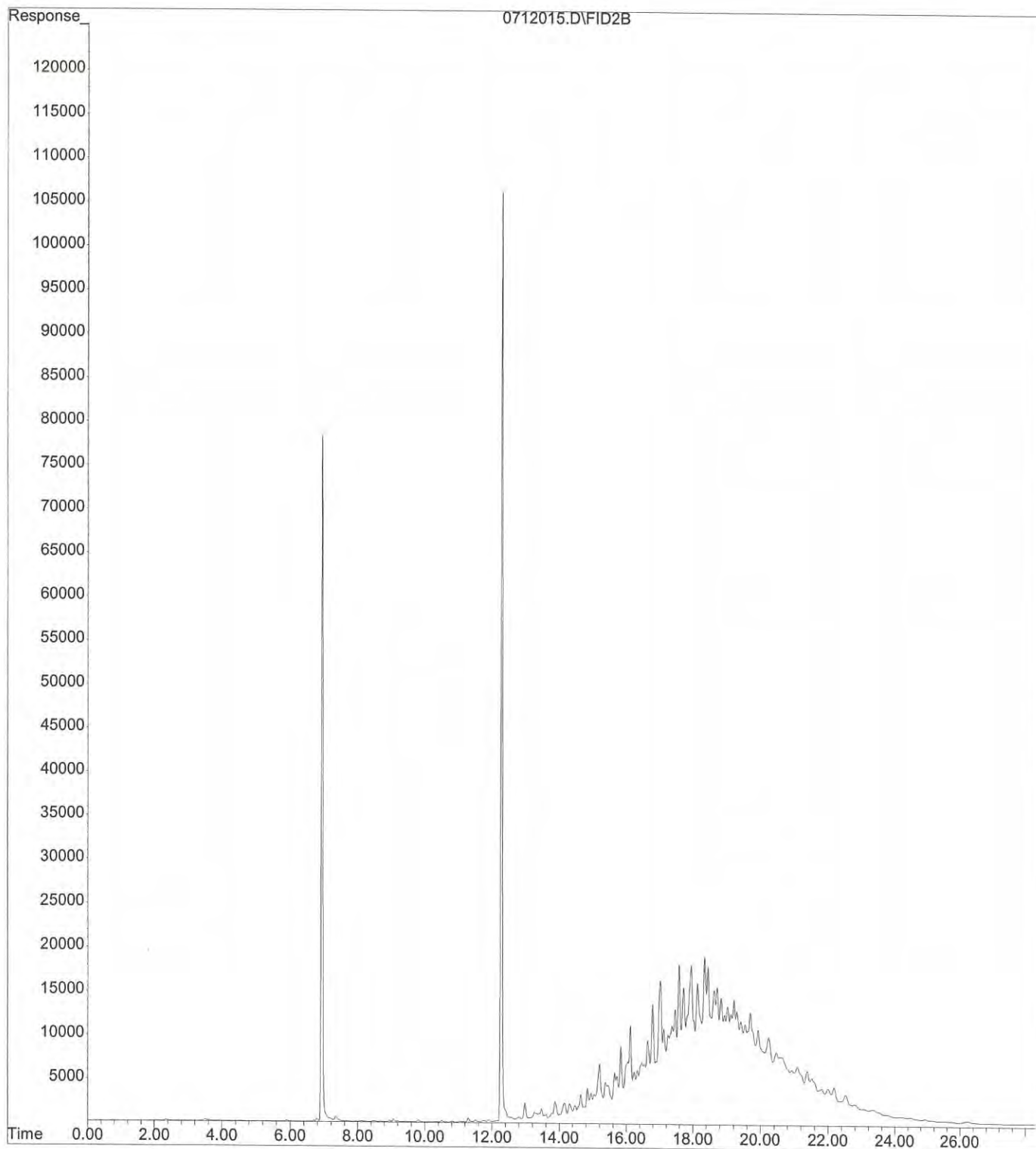
Page 3 of 3

Analytical Laboratory Testing Services 14648 NE 95th Street • Redmond, WA 98052 Phone: (425) 883-3881 • www.on-site-env.com					
CIVIL-ENGINEERING INC.					
Company:	GEI				
Project Number:	4082-039-01				
Project Name:	Sand Transit				
Project Manager:	Tara McPherson				
Sampled by:	Chelsea Gohr / Paul Robinson				
Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
21	FU209-B8-15-16	7/6/17	1705	Soil S	NWTPH-HCID
22	FU209-B8-17.5-18.5		1720		NWTPH-Gx/BTEX
23	FU209-B8-20-21		1735		NWTPH-Gx
24	FU209-B8-22.5-23		1800		NWTPH-Dx (☐ Acid / SG Clean-up)
					Volatiles 8260C
					Halogenated Volatiles 8260C
					EDB EPA 8011 (Waters Only)
					Semivolatiles 8270D/SIM (with low-level PAHs)
					PAHs 8270D/SIM (low-level)
					PCBs 8082A
					Organochlorine Pesticides 8081B
					Organophosphorus Pesticides 8270D/SIM
					Chlorinated Acid Herbicides 8151A
					Total RCRA Metals
					Total MTCA Metals
					TCLP Metals
					HEM (oil and grease) 1664A
					% Moisture
Relinquished	Signature	Company	Date	Time	Comments/Special Instructions
Received	[Signature]	GET	7/7/17	8:50am	
Relinquished	[Signature]	AHPHA	7-7-17	8:50am	
Received	[Signature]	AHPHA	7-7-17	10:37A	
Relinquished	[Signature]	OBE	7/7/17	1037	
Received					Data Package: Standard ☐ Level III ☐ Level IV ☐
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

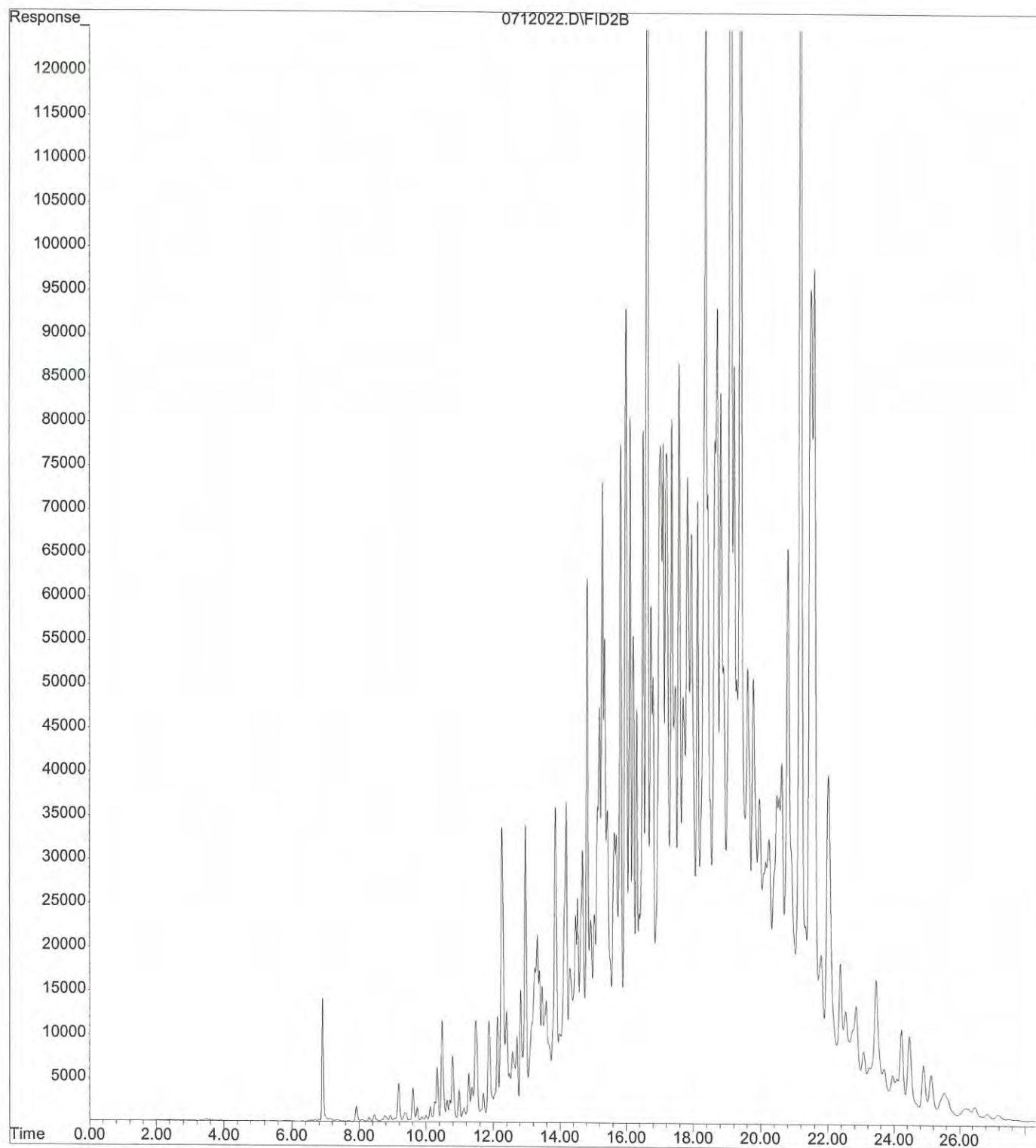
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Instrument : Daryl
Sample Name: 07-045-01s
Misc Info :
Vial Number: 11



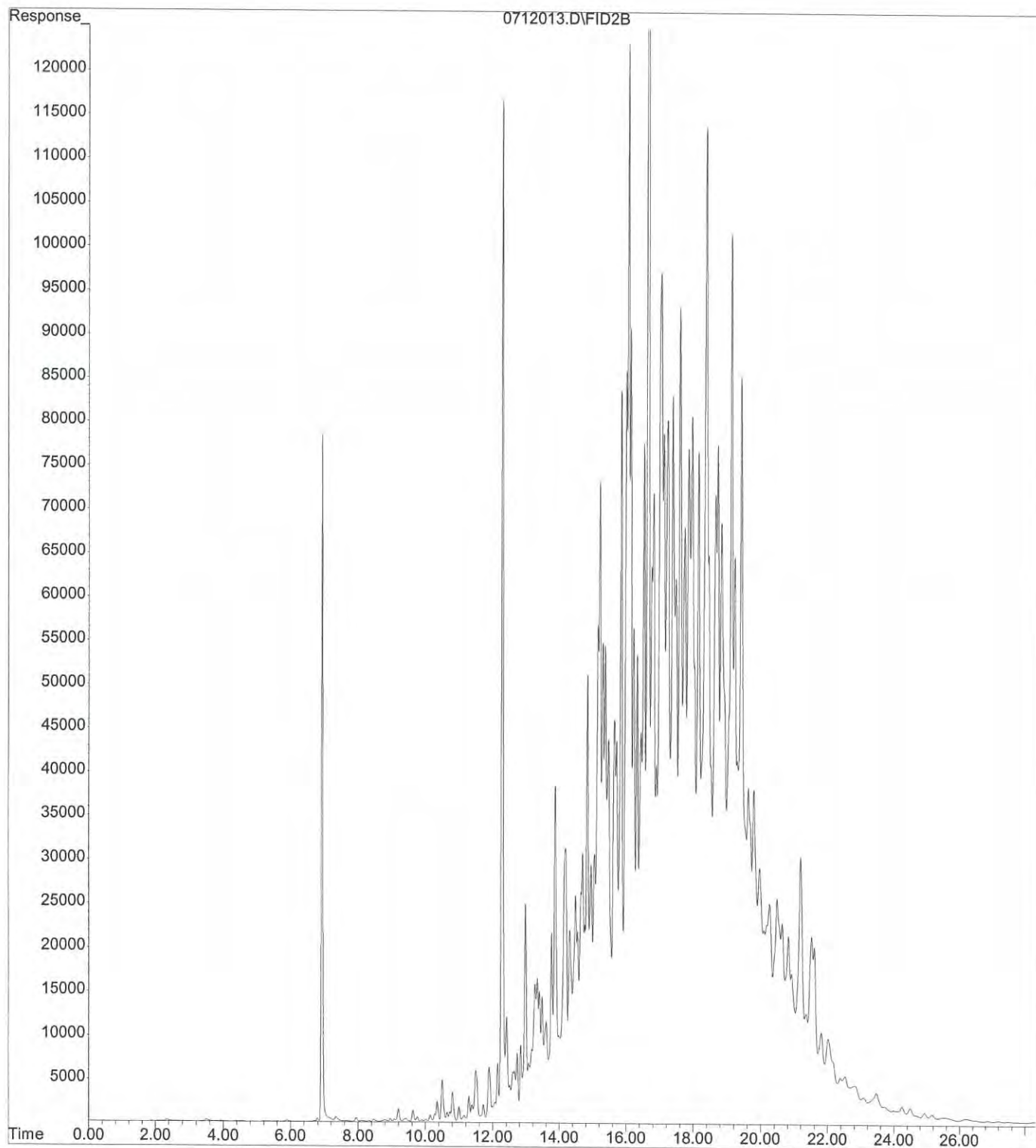
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Sample Name: 07-045-02s
Misc Info :
Vial Number: 15



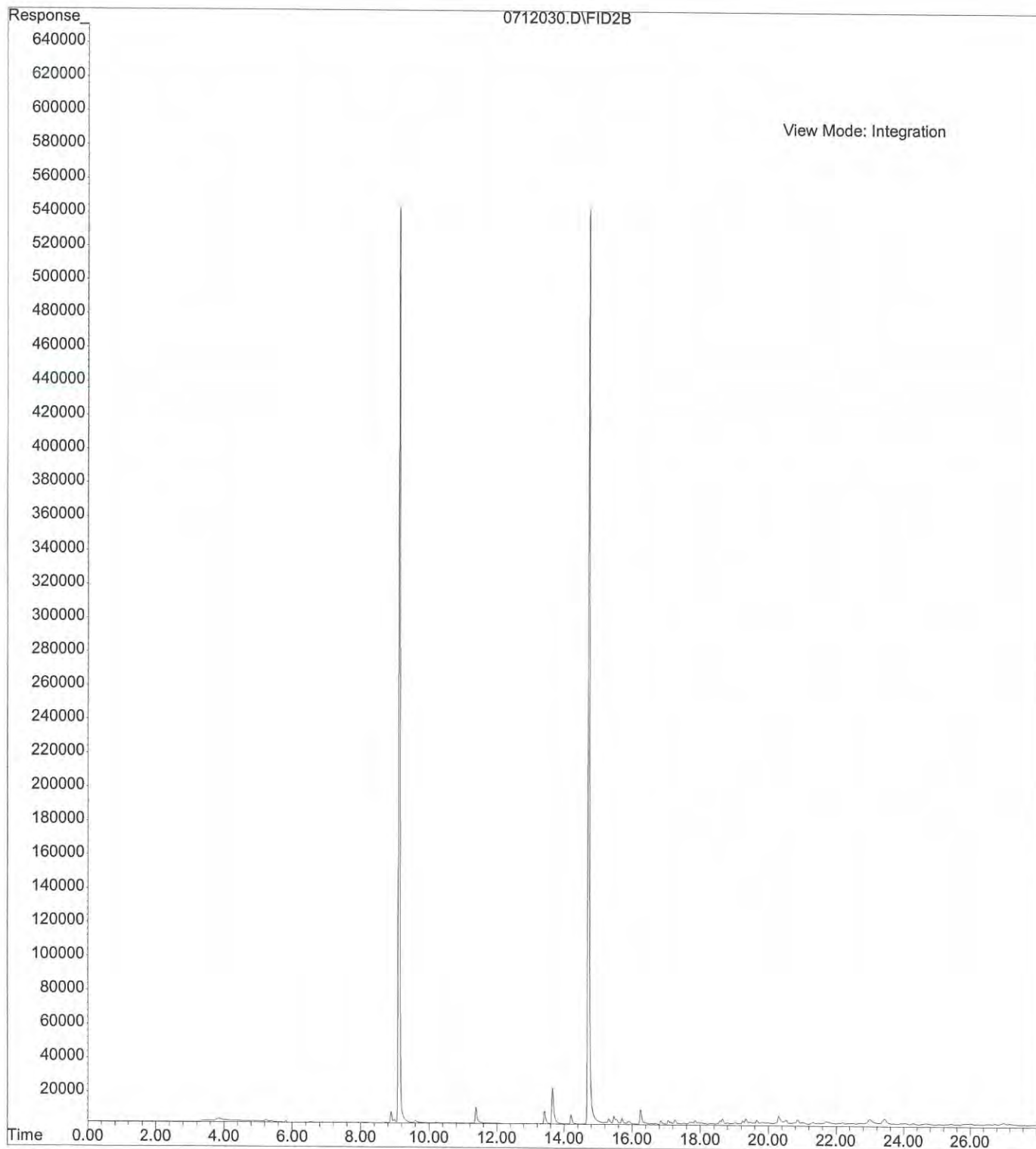
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Instrument : Daryl
Sample Name: 07-045-05s 1:250
Misc Info :
Vial Number: 22



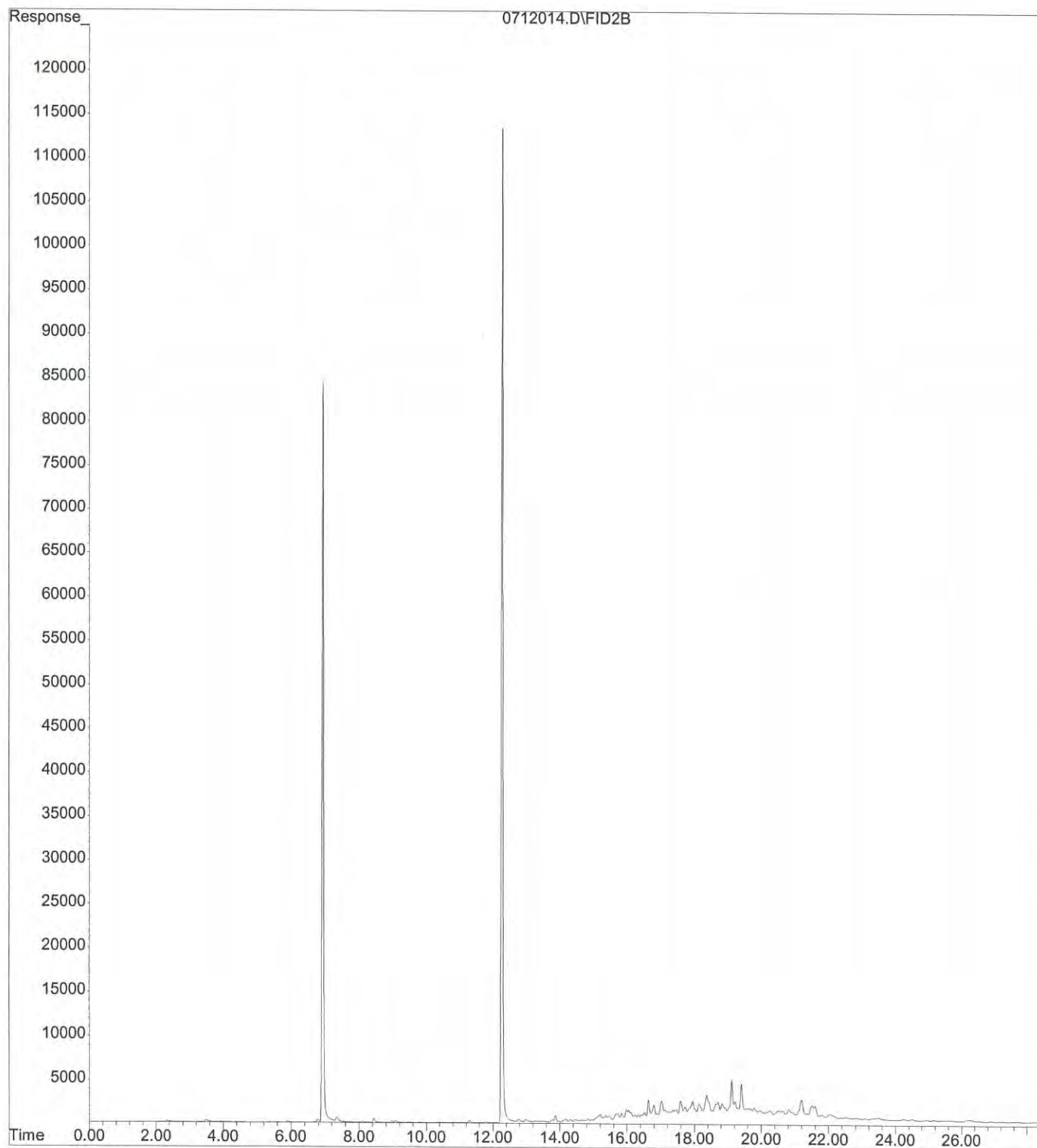
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Instrument : Daryl
Sample Name: 07-045-07s
Misc Info :
Vial Number: 13



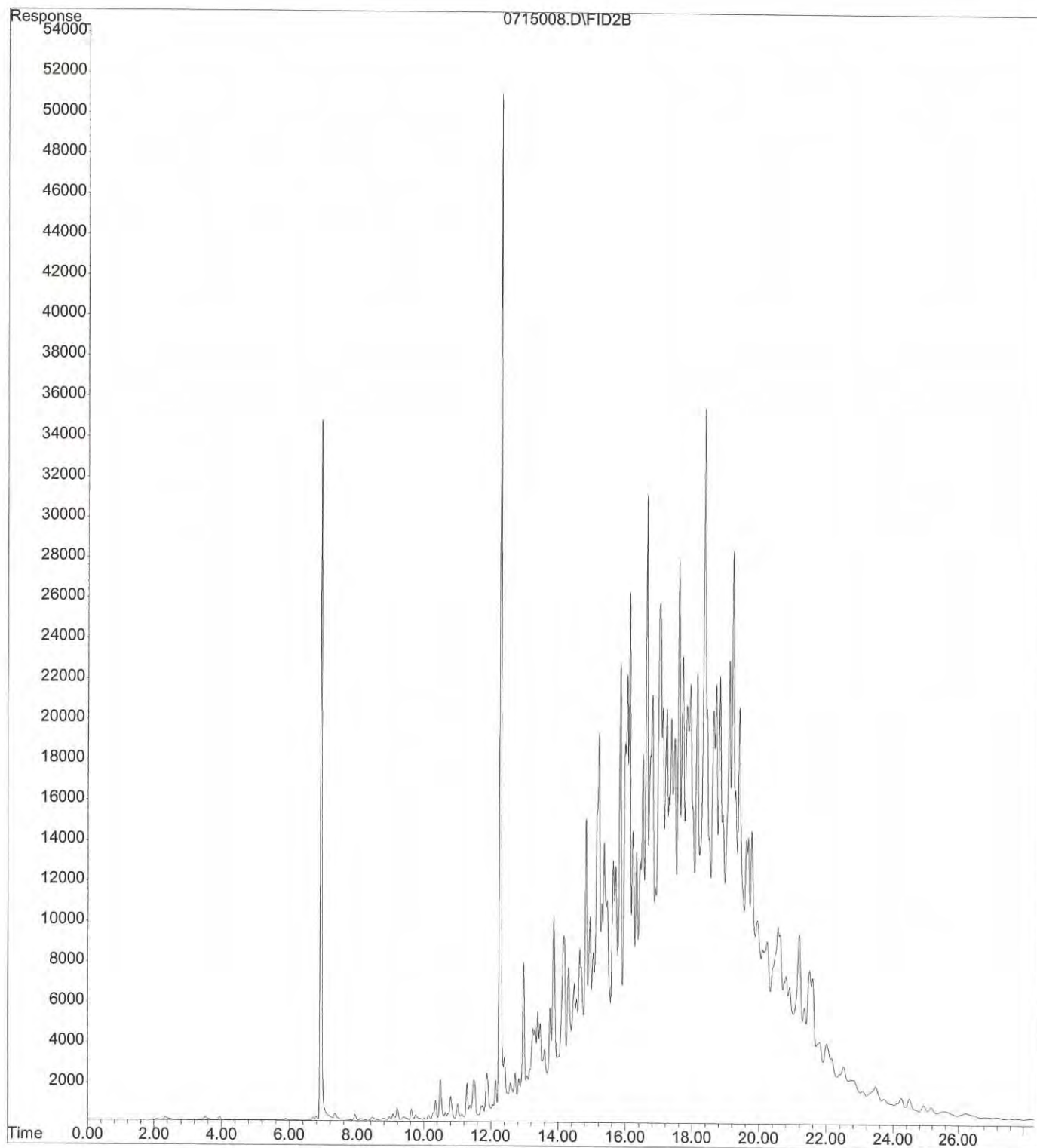
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Instrument : Hope
Sample Name: 07-045-08s
Misc Info :
Vial Number: 30



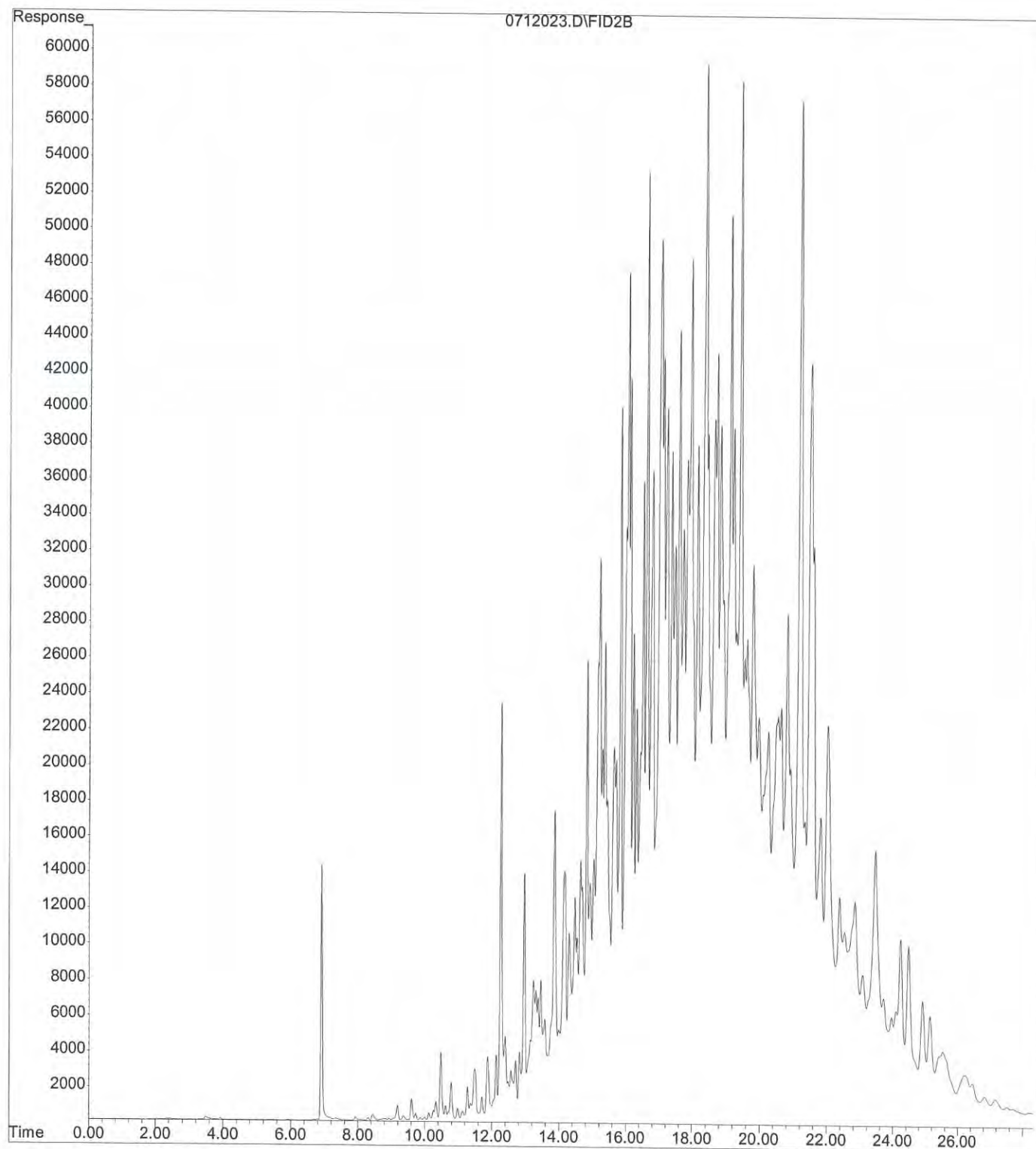
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Instrument : Daryl
Sample Name: 07-045-09s
Misc Info :
Vial Number: 14



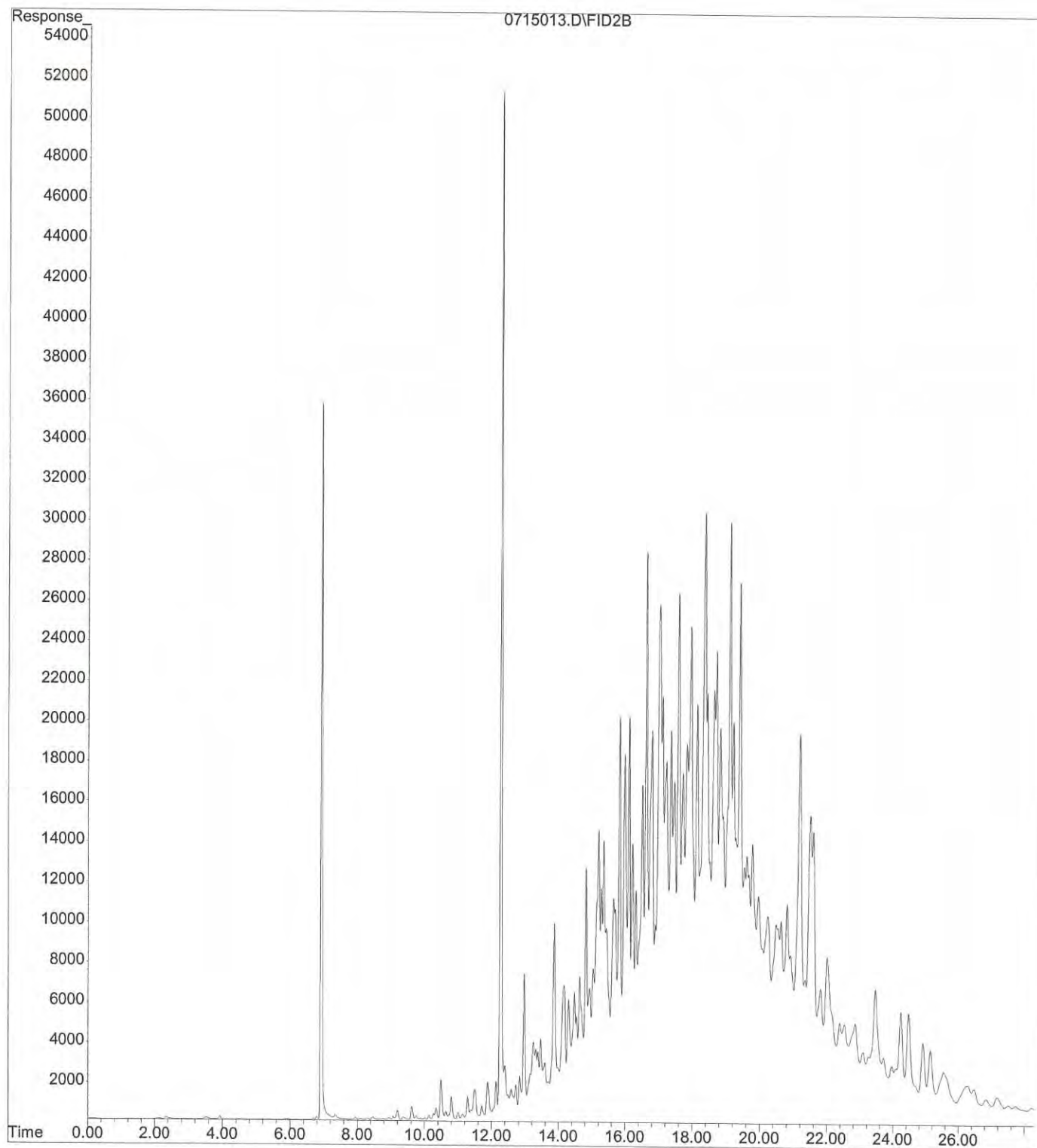
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Sample Name: 07-045-10s rr 1:100
Misc Info :
Vial Number: 8



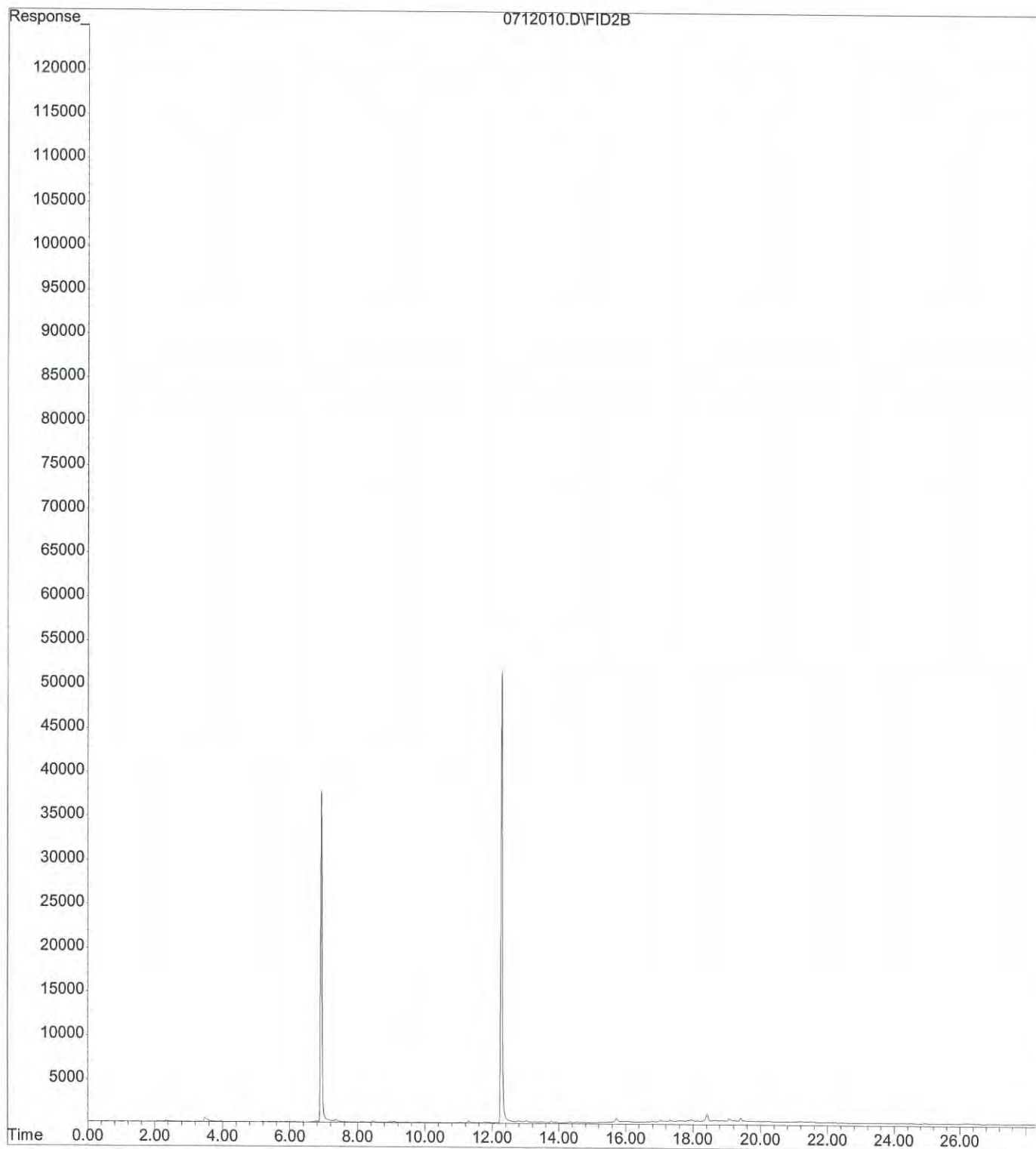
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Instrument : Daryl
Sample Name: 07-045-12s 1:250
Misc Info :
Vial Number: 23



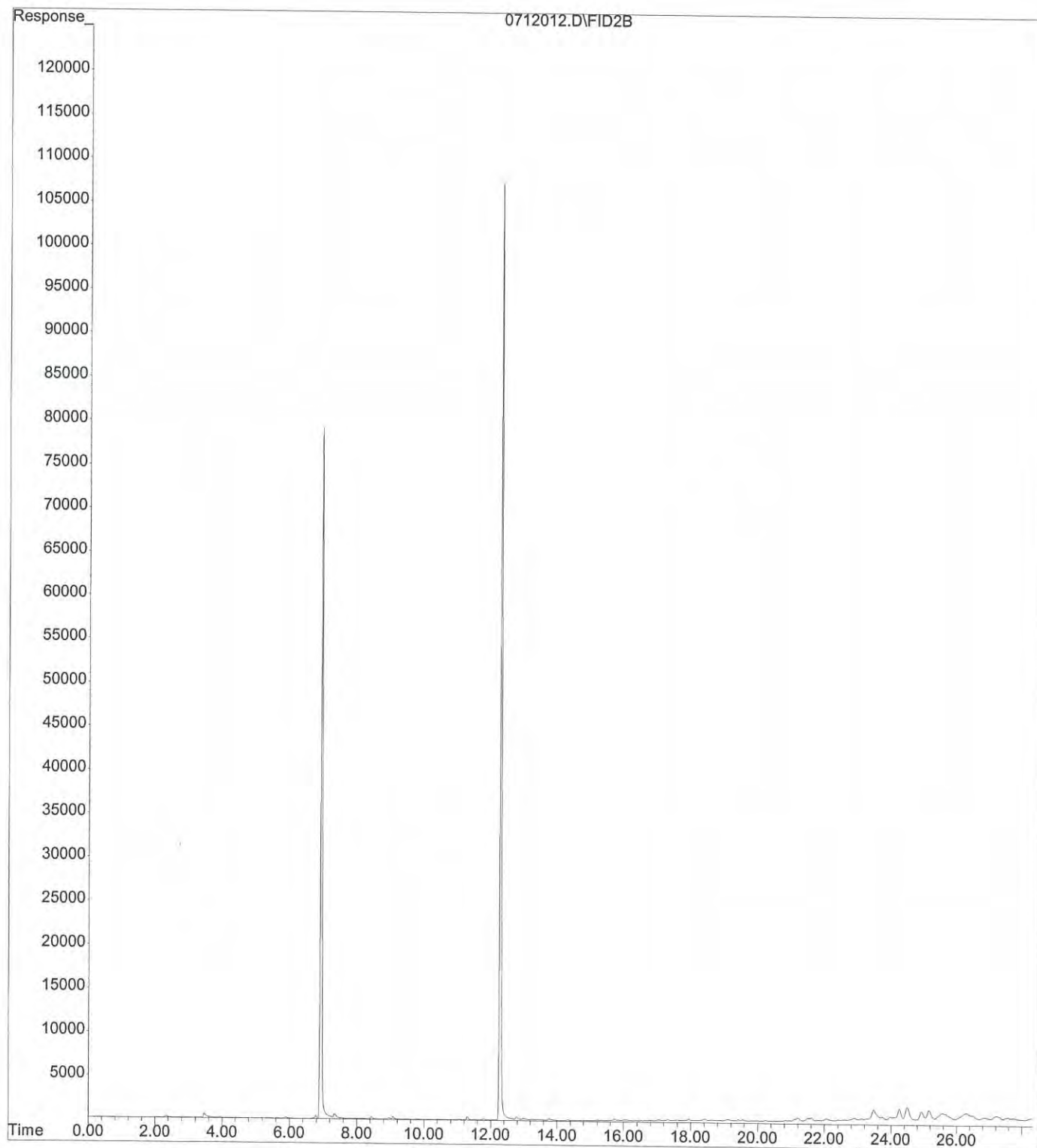
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Instrument : Daryl
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Misc Info :
Vial Number: 13



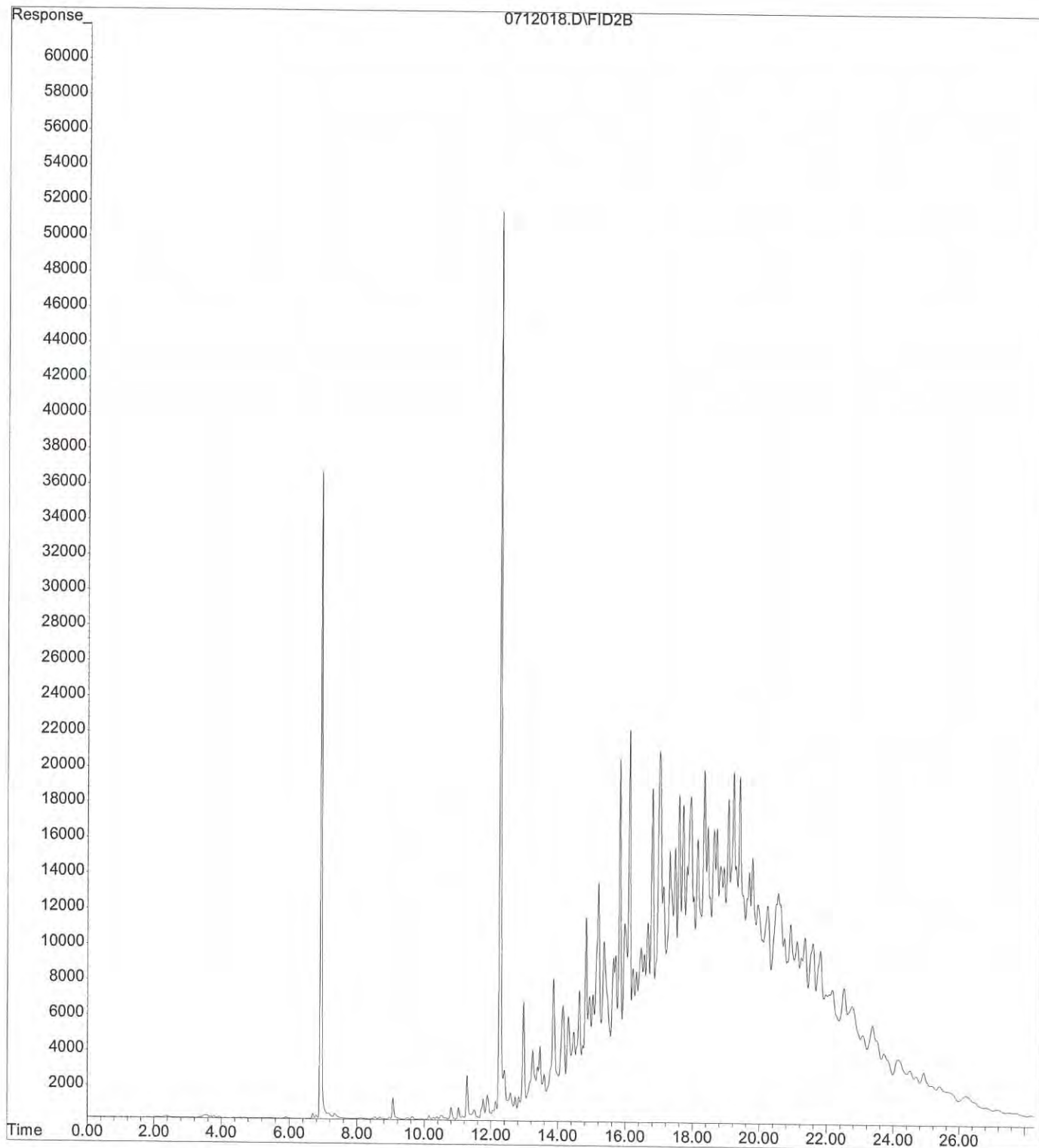
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Instrument : Daryl
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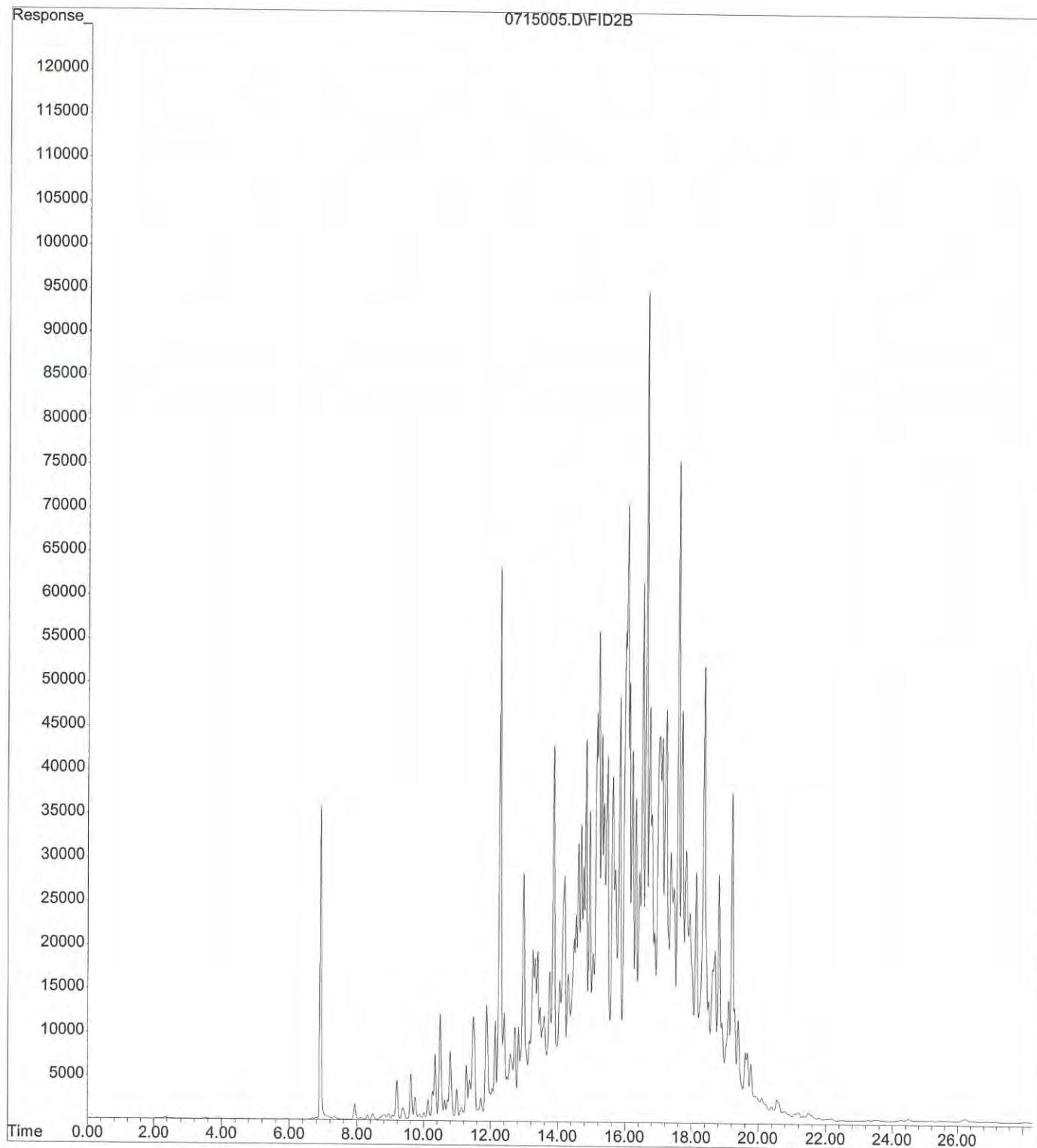
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Vial Number: 12



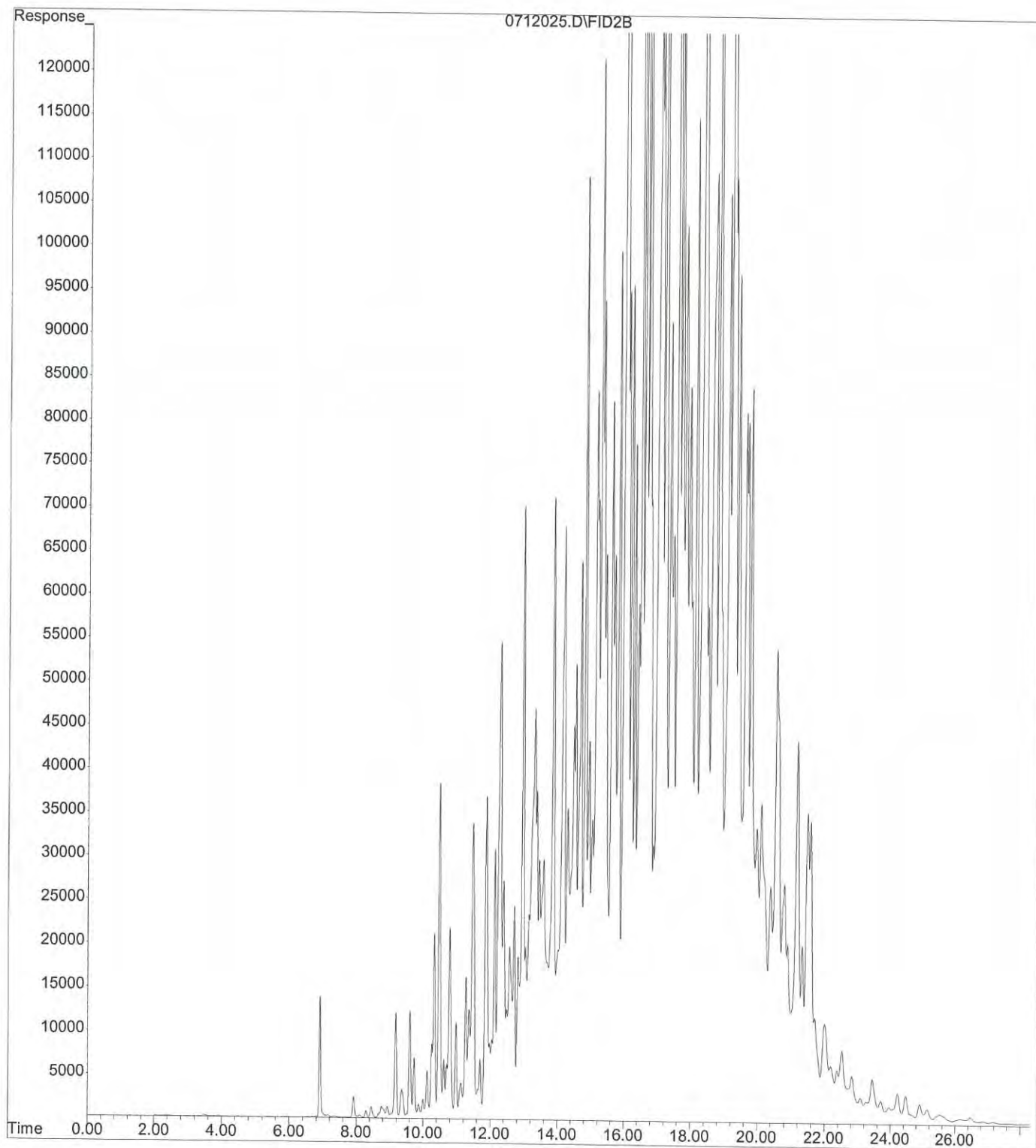
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Misc Info :
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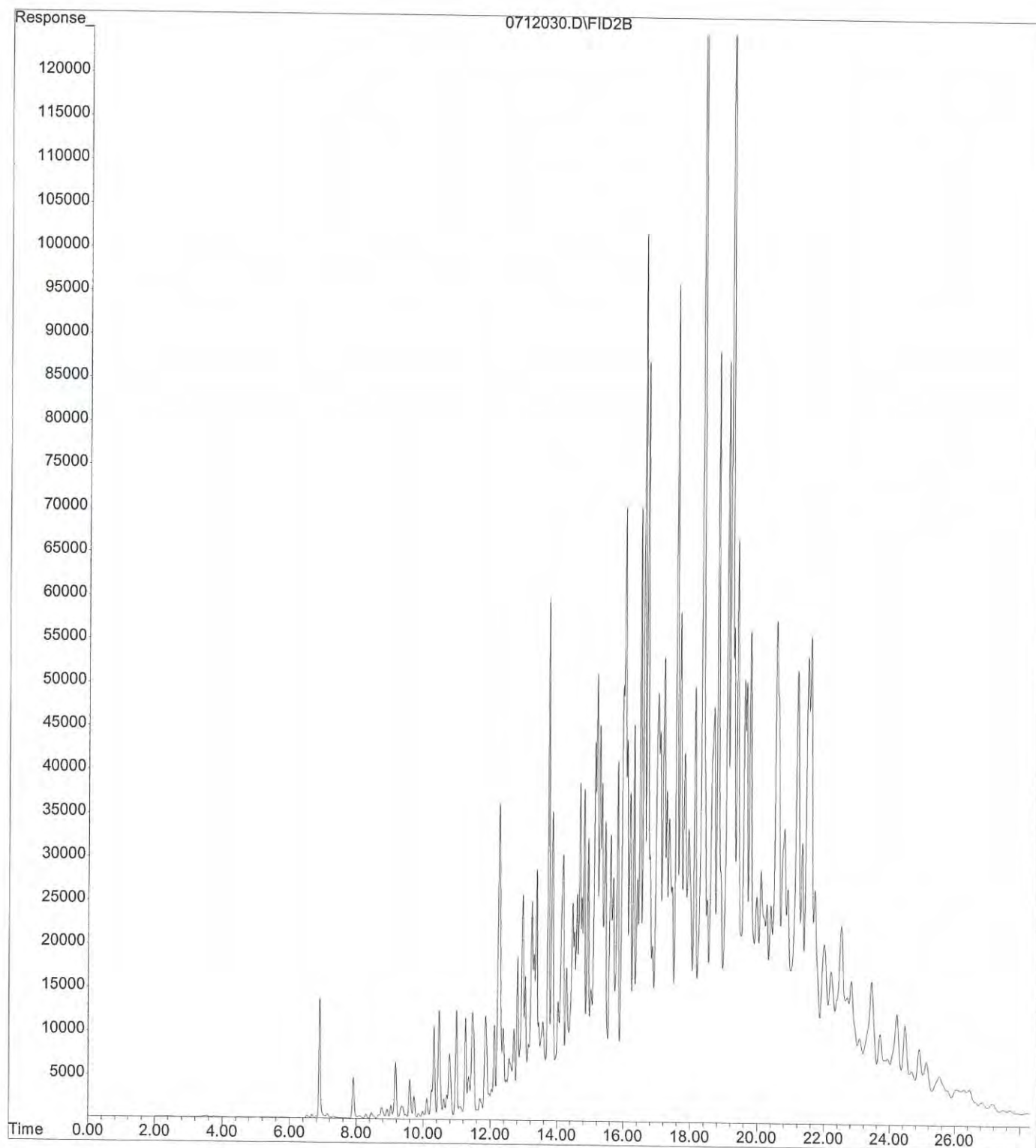
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Misc Info :
Vial Number: 5



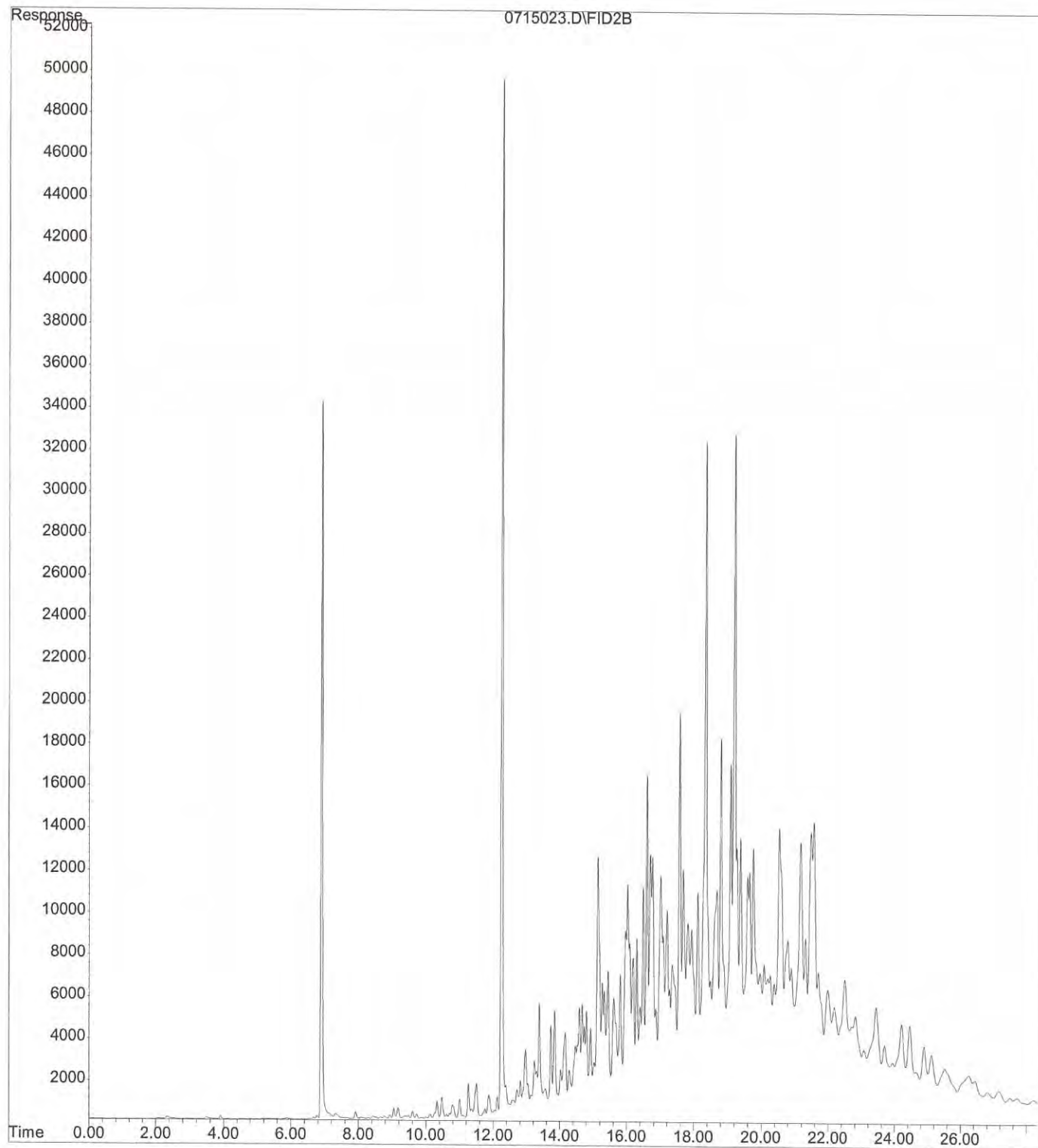
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Instrument : Daryl
Sample Name: 07-045-21s 1:250
Misc Info :
Vial Number: 25



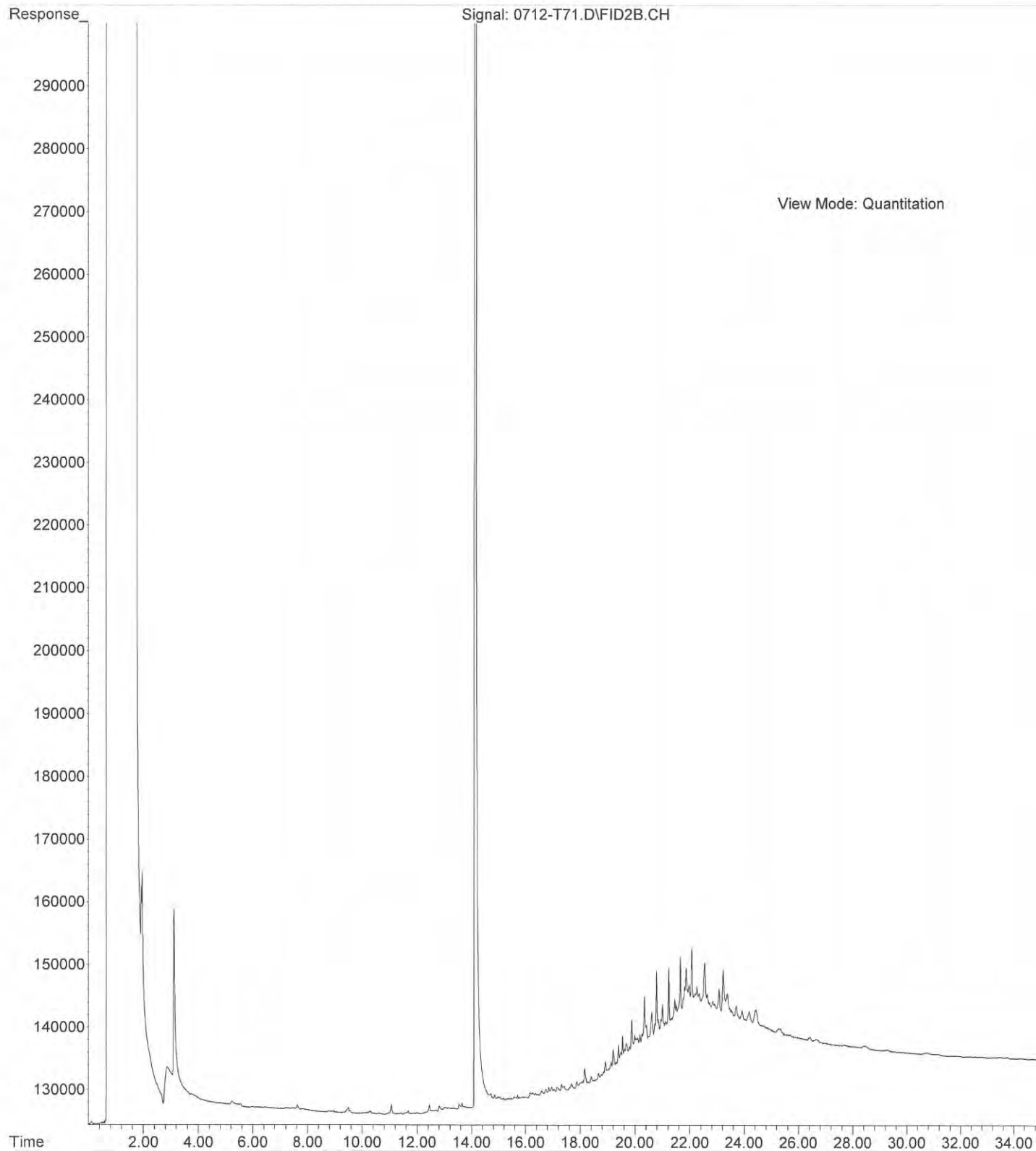
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Instrument : Daryl
Sample Name: 07-045-23s 1:250
Misc Info :
Vial Number: 30



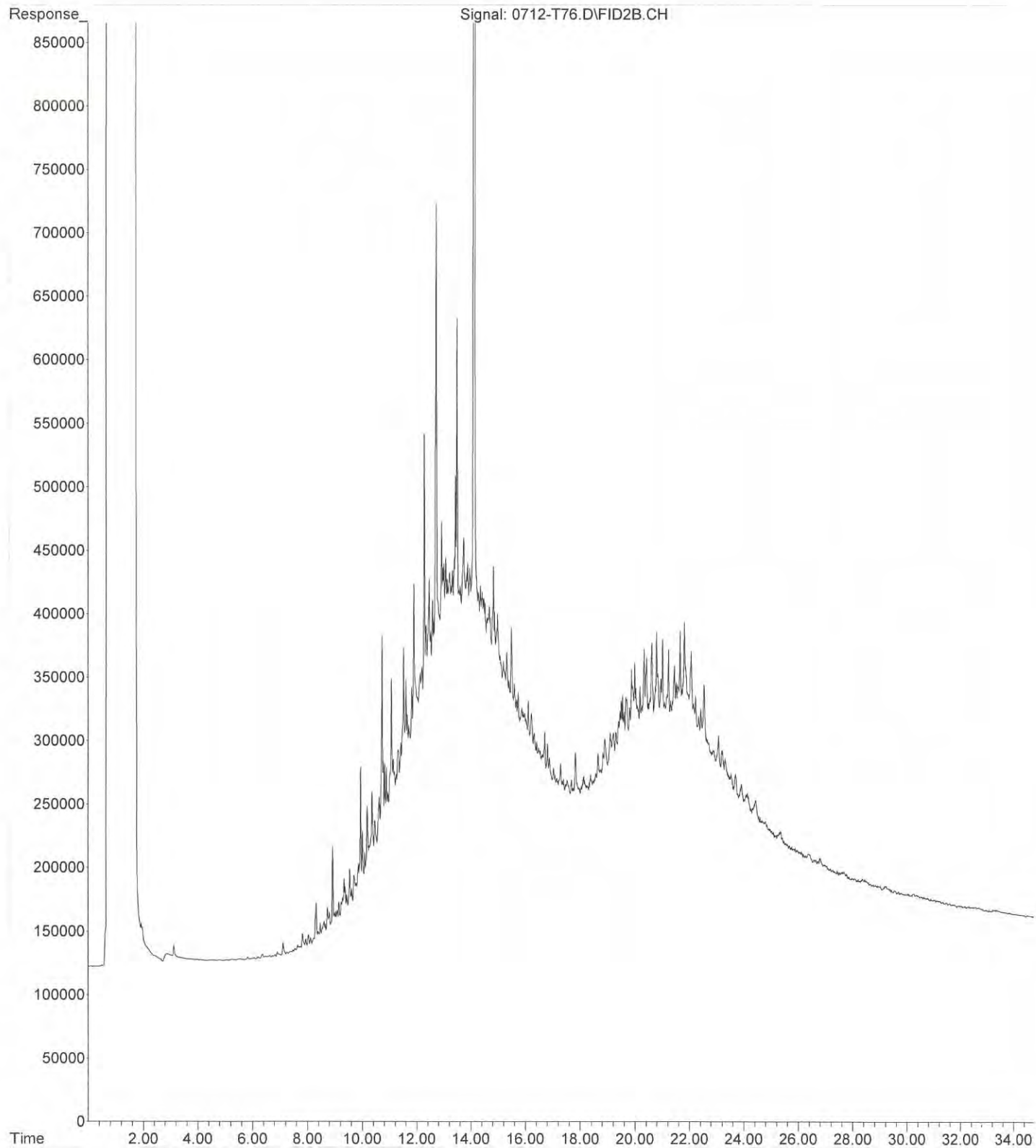
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Misc Info :
Vial Number: 23



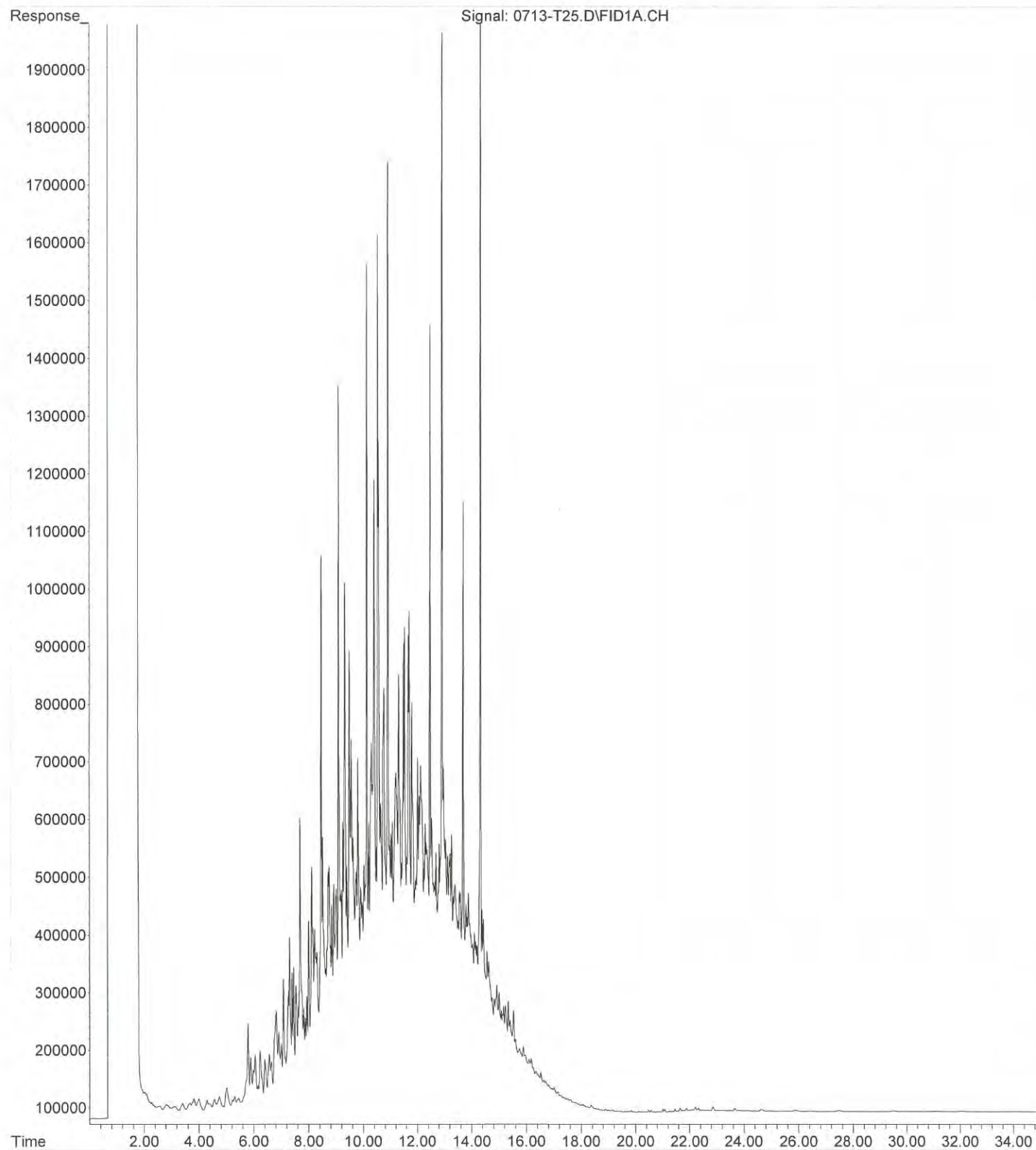
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Instrument : Teri
Sample Name: 07-045-01
Misc Info :
Vial Number: 71



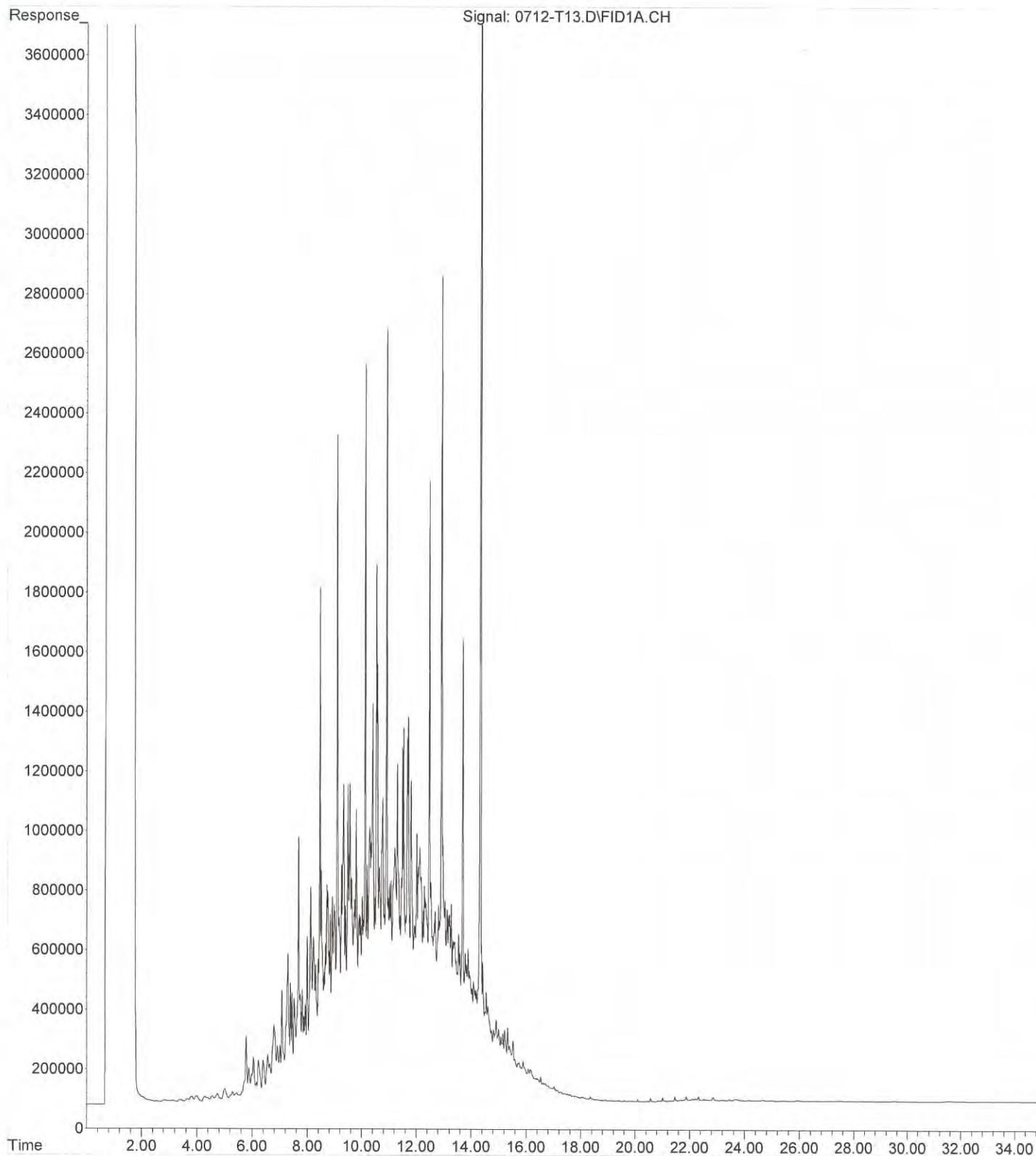
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Vial Number: 76



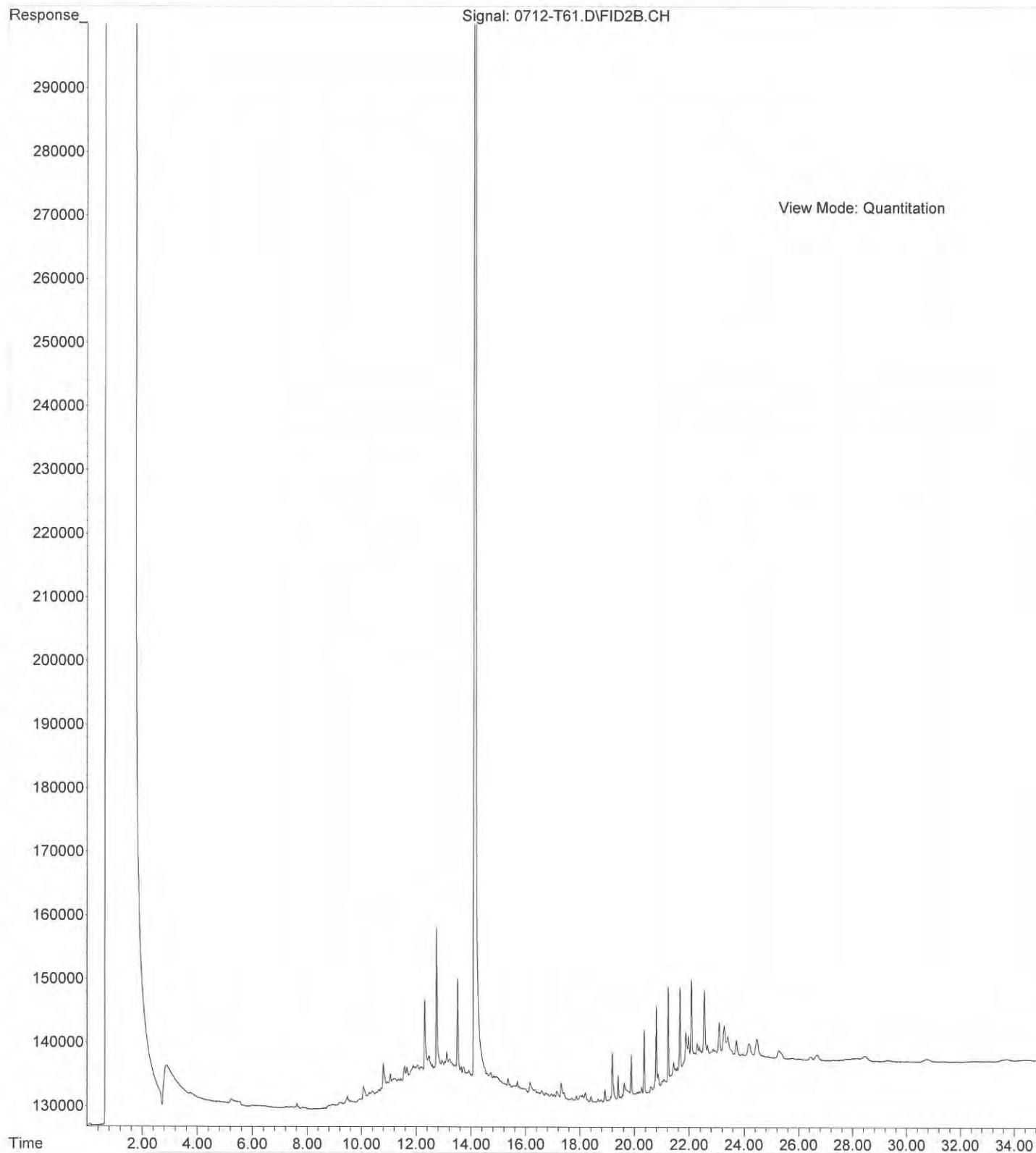
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Instrument : Teri
Sample Name: 07-045-05 5X
Misc Info :
Vial Number: 25



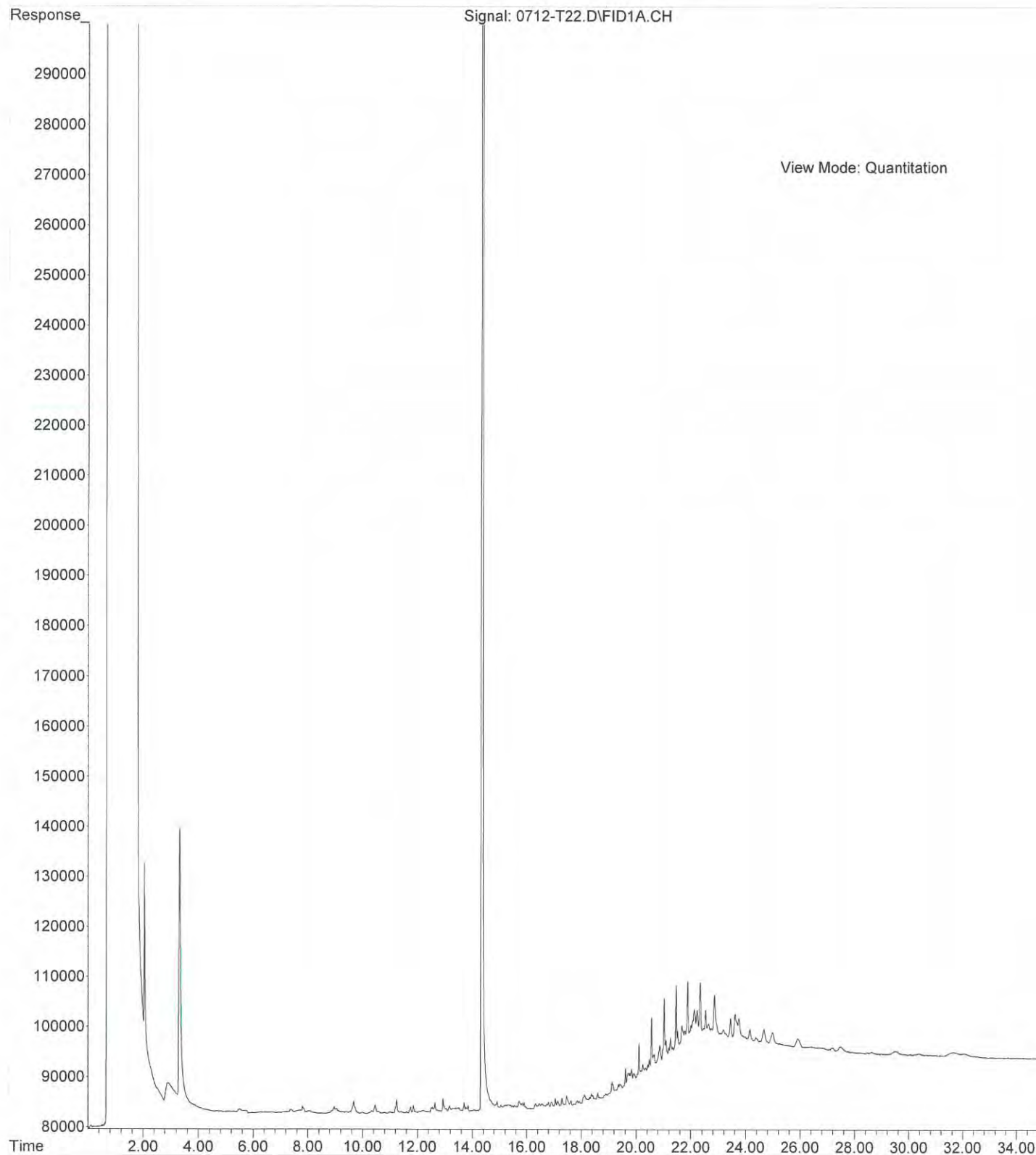
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Sample Name: 07-045-07
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Vial Number: 13



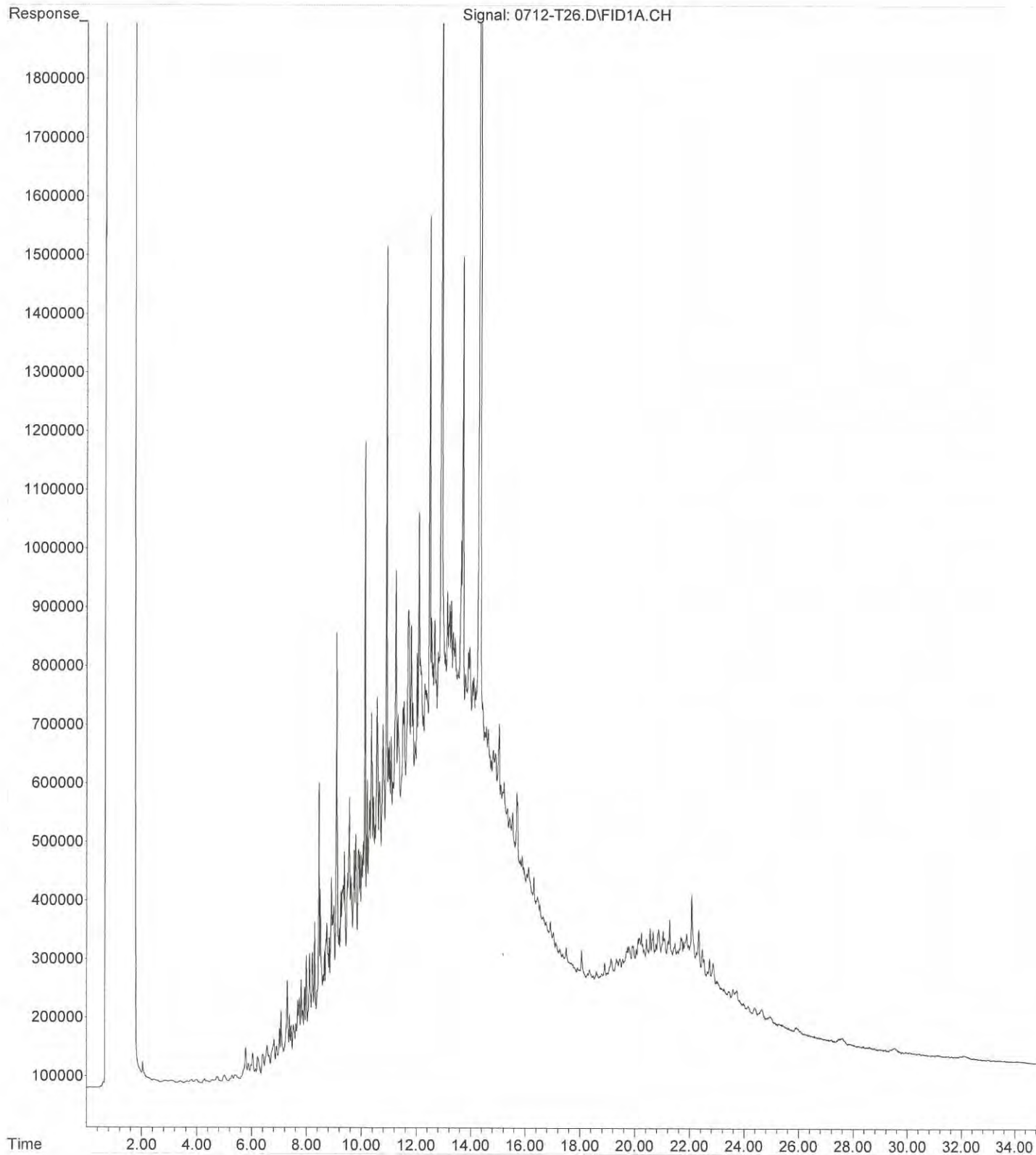
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Sample Name: 07-045-08
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Vial Number: 61



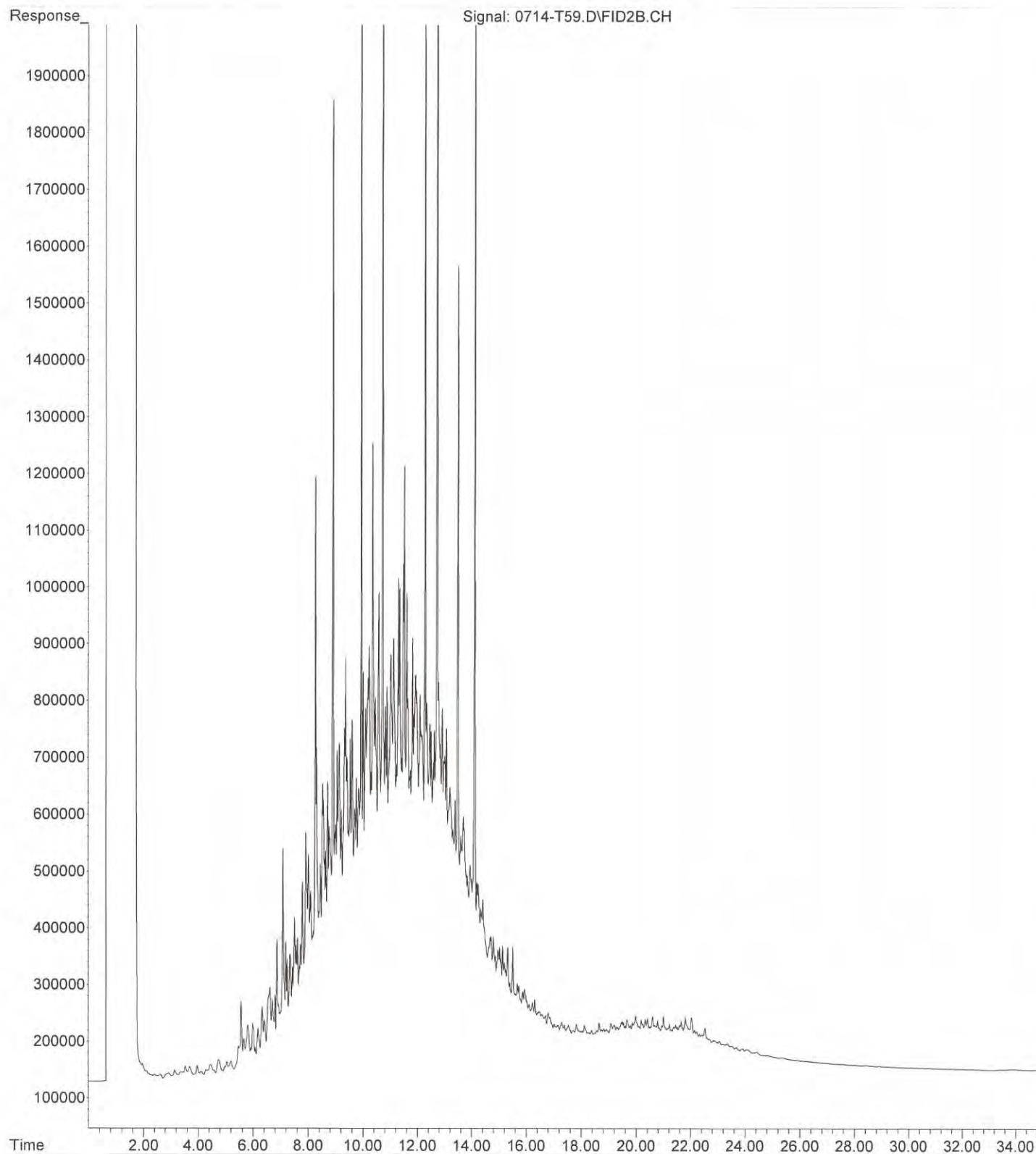
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Instrument : Teri
Sample Name: 07-045-09
Misc Info :
Vial Number: 22



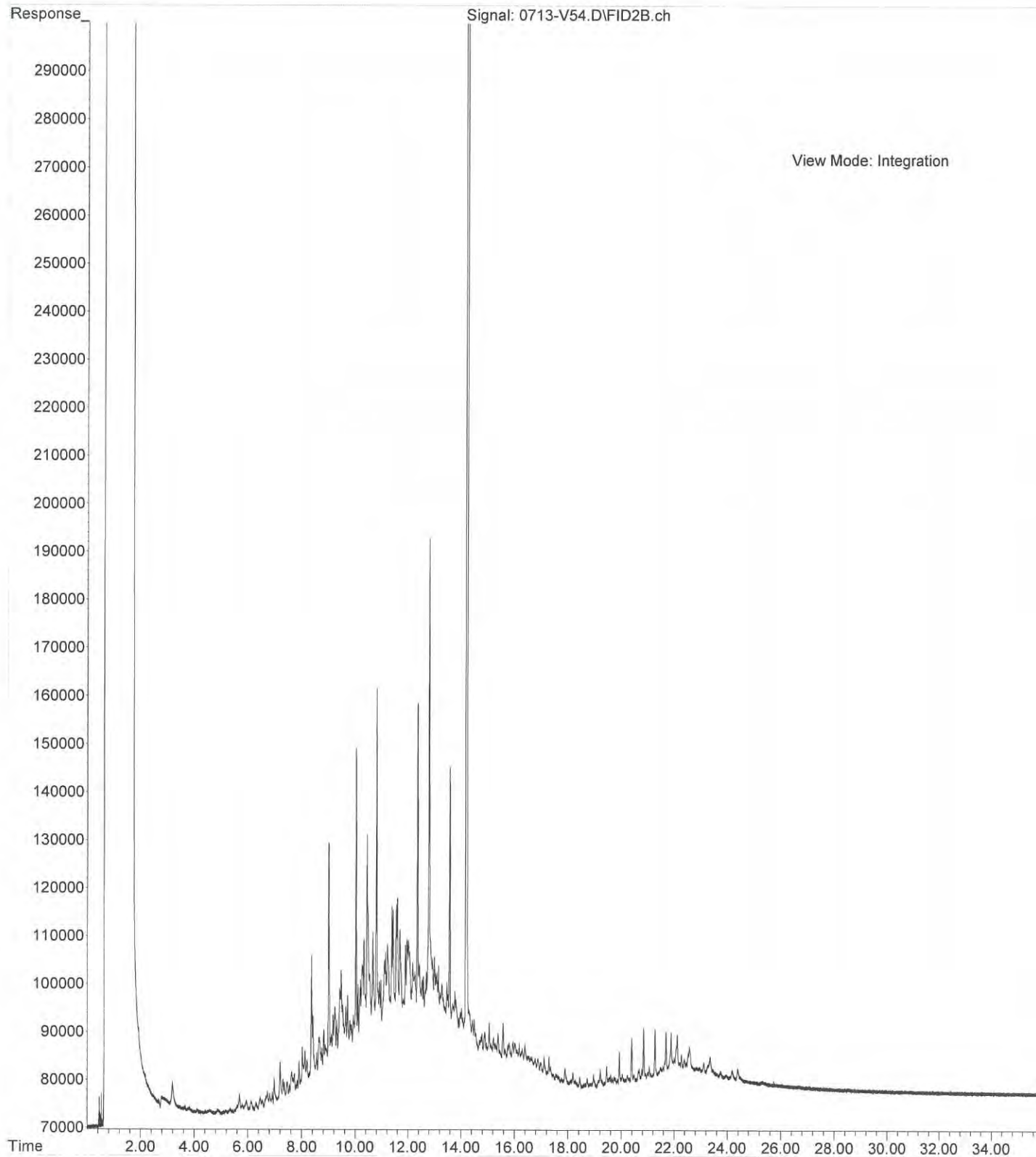
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Sample Name: 07-045-10
Misc Info :
Vial Number: 26



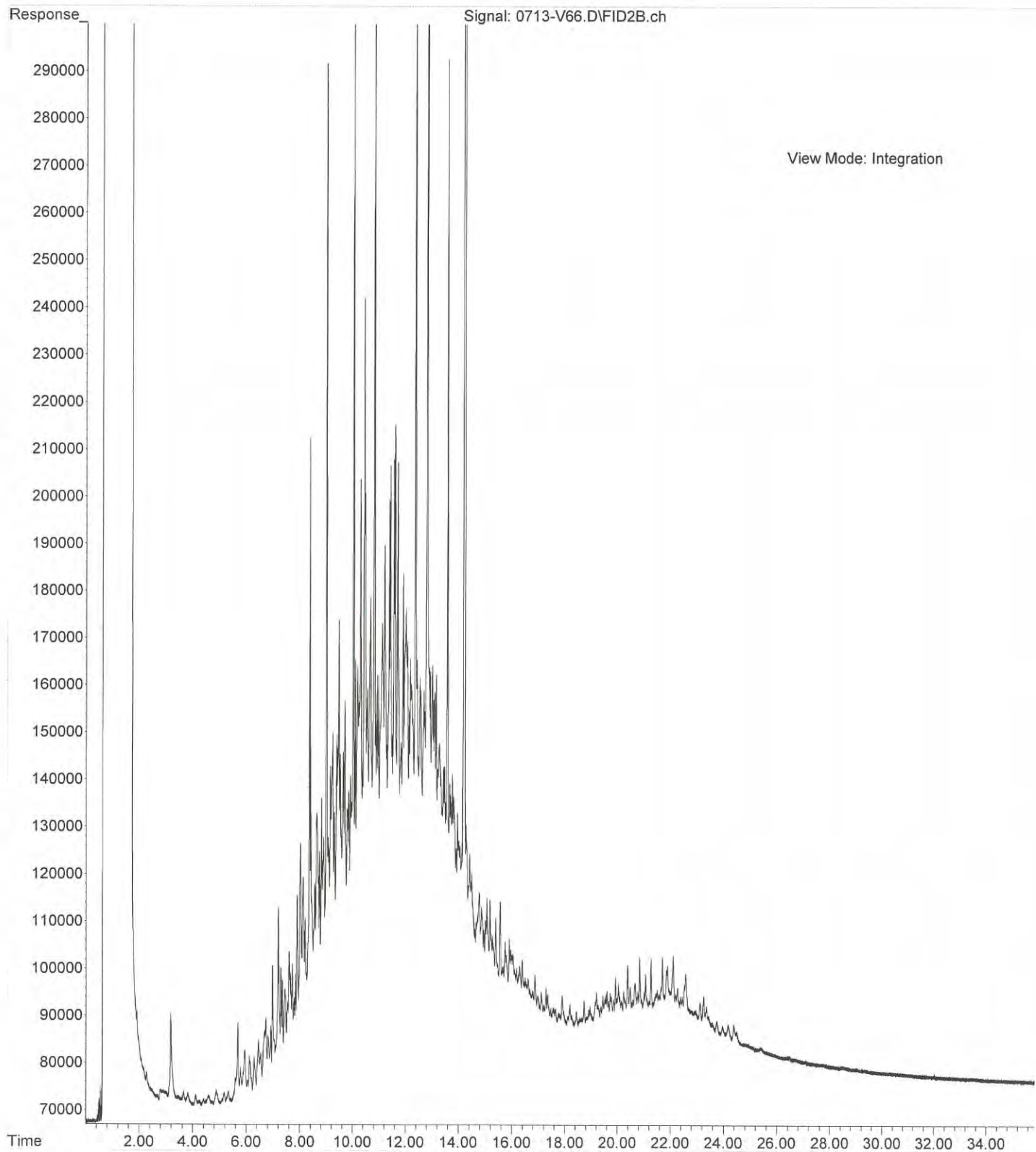
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Sample Name: 07-045-12 5X
Misc Info :
Vial Number: 59



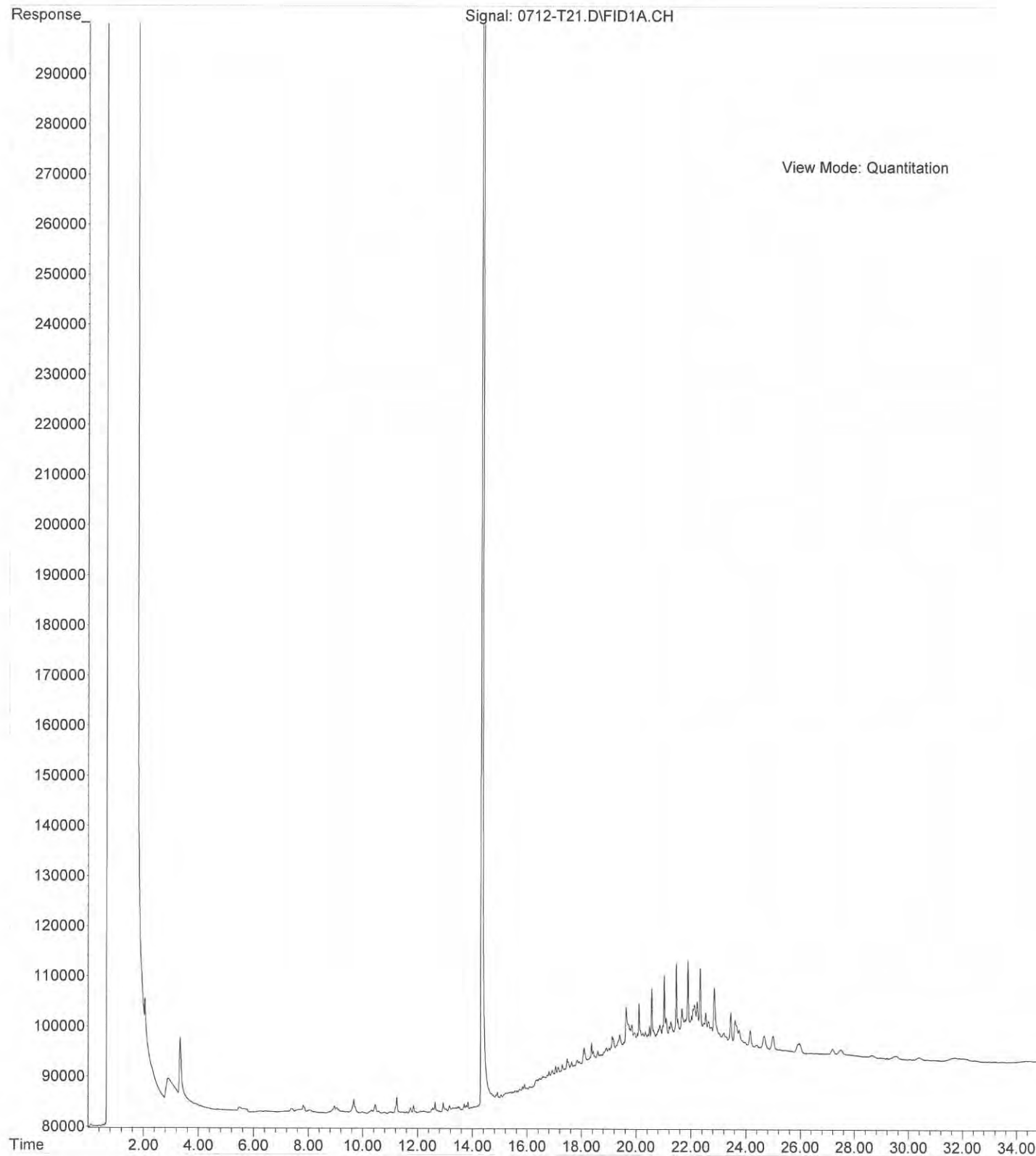
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Sample Name: 07-045-13
Misc Info :
Vial Number: 54



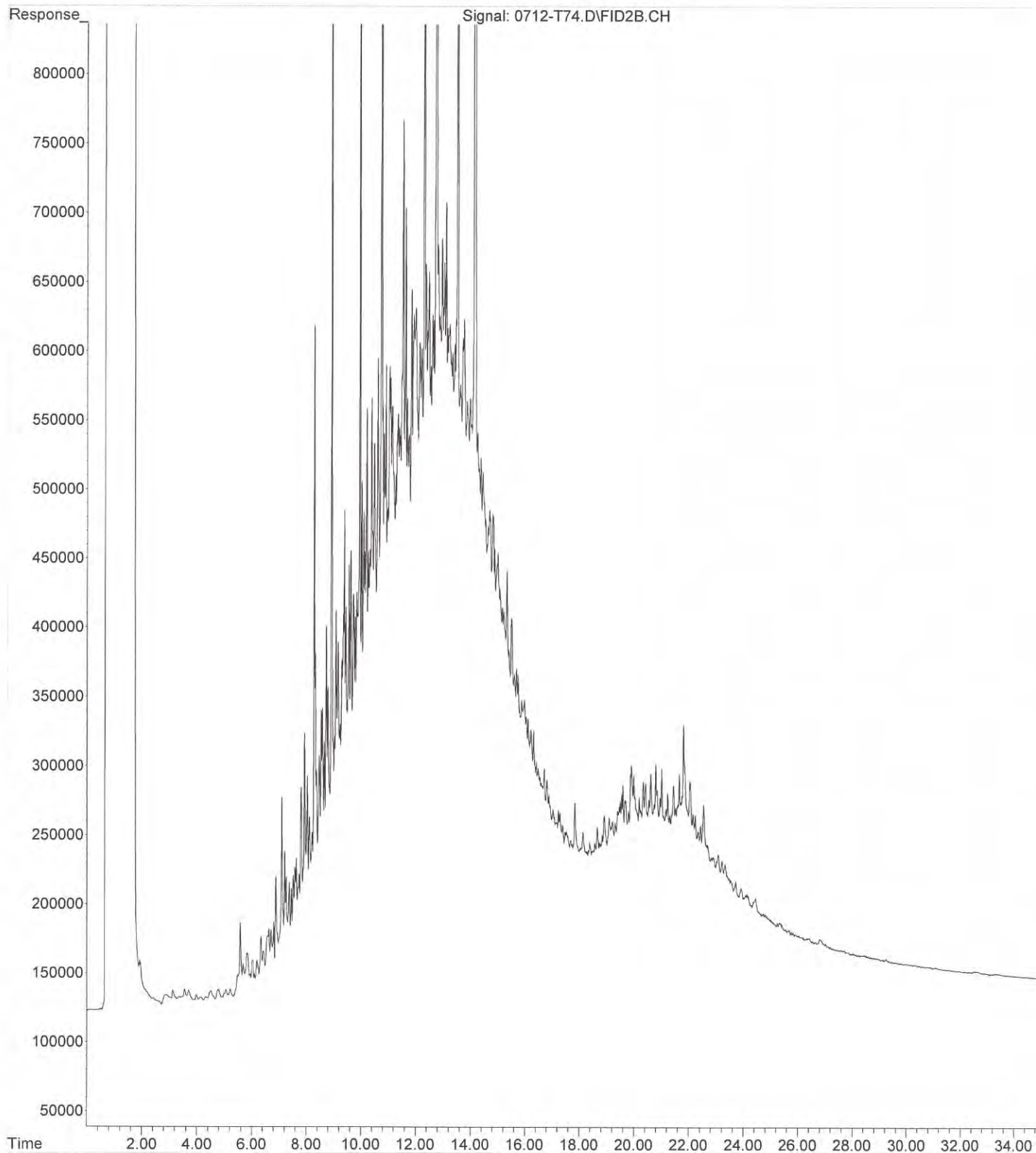
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Instrument : Vigo
Sample Name: 07-045-14
Misc Info :
Vial Number: 66



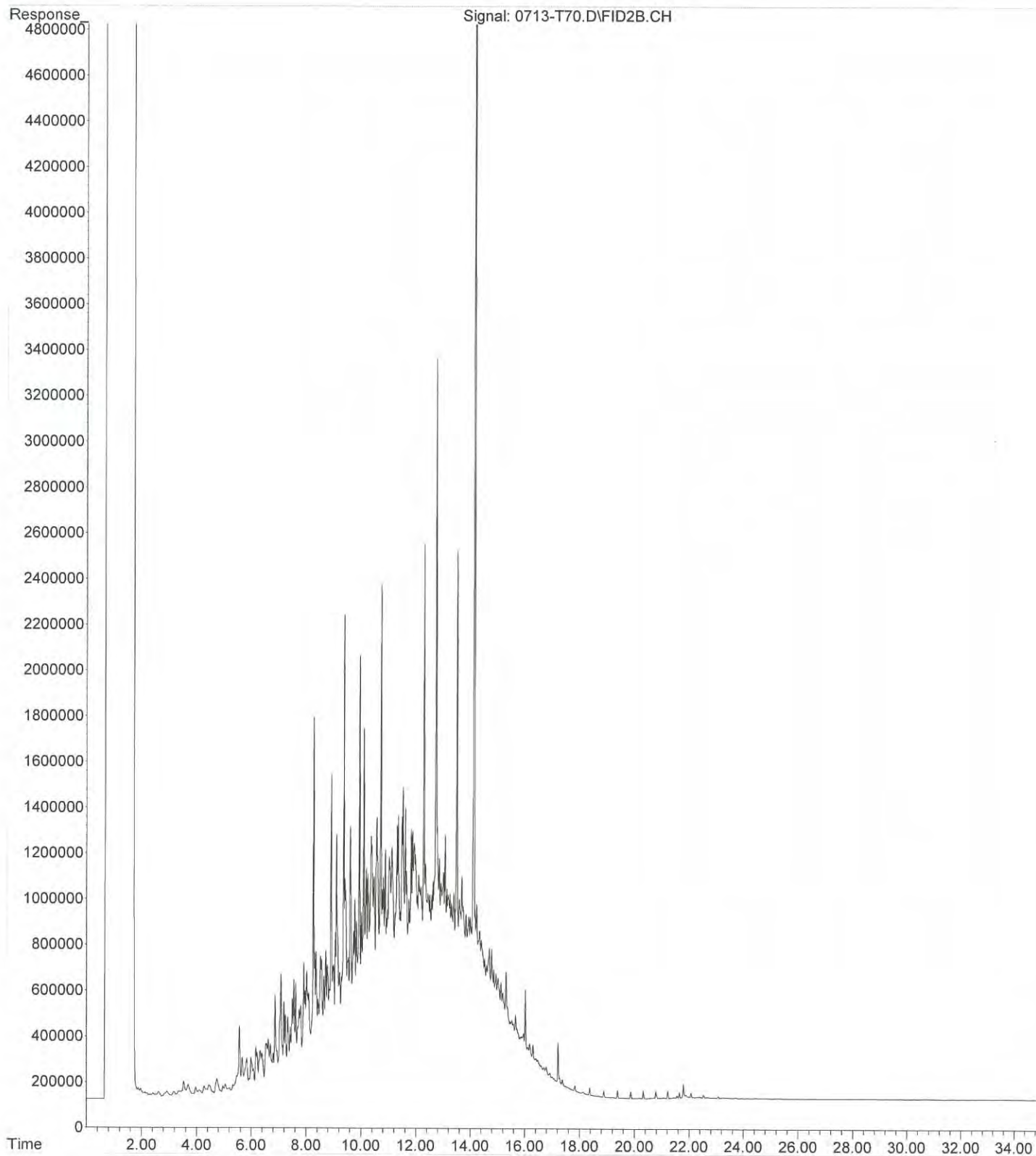
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Sample Name: 07-045-16
Misc Info :
Vial Number: 21



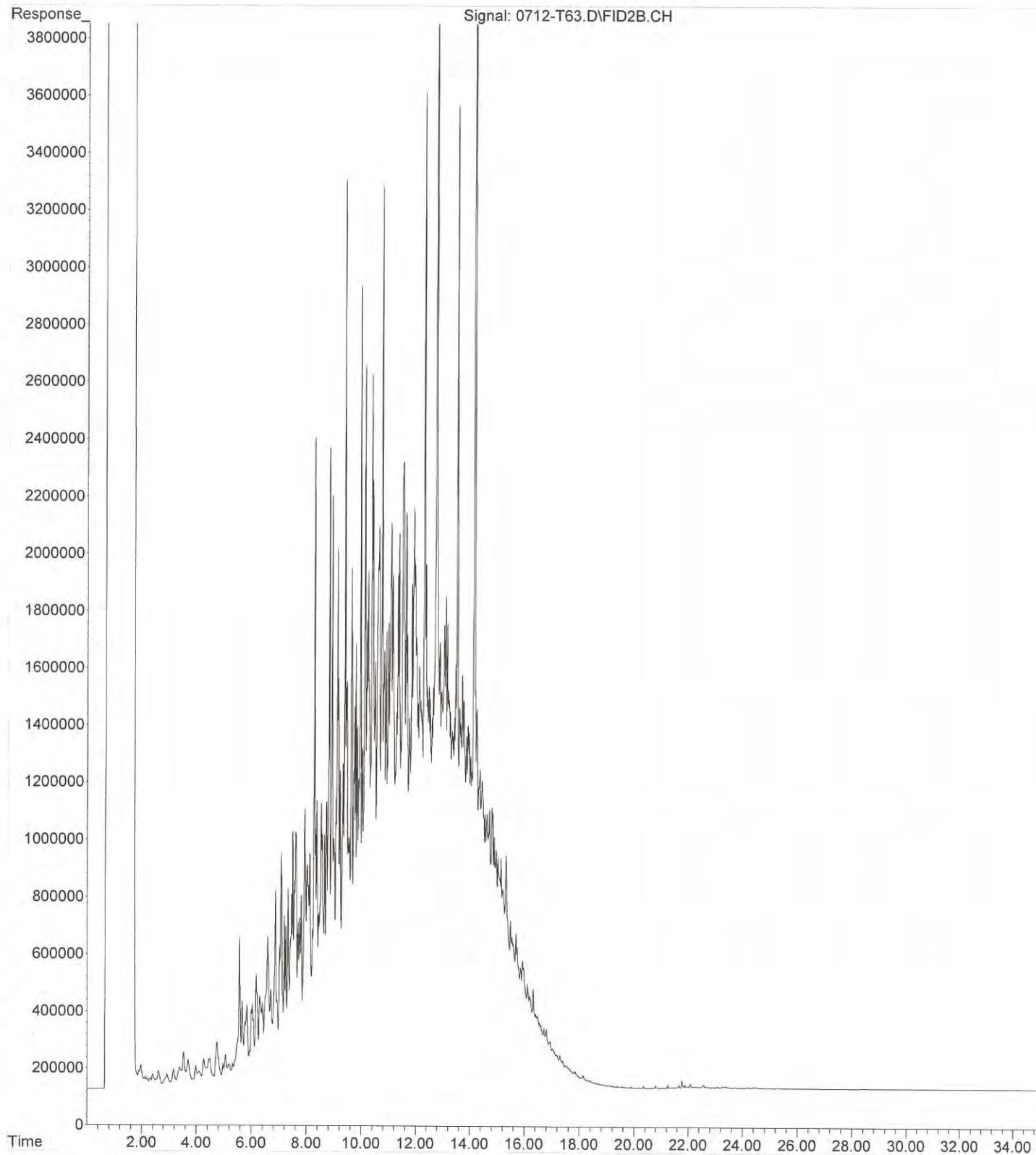
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Instrument : Teri
Sample Name: 07-045-17
Misc Info :
Vial Number: 74



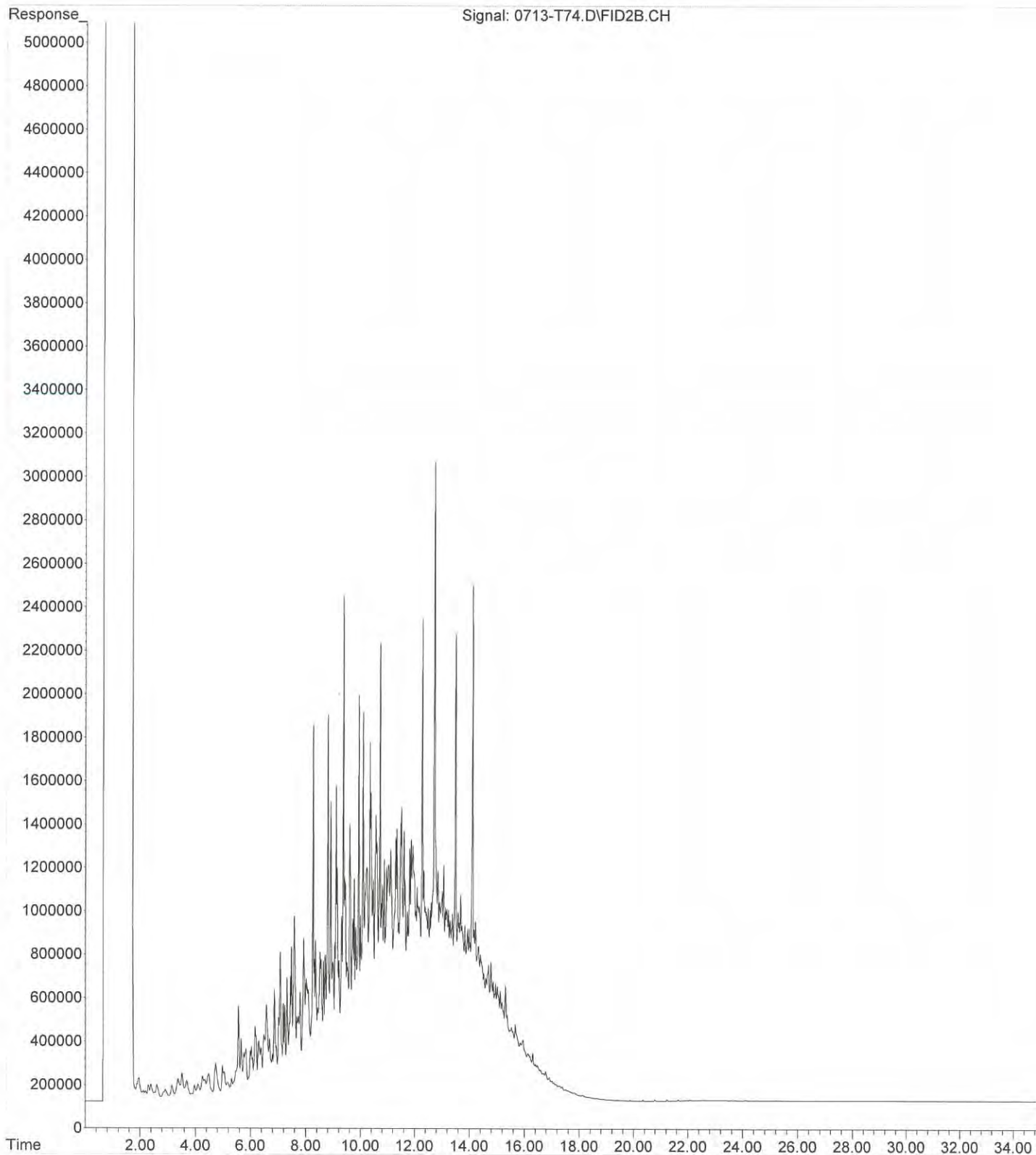
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Sample Name: 07-045-19
Misc Info :
Vial Number: 70



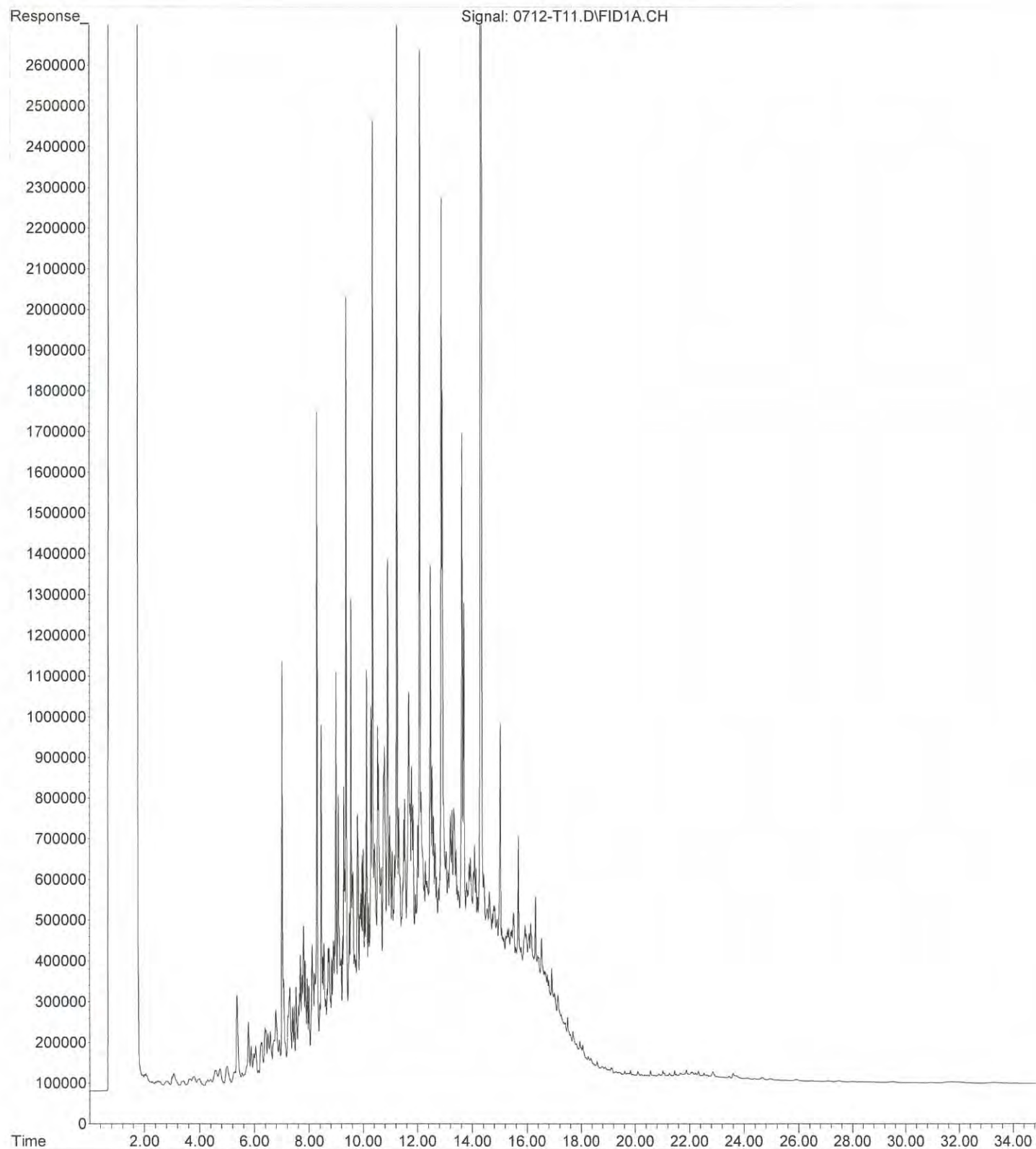
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Instrument : Teri
Sample Name: 07-045-21
Misc Info :
Vial Number: 63



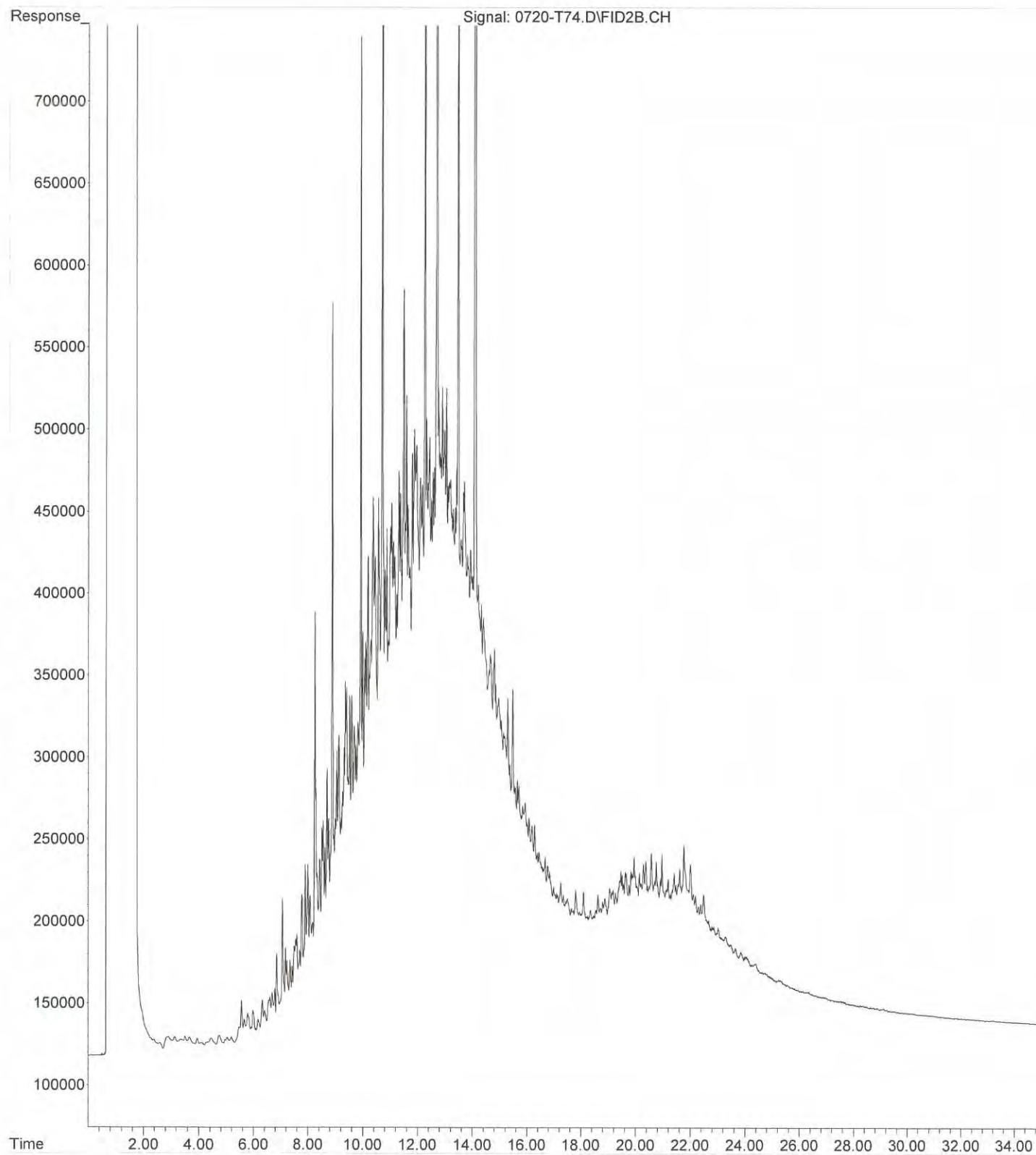
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Acquired : 14 Jul 2017 0:56 using AcqMethod T161216F.M
Instrument : Teri
Sample Name: 07-045-23 5X
Misc Info :
Vial Number: 74



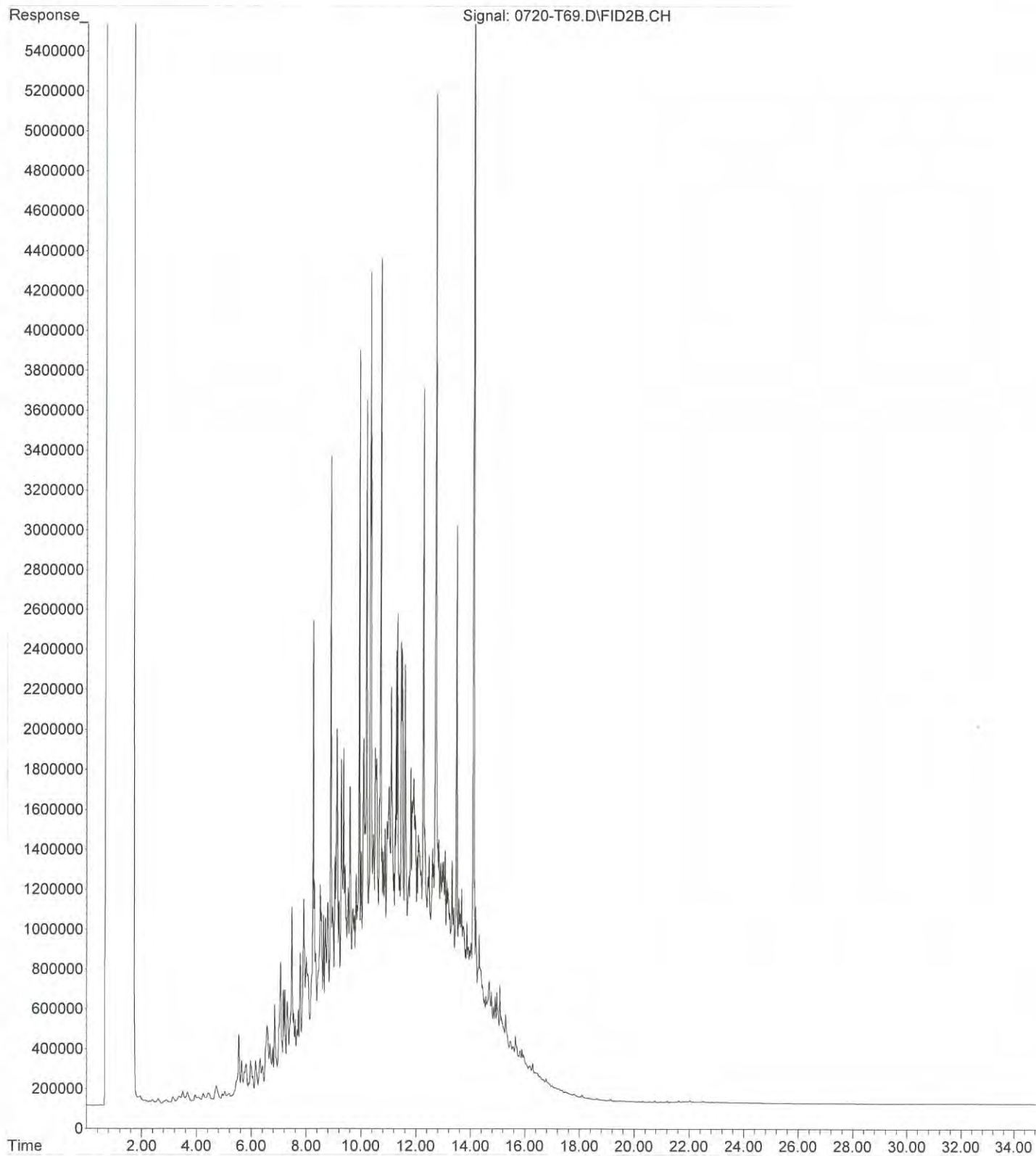
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Instrument : Teri
Sample Name: 07-045-24
Misc Info :
Vial Number: 11



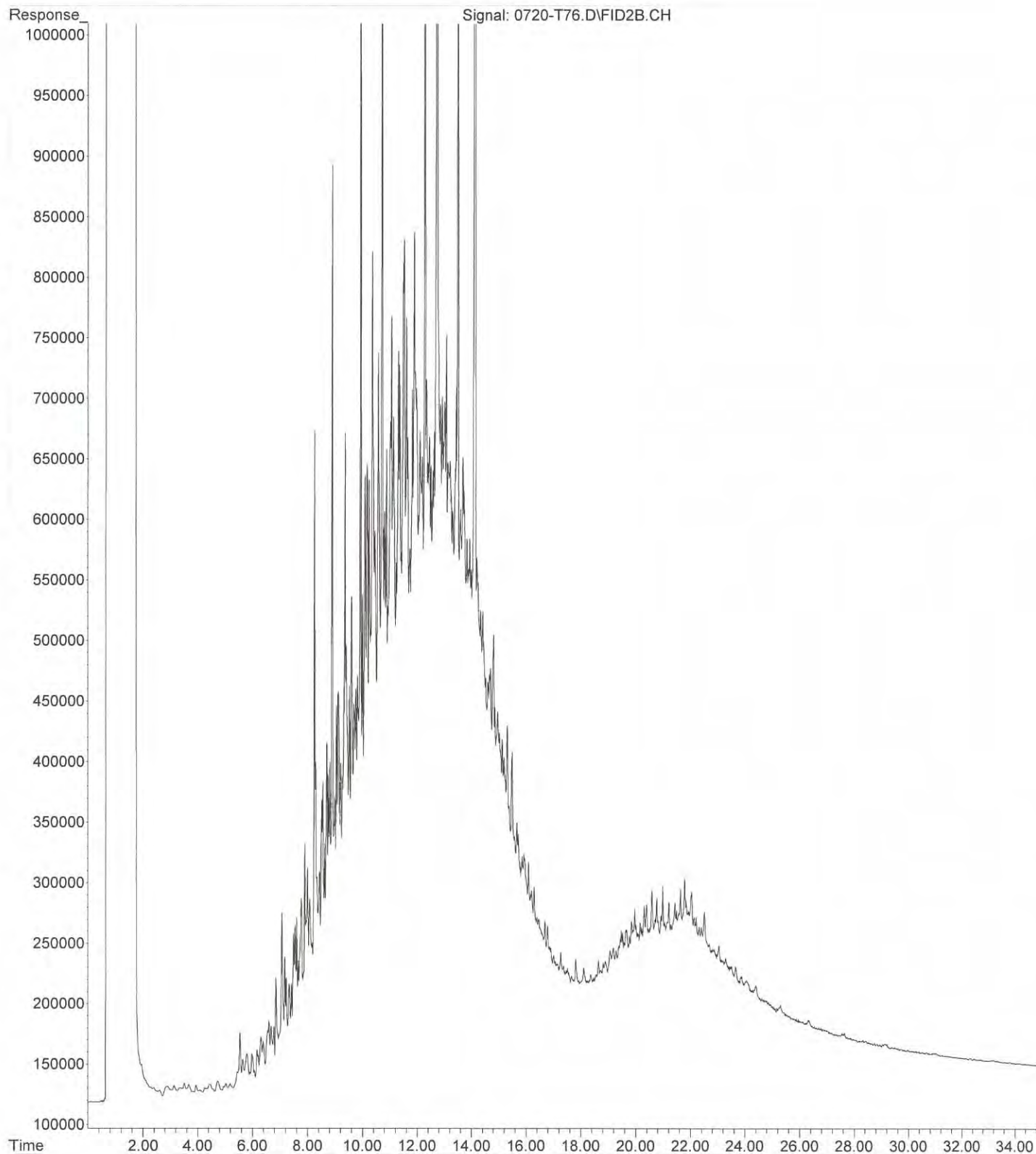
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Instrument : Teri
Sample Name: 07-045-03
Misc Info :
Vial Number: 74



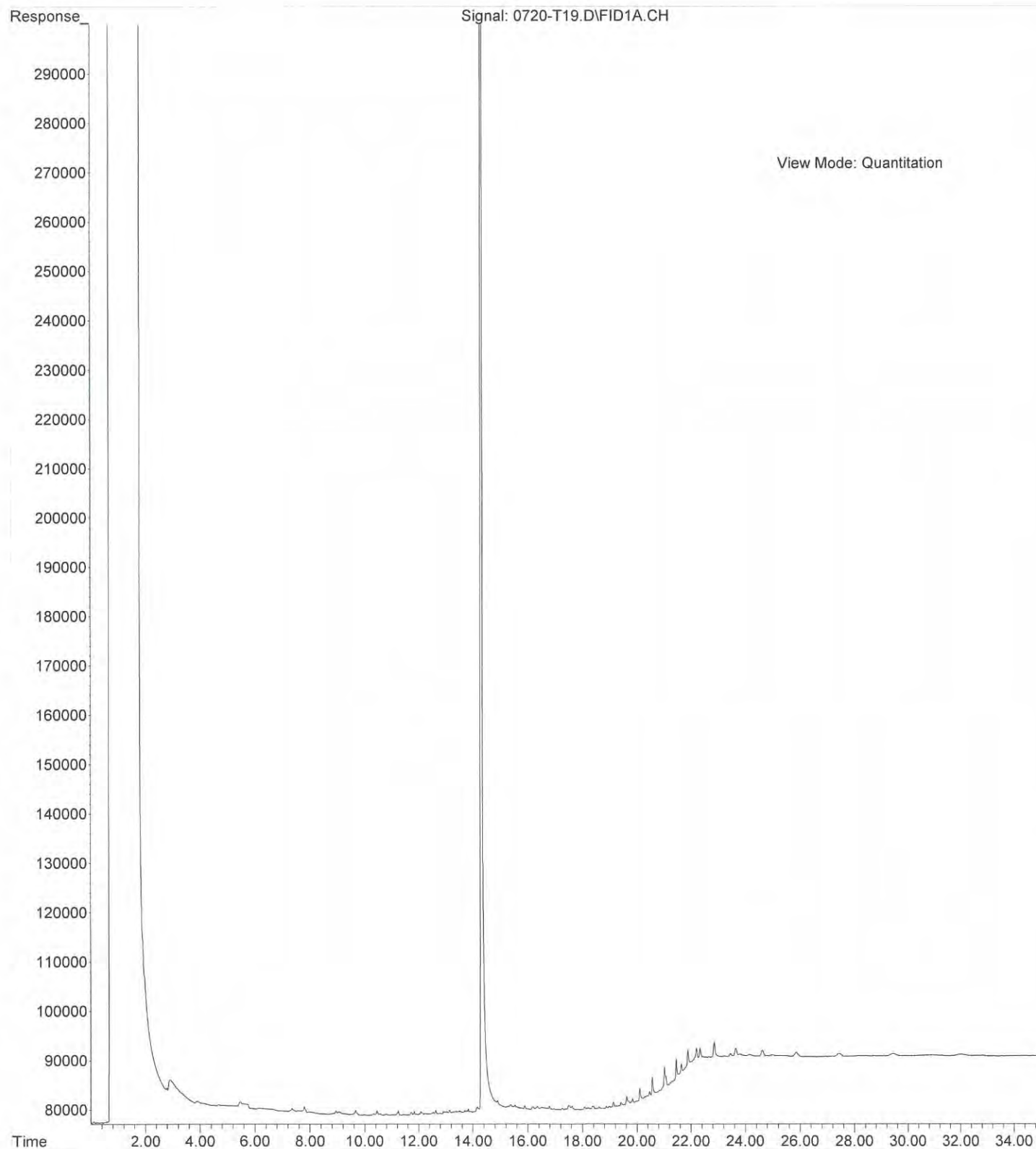
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Operator : ZT
Acquired : 21 Jul 2017 4:23 using AcqMethod T161216F.M
Instrument : Teri
Sample Name: 07-045-04
Misc Info :
Vial Number: 69



File : C:\msdchem\1\DATA\T170720.SEC\0720-T76.D
Operator : ZT
Acquired : 21 Jul 2017 9:22 using AcqMethod T161216F.M
Instrument : Teri
Sample Name: 07-045-11
Misc Info :
Vial Number: 76



File : C:\msdchem\1\DATA\T170720\0720-T19.D
Operator : ZT
Acquired : 21 Jul 2017 4:23 using AcqMethod T161216F.M
Instrument : Teri
Sample Name: 07-045-15
Misc Info :
Vial Number: 19





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

July 24, 2017

Marsi Beeson
GeoEngineers, Inc.
12000 NW Naito Prkway, Suite 180
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01
Laboratory Reference No. 1707-061

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on July 8, 2017.

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,

A handwritten signature in black ink, appearing to read 'DB' followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



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

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

Date of Report: July 24, 2017
Samples Submitted: July 8, 2017
Laboratory Reference: 1707-061
Project: 4082-039-01

Case Narrative

Samples were collected on July 7, 2017 and received by the laboratory on July 8, 2017. 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.

Volatiles EPA 8260C Analysis

Per EPA Method 5035A, samples were received by the laboratory in pre-weighed 40 mL VOA vials within 48 hours of sample collection. They were stored in a freezer at between -7°C and -20°C until extraction or analysis.

Some MTCA Method A cleanup levels are non-achievable for sample FL209-B11-3-4 due to the necessary dilution of the sample.

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



Date of Report: July 24, 2017
Samples Submitted: July 8, 2017
Laboratory Reference: 1707-061
Project: 4082-039-01

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL209-B8-27.5-28	07-061-01	Soil	7-7-17	7-8-17	
FL209-B8-30-30.5	07-061-02	Soil	7-7-17	7-8-17	
FL209-B9-1-2	07-061-03	Soil	7-7-17	7-8-17	
FL209-B9-5.5-6.5	07-061-04	Soil	7-7-17	7-8-17	
FL209-B11-1-2	07-061-07	Soil	7-7-17	7-8-17	
FL209-B11-3-4	07-061-08	Soil	7-7-17	7-8-17	
FL209-B11-6-6.5	07-061-09	Soil	7-7-17	7-8-17	



Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-B8-27.5-28					
Laboratory ID:	07-061-01					
Benzene	ND	0.021	EPA 8021B	7-14-17	7-14-17	
Toluene	ND	0.10	EPA 8021B	7-14-17	7-14-17	
Ethyl Benzene	ND	0.10	EPA 8021B	7-14-17	7-14-17	
m,p-Xylene	ND	0.10	EPA 8021B	7-14-17	7-14-17	
o-Xylene	ND	0.10	EPA 8021B	7-14-17	7-14-17	
Gasoline	ND	10	NWTPH-Gx	7-14-17	7-14-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	84	63-124				
Client ID:	FL209-B8-30-30.5					
Laboratory ID:	07-061-02					
Benzene	ND	0.020	EPA 8021B	7-14-17	7-14-17	
Toluene	ND	0.047	EPA 8021B	7-14-17	7-14-17	
Ethyl Benzene	ND	0.047	EPA 8021B	7-14-17	7-14-17	
m,p-Xylene	ND	0.047	EPA 8021B	7-14-17	7-14-17	
o-Xylene	ND	0.047	EPA 8021B	7-14-17	7-14-17	
Gasoline	ND	4.7	NWTPH-Gx	7-14-17	7-14-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	63-124				
Client ID:	FL209-B9-1-2					
Laboratory ID:	07-061-03					
Benzene	ND	0.020	EPA 8021B	7-14-17	7-14-17	
Toluene	ND	0.050	EPA 8021B	7-14-17	7-14-17	
Ethyl Benzene	ND	0.050	EPA 8021B	7-14-17	7-14-17	
m,p-Xylene	ND	0.050	EPA 8021B	7-14-17	7-14-17	
o-Xylene	ND	0.050	EPA 8021B	7-14-17	7-14-17	
Gasoline	ND	5.0	NWTPH-Gx	7-14-17	7-14-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	88	63-124				



Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

NWTPH-Gx/BTEX

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B9-5.5-6.5						
Laboratory ID: 07-061-04						
Benzene	ND	0.020	EPA 8021B	7-14-17	7-14-17	
Toluene	ND	0.060	EPA 8021B	7-14-17	7-14-17	
Ethyl Benzene	ND	0.060	EPA 8021B	7-14-17	7-14-17	
m,p-Xylene	ND	0.060	EPA 8021B	7-14-17	7-14-17	
o-Xylene	ND	0.060	EPA 8021B	7-14-17	7-14-17	
Gasoline	ND	6.0	NWTPH-Gx	7-14-17	7-14-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	100	63-124				
Client ID: FL209-B11-1-2						
Laboratory ID: 07-061-07						
Benzene	ND	0.024	EPA 8021B	7-14-17	7-14-17	
Toluene	ND	0.12	EPA 8021B	7-14-17	7-14-17	
Ethyl Benzene	ND	0.12	EPA 8021B	7-14-17	7-14-17	
m,p-Xylene	ND	0.12	EPA 8021B	7-14-17	7-14-17	
o-Xylene	ND	0.12	EPA 8021B	7-14-17	7-14-17	
Gasoline	ND	12	NWTPH-Gx	7-14-17	7-14-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	63-124				
Client ID: FL209-B11-3-4						
Laboratory ID: 07-061-08						
Gasoline	ND	13	NWTPH-Gx	7-14-17	7-14-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	63-124				
Client ID: FL209-B11-6-6.5						
Laboratory ID: 07-061-09						
Benzene	ND	0.020	EPA 8021B	7-14-17	7-14-17	
Toluene	ND	0.047	EPA 8021B	7-14-17	7-14-17	
Ethyl Benzene	ND	0.047	EPA 8021B	7-14-17	7-14-17	
m,p-Xylene	ND	0.047	EPA 8021B	7-14-17	7-14-17	
o-Xylene	ND	0.047	EPA 8021B	7-14-17	7-14-17	
Gasoline	ND	4.7	NWTPH-Gx	7-14-17	7-14-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	89	63-124				



Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B8-27.5-28						
Laboratory ID:	07-061-01					
Diesel Fuel #2	170	27	NWTPH-Dx	7-13-17	7-14-17	
Lube Oil Range Organics	ND	75	NWTPH-Dx	7-13-17	7-14-17	U1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	76	50-150				
Client ID: FL209-B8-30-30.5						
Laboratory ID:	07-061-02					
Diesel Range Organics	ND	27	NWTPH-Dx	7-13-17	7-14-17	
Lube Oil Range Organics	ND	54	NWTPH-Dx	7-13-17	7-14-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	83	50-150				
Client ID: FL209-B9-1-2						
Laboratory ID:	07-061-03					
Diesel Range Organics	ND	27	NWTPH-Dx	7-13-17	7-14-17	
Lube Oil	96	54	NWTPH-Dx	7-13-17	7-14-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	100	50-150				
Client ID: FL209-B9-5.5-6.5						
Laboratory ID:	07-061-04					
Diesel Range Organics	ND	32	NWTPH-Dx	7-13-17	7-14-17	
Lube Oil Range Organics	ND	63	NWTPH-Dx	7-13-17	7-14-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	71	50-150				
Client ID: FL209-B11-1-2						
Laboratory ID:	07-061-07					
Diesel Fuel #2	550	27	NWTPH-Dx	7-13-17	7-14-17	
Lube Oil	350	54	NWTPH-Dx	7-13-17	7-14-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	81	50-150				
Client ID: FL209-B11-3-4						
Laboratory ID:	07-061-08					
Diesel Fuel #2	8400	160	NWTPH-Dx	7-13-17	7-17-17	
Lube Oil Range Organics	ND	540	NWTPH-Dx	7-13-17	7-17-17	U1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	68	50-150				



Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-B11-6-6.5					
Laboratory ID:	07-061-09					
Diesel Range Organics	ND	28	NWTPH-Dx	7-13-17	7-14-17	
Lube Oil Range Organics	ND	56	NWTPH-Dx	7-13-17	7-14-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	91	50-150				



Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

VOLATILES EPA 8260C

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B11-3-4				
Laboratory ID:		07-061-08				
Dichlorodifluoromethane	ND	0.098	EPA 8260C	7-13-17	7-13-17	
Chloromethane	ND	0.38	EPA 8260C	7-13-17	7-13-17	
Vinyl Chloride	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Bromomethane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Chloroethane	ND	0.38	EPA 8260C	7-13-17	7-13-17	
Trichlorofluoromethane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
1,1-Dichloroethene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Acetone	ND	0.75	EPA 8260C	7-13-17	7-13-17	
Iodomethane	ND	0.38	EPA 8260C	7-13-17	7-13-17	
Carbon Disulfide	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Methylene Chloride	ND	0.75	EPA 8260C	7-13-17	7-13-17	
(trans) 1,2-Dichloroethene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Methyl t-Butyl Ether	ND	0.075	EPA 8260C	7-13-17	7-13-17	
1,1-Dichloroethane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Vinyl Acetate	ND	0.38	EPA 8260C	7-13-17	7-13-17	
2,2-Dichloropropane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
(cis) 1,2-Dichloroethene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
2-Butanone	ND	0.38	EPA 8260C	7-13-17	7-13-17	
Bromochloromethane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Chloroform	ND	0.075	EPA 8260C	7-13-17	7-13-17	
1,1,1-Trichloroethane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Carbon Tetrachloride	ND	0.075	EPA 8260C	7-13-17	7-13-17	
1,1-Dichloropropene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Benzene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
1,2-Dichloroethane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Trichloroethene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
1,2-Dichloropropane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Dibromomethane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Bromodichloromethane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
2-Chloroethyl Vinyl Ether	ND	0.38	EPA 8260C	7-13-17	7-13-17	
(cis) 1,3-Dichloropropene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Methyl Isobutyl Ketone	ND	0.38	EPA 8260C	7-13-17	7-13-17	
Toluene	ND	0.38	EPA 8260C	7-13-17	7-13-17	
(trans) 1,3-Dichloropropene	ND	0.075	EPA 8260C	7-13-17	7-13-17	



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

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

Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-B11-3-4					
Laboratory ID:	07-061-08					
1,1,2-Trichloroethane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Tetrachloroethene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
1,3-Dichloropropane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
2-Hexanone	ND	0.38	EPA 8260C	7-13-17	7-13-17	
Dibromochloromethane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
1,2-Dibromoethane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Chlorobenzene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
1,1,1,2-Tetrachloroethane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Ethylbenzene	0.11	0.075	EPA 8260C	7-13-17	7-13-17	
m,p-Xylene	0.20	0.15	EPA 8260C	7-13-17	7-13-17	
o-Xylene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Styrene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Bromoform	ND	0.38	EPA 8260C	7-13-17	7-13-17	
Isopropylbenzene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Bromobenzene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
1,1,2,2-Tetrachloroethane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
1,2,3-Trichloropropane	ND	0.075	EPA 8260C	7-13-17	7-13-17	
n-Propylbenzene	0.29	0.075	EPA 8260C	7-13-17	7-13-17	
2-Chlorotoluene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
4-Chlorotoluene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
1,3,5-Trimethylbenzene	0.79	0.075	EPA 8260C	7-13-17	7-13-17	
tert-Butylbenzene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
1,2,4-Trimethylbenzene	3.8	0.075	EPA 8260C	7-13-17	7-13-17	
sec-Butylbenzene	0.11	0.075	EPA 8260C	7-13-17	7-13-17	
1,3-Dichlorobenzene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
p-Isopropyltoluene	0.16	0.075	EPA 8260C	7-13-17	7-13-17	
1,4-Dichlorobenzene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
1,2-Dichlorobenzene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
n-Butylbenzene	0.39	0.075	EPA 8260C	7-13-17	7-13-17	
1,2-Dibromo-3-chloropropane	ND	0.38	EPA 8260C	7-13-17	7-13-17	
1,2,4-Trichlorobenzene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
Hexachlorobutadiene	ND	0.38	EPA 8260C	7-13-17	7-13-17	
Naphthalene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
1,2,3-Trichlorobenzene	ND	0.075	EPA 8260C	7-13-17	7-13-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	99	73-134				
<i>Toluene-d8</i>	98	81-124				
<i>4-Bromofluorobenzene</i>	97	80-131				



Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

VOLATILES EPA 8260C

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B8-27.5-28				
Laboratory ID:		07-061-01				
Dichlorodifluoromethane	ND	0.0020	EPA 8260C	7-20-17	7-20-17	
Chloromethane	ND	0.0062	EPA 8260C	7-20-17	7-20-17	
Vinyl Chloride	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Bromomethane	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Chloroethane	ND	0.0049	EPA 8260C	7-20-17	7-20-17	
Trichlorofluoromethane	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
1,1-Dichloroethene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Acetone	0.012	0.0098	EPA 8260C	7-20-17	7-20-17	
Iodomethane	ND	0.0049	EPA 8260C	7-20-17	7-20-17	
Carbon Disulfide	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Methylene Chloride	ND	0.016	EPA 8260C	7-20-17	7-20-17	
(trans) 1,2-Dichloroethene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Methyl t-Butyl Ether	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
1,1-Dichloroethane	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Vinyl Acetate	ND	0.0049	EPA 8260C	7-20-17	7-20-17	
2,2-Dichloropropane	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
(cis) 1,2-Dichloroethene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
2-Butanone	ND	0.0049	EPA 8260C	7-20-17	7-20-17	
Bromochloromethane	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Chloroform	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
1,1,1-Trichloroethane	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Carbon Tetrachloride	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
1,1-Dichloropropene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Benzene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
1,2-Dichloroethane	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Trichloroethene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
1,2-Dichloropropane	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Dibromomethane	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Bromodichloromethane	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
2-Chloroethyl Vinyl Ether	ND	0.0064	EPA 8260C	7-20-17	7-20-17	
(cis) 1,3-Dichloropropene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Methyl Isobutyl Ketone	ND	0.0049	EPA 8260C	7-20-17	7-20-17	
Toluene	ND	0.0049	EPA 8260C	7-20-17	7-20-17	
(trans) 1,3-Dichloropropene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	



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

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Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

VOLATILES EPA 8260C

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B8-27.5-28						
Laboratory ID: 07-061-01						
1,1,2-Trichloroethane	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Tetrachloroethene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
1,3-Dichloropropane	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
2-Hexanone	ND	0.0049	EPA 8260C	7-20-17	7-20-17	
Dibromochloromethane	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
1,2-Dibromoethane	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Chlorobenzene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
1,1,1,2-Tetrachloroethane	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Ethylbenzene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
m,p-Xylene	ND	0.0020	EPA 8260C	7-20-17	7-20-17	
o-Xylene	0.0016	0.00098	EPA 8260C	7-20-17	7-20-17	
Styrene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Bromoform	ND	0.0049	EPA 8260C	7-20-17	7-20-17	
Isopropylbenzene	0.0012	0.00098	EPA 8260C	7-20-17	7-20-17	
Bromobenzene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	7-20-17	7-20-17	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	7-20-17	7-20-17	
n-Propylbenzene	0.0016	0.00098	EPA 8260C	7-20-17	7-20-17	
2-Chlorotoluene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
4-Chlorotoluene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
1,3,5-Trimethylbenzene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
tert-Butylbenzene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
1,2,4-Trimethylbenzene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
sec-Butylbenzene	0.0042	0.00098	EPA 8260C	7-20-17	7-20-17	
1,3-Dichlorobenzene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
p-Isopropyltoluene	0.0017	0.00098	EPA 8260C	7-20-17	7-20-17	
1,4-Dichlorobenzene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
1,2-Dichlorobenzene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
n-Butylbenzene	0.0054	0.00098	EPA 8260C	7-20-17	7-20-17	
1,2-Dibromo-3-chloropropane	ND	0.0049	EPA 8260C	7-20-17	7-20-17	
1,2,4-Trichlorobenzene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
Hexachlorobutadiene	ND	0.0049	EPA 8260C	7-20-17	7-20-17	
Naphthalene	0.0053	0.00098	EPA 8260C	7-20-17	7-20-17	
1,2,3-Trichlorobenzene	ND	0.00098	EPA 8260C	7-20-17	7-20-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	120	73-134				
Toluene-d8	114	81-124				
4-Bromofluorobenzene	112	80-131				



Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

VOLATILES EPA 8260C

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B9-1-2				
Laboratory ID:		07-061-03				
Dichlorodifluoromethane	ND	0.0021	EPA 8260C	7-20-17	7-20-17	
Chloromethane	ND	0.0067	EPA 8260C	7-20-17	7-20-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Bromomethane	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Chloroethane	ND	0.0053	EPA 8260C	7-20-17	7-20-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Acetone	ND	0.011	EPA 8260C	7-20-17	7-20-17	
Iodomethane	ND	0.0053	EPA 8260C	7-20-17	7-20-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Methylene Chloride	ND	0.017	EPA 8260C	7-20-17	7-20-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Vinyl Acetate	ND	0.0053	EPA 8260C	7-20-17	7-20-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
2-Butanone	ND	0.0053	EPA 8260C	7-20-17	7-20-17	
Bromochloromethane	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Chloroform	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Benzene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Trichloroethene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Dibromomethane	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
2-Chloroethyl Vinyl Ether	ND	0.0069	EPA 8260C	7-20-17	7-20-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260C	7-20-17	7-20-17	
Toluene	ND	0.0053	EPA 8260C	7-20-17	7-20-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	



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Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-B9-1-2					
Laboratory ID:	07-061-03					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
2-Hexanone	ND	0.0053	EPA 8260C	7-20-17	7-20-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Chlorobenzene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Ethylbenzene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
m,p-Xylene	ND	0.0021	EPA 8260C	7-20-17	7-20-17	
o-Xylene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Styrene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Bromoform	ND	0.0053	EPA 8260C	7-20-17	7-20-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Bromobenzene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,1,2,2-Tetrachloroethane	ND	0.0014	EPA 8260C	7-20-17	7-20-17	
1,2,3-Trichloropropane	ND	0.0014	EPA 8260C	7-20-17	7-20-17	
n-Propylbenzene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260C	7-20-17	7-20-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Hexachlorobutadiene	ND	0.0053	EPA 8260C	7-20-17	7-20-17	
Naphthalene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	7-20-17	7-20-17	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	110	73-134				
Toluene-d8	105	81-124				
4-Bromofluorobenzene	101	80-131				



Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

VOLATILES EPA 8260C

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B11-1-2				
Laboratory ID:		07-061-07				
Dichlorodifluoromethane	ND	0.0018	EPA 8260C	7-20-17	7-20-17	
Chloromethane	ND	0.0057	EPA 8260C	7-20-17	7-20-17	
Vinyl Chloride	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Bromomethane	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Chloroethane	ND	0.0045	EPA 8260C	7-20-17	7-20-17	
Trichlorofluoromethane	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
1,1-Dichloroethene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Acetone	0.050	0.0091	EPA 8260C	7-20-17	7-20-17	
Iodomethane	ND	0.0045	EPA 8260C	7-20-17	7-20-17	
Carbon Disulfide	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Methylene Chloride	ND	0.015	EPA 8260C	7-20-17	7-20-17	
(trans) 1,2-Dichloroethene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Methyl t-Butyl Ether	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
1,1-Dichloroethane	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Vinyl Acetate	ND	0.0045	EPA 8260C	7-20-17	7-20-17	
2,2-Dichloropropane	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
(cis) 1,2-Dichloroethene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
2-Butanone	0.0063	0.0045	EPA 8260C	7-20-17	7-20-17	
Bromochloromethane	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Chloroform	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
1,1,1-Trichloroethane	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Carbon Tetrachloride	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
1,1-Dichloropropene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Benzene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
1,2-Dichloroethane	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Trichloroethene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
1,2-Dichloropropane	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Dibromomethane	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Bromodichloromethane	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
2-Chloroethyl Vinyl Ether	ND	0.0059	EPA 8260C	7-20-17	7-20-17	
(cis) 1,3-Dichloropropene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Methyl Isobutyl Ketone	ND	0.0045	EPA 8260C	7-20-17	7-20-17	
Toluene	ND	0.0045	EPA 8260C	7-20-17	7-20-17	
(trans) 1,3-Dichloropropene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	



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Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

VOLATILES EPA 8260C

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B11-1-2				
Laboratory ID:		07-061-07				
1,1,2-Trichloroethane	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Tetrachloroethene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
1,3-Dichloropropane	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
2-Hexanone	ND	0.0045	EPA 8260C	7-20-17	7-20-17	
Dibromochloromethane	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
1,2-Dibromoethane	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Chlorobenzene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
1,1,1,2-Tetrachloroethane	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Ethylbenzene	0.0011	0.00091	EPA 8260C	7-20-17	7-20-17	
m,p-Xylene	0.0022	0.0018	EPA 8260C	7-20-17	7-20-17	
o-Xylene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Styrene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Bromoform	ND	0.0045	EPA 8260C	7-20-17	7-20-17	
Isopropylbenzene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Bromobenzene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	7-20-17	7-20-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	7-20-17	7-20-17	
n-Propylbenzene	0.0022	0.00091	EPA 8260C	7-20-17	7-20-17	
2-Chlorotoluene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
4-Chlorotoluene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
1,3,5-Trimethylbenzene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
tert-Butylbenzene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
1,2,4-Trimethylbenzene	0.023	0.00091	EPA 8260C	7-20-17	7-20-17	
sec-Butylbenzene	0.0012	0.00091	EPA 8260C	7-20-17	7-20-17	
1,3-Dichlorobenzene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
p-Isopropyltoluene	0.0019	0.00091	EPA 8260C	7-20-17	7-20-17	
1,4-Dichlorobenzene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
1,2-Dichlorobenzene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
n-Butylbenzene	0.0039	0.00091	EPA 8260C	7-20-17	7-20-17	
1,2-Dibromo-3-chloropropane	ND	0.0045	EPA 8260C	7-20-17	7-20-17	
1,2,4-Trichlorobenzene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
Hexachlorobutadiene	ND	0.0045	EPA 8260C	7-20-17	7-20-17	
Naphthalene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
1,2,3-Trichlorobenzene	ND	0.00091	EPA 8260C	7-20-17	7-20-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	120	73-134				
Toluene-d8	110	81-124				
4-Bromofluorobenzene	104	80-131				



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Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

VOLATILES EPA 8260C

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B11-6-6.5				
Laboratory ID:		07-061-09				
Dichlorodifluoromethane	ND	0.0016	EPA 8260C	7-20-17	7-20-17	
Chloromethane	ND	0.0049	EPA 8260C	7-20-17	7-20-17	
Vinyl Chloride	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Bromomethane	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Chloroethane	ND	0.0039	EPA 8260C	7-20-17	7-20-17	
Trichlorofluoromethane	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,1-Dichloroethene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Acetone	0.010	0.0078	EPA 8260C	7-20-17	7-20-17	
Iodomethane	ND	0.0039	EPA 8260C	7-20-17	7-20-17	
Carbon Disulfide	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Methylene Chloride	ND	0.012	EPA 8260C	7-20-17	7-20-17	
(trans) 1,2-Dichloroethene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Methyl t-Butyl Ether	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,1-Dichloroethane	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Vinyl Acetate	ND	0.0039	EPA 8260C	7-20-17	7-20-17	
2,2-Dichloropropane	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
(cis) 1,2-Dichloroethene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
2-Butanone	ND	0.0039	EPA 8260C	7-20-17	7-20-17	
Bromochloromethane	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Chloroform	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,1,1-Trichloroethane	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Carbon Tetrachloride	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,1-Dichloropropene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Benzene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,2-Dichloroethane	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Trichloroethene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,2-Dichloropropane	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Dibromomethane	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Bromodichloromethane	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
2-Chloroethyl Vinyl Ether	ND	0.0051	EPA 8260C	7-20-17	7-20-17	
(cis) 1,3-Dichloropropene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Methyl Isobutyl Ketone	ND	0.0039	EPA 8260C	7-20-17	7-20-17	
Toluene	ND	0.0039	EPA 8260C	7-20-17	7-20-17	
(trans) 1,3-Dichloropropene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	



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

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

Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

VOLATILES EPA 8260C

Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B11-6-6.5						
Laboratory ID: 07-061-09						
1,1,2-Trichloroethane	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Tetrachloroethene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,3-Dichloropropane	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
2-Hexanone	ND	0.0039	EPA 8260C	7-20-17	7-20-17	
Dibromochloromethane	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,2-Dibromoethane	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Chlorobenzene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,1,1,2-Tetrachloroethane	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Ethylbenzene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
m,p-Xylene	ND	0.0016	EPA 8260C	7-20-17	7-20-17	
o-Xylene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Styrene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Bromoform	ND	0.0039	EPA 8260C	7-20-17	7-20-17	
Isopropylbenzene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Bromobenzene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
n-Propylbenzene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
2-Chlorotoluene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
4-Chlorotoluene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,3,5-Trimethylbenzene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
tert-Butylbenzene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,2,4-Trimethylbenzene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
sec-Butylbenzene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,3-Dichlorobenzene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
p-Isopropyltoluene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,4-Dichlorobenzene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,2-Dichlorobenzene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
n-Butylbenzene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,2-Dibromo-3-chloropropane	ND	0.0039	EPA 8260C	7-20-17	7-20-17	
1,2,4-Trichlorobenzene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Hexachlorobutadiene	ND	0.0039	EPA 8260C	7-20-17	7-20-17	
Naphthalene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
1,2,3-Trichlorobenzene	ND	0.00078	EPA 8260C	7-20-17	7-20-17	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	113	73-134				
Toluene-d8	105	81-124				
4-Bromofluorobenzene	105	80-131				



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Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B8-27.5-28						
Laboratory ID: 07-061-01						
Naphthalene	0.017	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
2-Methylnaphthalene	0.10	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
1-Methylnaphthalene	0.031	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
Acenaphthylene	ND	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
Acenaphthene	0.021	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
Fluorene	0.057	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
Phenanthrene	0.060	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
Anthracene	ND	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
Fluoranthene	ND	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
Pyrene	ND	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[a]anthracene	ND	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
Chrysene	ND	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[b]fluoranthene	ND	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[j,k]fluoranthene	ND	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[a]pyrene	ND	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
Dibenz[a,h]anthracene	ND	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[g,h,i]perylene	ND	0.0071	EPA 8270D/SIM	7-21-17	7-21-17	
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	81	32 - 122				
Pyrene-d10	75	33 - 125				
Terphenyl-d14	97	36 - 118				



Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B8-30-30.5						
Laboratory ID: 07-061-02						
Naphthalene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
2-Methylnaphthalene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
1-Methylnaphthalene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
Acenaphthylene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
Acenaphthene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
Fluorene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
Phenanthrene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
Anthracene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
Fluoranthene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
Pyrene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[a]anthracene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
Chrysene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[b]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo(j,k)fluoranthene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[a]pyrene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
Dibenz[a,h]anthracene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[g,h,i]perylene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-21-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	96	32 - 122				
Pyrene-d10	88	33 - 125				
Terphenyl-d14	94	36 - 118				



Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B9-1-2				
Laboratory ID:		07-061-03				
Naphthalene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
2-Methylnaphthalene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
1-Methylnaphthalene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Acenaphthylene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Acenaphthene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Fluorene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Phenanthrene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Anthracene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Fluoranthene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Pyrene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Benzo[a]anthracene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Chrysene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Benzo[b]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Benzo(j,k)fluoranthene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Benzo[a]pyrene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Dibenz[a,h]anthracene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Benzo[g,h,i]perylene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>80</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>85</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>93</i>	<i>36 - 118</i>				



Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B9-5.5-6.5						
Laboratory ID: 07-061-04						
Naphthalene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
2-Methylnaphthalene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
1-Methylnaphthalene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Acenaphthylene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Acenaphthene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Fluorene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Phenanthrene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Anthracene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Fluoranthene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Pyrene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[a]anthracene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Chrysene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[b]fluoranthene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo(j,k)fluoranthene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[a]pyrene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Dibenz[a,h]anthracene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[g,h,i]perylene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	83	32 - 122				
Pyrene-d10	80	33 - 125				
Terphenyl-d14	88	36 - 118				



Date of Report: July 24, 2017
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 Laboratory Reference: 1707-061
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B11-1-2						
Laboratory ID: 07-061-07						
Naphthalene	0.0082	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
2-Methylnaphthalene	0.022	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
1-Methylnaphthalene	0.018	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Acenaphthylene	0.0086	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Acenaphthene	0.019	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Fluorene	0.047	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Phenanthrene	0.10	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Anthracene	0.018	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Fluoranthene	0.024	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Pyrene	0.045	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Benzo[a]anthracene	0.0088	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Chrysene	0.018	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Benzo[b]fluoranthene	0.016	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Benzo[j,k]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Benzo[a]pyrene	0.0094	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Indeno(1,2,3-c,d)pyrene	0.0086	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Dibenz[a,h]anthracene	ND	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
Benzo[g,h,i]perylene	0.010	0.0072	EPA 8270D/SIM	7-21-17	7-22-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>77</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>75</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>95</i>	<i>36 - 118</i>				



Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B11-3-4						
Laboratory ID: 07-061-08						
Naphthalene	0.39	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
2-Methylnaphthalene	19	0.17	EPA 8270D/SIM	7-21-17	7-24-17	
1-Methylnaphthalene	13	0.17	EPA 8270D/SIM	7-21-17	7-24-17	
Acenaphthylene	0.29	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Acenaphthene	1.4	0.17	EPA 8270D/SIM	7-21-17	7-24-17	
Fluorene	2.6	0.17	EPA 8270D/SIM	7-21-17	7-24-17	
Phenanthrene	5.9	0.17	EPA 8270D/SIM	7-21-17	7-24-17	
Anthracene	0.22	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Fluoranthene	0.0095	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Pyrene	0.19	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[a]anthracene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Chrysene	0.019	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[b]fluoranthene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[j,k]fluoranthene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[a]pyrene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Dibenz[a,h]anthracene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[g,h,i]perylene	ND	0.0084	EPA 8270D/SIM	7-21-17	7-21-17	
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	49	32 - 122				
Pyrene-d10	54	33 - 125				
Terphenyl-d14	67	36 - 118				



Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B11-6-6.5						
Laboratory ID: 07-061-09						
Naphthalene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
2-Methylnaphthalene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
1-Methylnaphthalene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
Acenaphthylene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
Acenaphthene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
Fluorene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
Phenanthrene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
Anthracene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
Fluoranthene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
Pyrene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[a]anthracene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
Chrysene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[b]fluoranthene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo(j,k)fluoranthene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[a]pyrene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
Dibenz[a,h]anthracene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[g,h,i]perylene	ND	0.0075	EPA 8270D/SIM	7-21-17	7-21-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>2-Fluorobiphenyl</i>	<i>83</i>	<i>32 - 122</i>				
<i>Pyrene-d10</i>	<i>73</i>	<i>33 - 125</i>				
<i>Terphenyl-d14</i>	<i>81</i>	<i>36 - 118</i>				



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 Project: 4082-039-01

**TOTAL METALS
 EPA 6010C/7471B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	07-061-03					
Client ID:	FL209-B9-1-2					
Arsenic	ND	11	6010C	7-12-17	7-12-17	
Lead	ND	5.4	6010C	7-13-17	7-13-17	

Lab ID:	07-061-08					
Client ID:	FL209-B11-3-4					
Arsenic	ND	13	6010C	7-12-17	7-12-17	
Barium	100	3.1	6010C	7-12-17	7-12-17	
Cadmium	ND	0.63	6010C	7-12-17	7-12-17	
Chromium	53	0.63	6010C	7-12-17	7-12-17	
Lead	ND	6.3	6010C	7-13-17	7-13-17	
Mercury	ND	0.31	7471B	7-12-17	7-12-17	
Selenium	ND	13	6010C	7-12-17	7-12-17	
Silver	ND	1.3	6010C	7-12-17	7-12-17	



Date of Report: July 24, 2017
Samples Submitted: July 8, 2017
Laboratory Reference: 1707-061
Project: 4082-039-01

**TOTAL METALS
EPA 6010C**

Matrix: Soil
Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	07-061-07					
Client ID:	FL209-B11-1-2					
Arsenic	ND	5.4	6010C	7-21-17	7-21-17	
Lead	5.8	5.4	6010C	7-21-17	7-21-17	



Date of Report: July 24, 2017
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**SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A**

Matrix: Soil
Units: mg/kg (ppm)

				Date	Date	
Analyte	Result	PQL	EPA Method	Prepared	Analyzed	Flags
Lab ID:	07-061-08					
Client ID:	FL209-B11-3-4					
Hexavalent Chromium	ND	1.3	7196A mod	7-24-17	7-24-17	



Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
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 Project: 4082-039-01

NWTPH-Gx/BTEX QUALITY CONTROL

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0714S2					
Benzene	ND	0.020	EPA 8021B	7-14-17	7-14-17	
Toluene	ND	0.050	EPA 8021B	7-14-17	7-14-17	
Ethyl Benzene	ND	0.050	EPA 8021B	7-14-17	7-14-17	
m,p-Xylene	ND	0.050	EPA 8021B	7-14-17	7-14-17	
o-Xylene	ND	0.050	EPA 8021B	7-14-17	7-14-17	
Gasoline	ND	5.0	NWTPH-Gx	7-14-17	7-14-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	95	63-124				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	07-062-03							
	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				103	97	63-124		

SPIKE BLANKS

Laboratory ID:	SB0714S1									
	SB	SBD	SB	SBD	SB	SBD				
Benzene	0.846	0.807	1.00	1.00	85	81	70-124	5	12	
Toluene	0.869	0.831	1.00	1.00	87	83	73-119	4	12	
Ethyl Benzene	0.874	0.823	1.00	1.00	87	82	74-117	6	12	
m,p-Xylene	0.895	0.846	1.00	1.00	90	85	75-117	6	13	
o-Xylene	0.882	0.843	1.00	1.00	88	84	75-116	5	12	
Surrogate:										
Fluorobenzene					86	81	63-124			



Date of Report: July 24, 2017
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 Project: 4082-039-01

**NWTPH-Dx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0713S2					
Diesel Range Organics	ND	25	NWTPH-Dx	7-13-17	7-14-17	
Lube Oil Range Organics	ND	50	NWTPH-Dx	7-13-17	7-14-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	81	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	07-076-01									
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	NA	
Lube Oil	94.1	64.8	NA	NA		NA	NA	37	NA	
Surrogate:										
o-Terphenyl						82	90	50-150		



Date of Report: July 24, 2017
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 Project: 4082-039-01

**VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0713S1					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	7-13-17	7-13-17	
Chloromethane	ND	0.0050	EPA 8260C	7-13-17	7-13-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Bromomethane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Chloroethane	ND	0.0050	EPA 8260C	7-13-17	7-13-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Acetone	ND	0.010	EPA 8260C	7-13-17	7-13-17	
Iodomethane	ND	0.0050	EPA 8260C	7-13-17	7-13-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Methylene Chloride	ND	0.010	EPA 8260C	7-13-17	7-13-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	7-13-17	7-13-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
2-Butanone	ND	0.0050	EPA 8260C	7-13-17	7-13-17	
Bromochloromethane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Chloroform	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Benzene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Trichloroethene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Dibromomethane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	7-13-17	7-13-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	7-13-17	7-13-17	
Toluene	ND	0.0050	EPA 8260C	7-13-17	7-13-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	



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

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

Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

**VOLATILES EPA 8260C
 METHOD BLANK QUALITY CONTROL**

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0713S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
2-Hexanone	ND	0.0050	EPA 8260C	7-13-17	7-13-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Chlorobenzene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Ethylbenzene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
m,p-Xylene	ND	0.0020	EPA 8260C	7-13-17	7-13-17	
o-Xylene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Styrene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Bromoform	ND	0.0050	EPA 8260C	7-13-17	7-13-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Bromobenzene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	7-13-17	7-13-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	7-13-17	7-13-17	
Naphthalene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-13-17	7-13-17	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	117	73-134				
Toluene-d8	115	81-124				
4-Bromofluorobenzene	112	80-131				



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Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

**VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits		RPD	RPD Limit	Flags
					Recovery				RPD		
SPIKE BLANKS											
Laboratory ID:	SB0713S1										
	SB	SBD	SB	SBD	SB	SBD					
1,1-Dichloroethene	0.0571	0.0579	0.0500	0.0500	114	116	66-127	1	15		
Benzene	0.0510	0.0503	0.0500	0.0500	102	101	76-122	1	15		
Trichloroethene	0.0519	0.0528	0.0500	0.0500	104	106	78-120	2	15		
Toluene	0.0533	0.0537	0.0500	0.0500	107	107	83-120	1	15		
Chlorobenzene	0.0477	0.0478	0.0500	0.0500	95	96	81-120	0	15		
Surrogate:											
Dibromofluoromethane					108	99	73-134				
Toluene-d8					107	100	81-124				
4-Bromofluorobenzene					102	96	80-131				



Date of Report: July 24, 2017
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 Laboratory Reference: 1707-061
 Project: 4082-039-01

VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0720S1					
Dichlorodifluoromethane	ND	0.0020	EPA 8260C	7-20-17	7-20-17	
Chloromethane	ND	0.0063	EPA 8260C	7-20-17	7-20-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Bromomethane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Chloroethane	ND	0.0050	EPA 8260C	7-20-17	7-20-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Acetone	ND	0.010	EPA 8260C	7-20-17	7-20-17	
Iodomethane	ND	0.0050	EPA 8260C	7-20-17	7-20-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Methylene Chloride	ND	0.016	EPA 8260C	7-20-17	7-20-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	7-20-17	7-20-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
2-Butanone	ND	0.0050	EPA 8260C	7-20-17	7-20-17	
Bromochloromethane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Chloroform	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Benzene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Trichloroethene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Dibromomethane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
2-Chloroethyl Vinyl Ether	ND	0.0065	EPA 8260C	7-20-17	7-20-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	7-20-17	7-20-17	
Toluene	ND	0.0050	EPA 8260C	7-20-17	7-20-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	



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VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0720S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
2-Hexanone	ND	0.0050	EPA 8260C	7-20-17	7-20-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Chlorobenzene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Ethylbenzene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
m,p-Xylene	ND	0.0020	EPA 8260C	7-20-17	7-20-17	
o-Xylene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Styrene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Bromoform	ND	0.0050	EPA 8260C	7-20-17	7-20-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Bromobenzene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	7-20-17	7-20-17	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	7-20-17	7-20-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	7-20-17	7-20-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	7-20-17	7-20-17	
Naphthalene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-20-17	7-20-17	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	119	73-134				
Toluene-d8	115	81-124				
4-Bromofluorobenzene	115	80-131				



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 Project: 4082-039-01

**VOLATILES EPA 8260C
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery	RPD	RPD	Flags
					Recovery	Limits	Limits		Limit	
SPIKE BLANKS										
Laboratory ID:	SB0720S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	0.0512	0.0559	0.0500	0.0500	102	112	66-127	9	15	
Benzene	0.0508	0.0531	0.0500	0.0500	102	106	76-122	4	15	
Trichloroethene	0.0524	0.0566	0.0500	0.0500	105	113	78-120	8	15	
Toluene	0.0541	0.0570	0.0500	0.0500	108	114	83-120	5	15	
Chlorobenzene	0.0468	0.0493	0.0500	0.0500	94	99	81-120	5	15	
Surrogate:										
Dibromofluoromethane					105	101	73-134			
Toluene-d8					100	99	81-124			
4-Bromofluorobenzene					99	96	80-131			



Date of Report: July 24, 2017
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 Laboratory Reference: 1707-061
 Project: 4082-039-01

**PAHs EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0721S1						
Naphthalene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
Fluorene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
Anthracene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
Pyrene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
Chrysene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	7-21-17	7-21-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	93	32 - 122				
Pyrene-d10	85	33 - 125				
Terphenyl-d14	92	36 - 118				



Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

**PAHs EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0721S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0689	0.0661	0.0833	0.0833	83	79	58 - 114	4	18	
Acenaphthylene	0.0678	0.0702	0.0833	0.0833	81	84	54 - 127	3	15	
Acenaphthene	0.0679	0.0705	0.0833	0.0833	82	85	58 - 119	4	15	
Fluorene	0.0711	0.0746	0.0833	0.0833	85	90	60 - 123	5	15	
Phenanthrene	0.0653	0.0690	0.0833	0.0833	78	83	54 - 120	6	15	
Anthracene	0.0731	0.0770	0.0833	0.0833	88	92	55 - 152	5	15	
Fluoranthene	0.0670	0.0708	0.0833	0.0833	80	85	56 - 129	6	15	
Pyrene	0.0663	0.0705	0.0833	0.0833	80	85	60 - 126	6	15	
Benzo[a]anthracene	0.0715	0.0754	0.0833	0.0833	86	91	56 - 137	5	15	
Chrysene	0.0687	0.0746	0.0833	0.0833	82	90	59 - 122	8	15	
Benzo[b]fluoranthene	0.0620	0.0673	0.0833	0.0833	74	81	46 - 133	8	21	
Benzo(j,k)fluoranthene	0.0705	0.0753	0.0833	0.0833	85	90	47 - 129	7	21	
Benzo[a]pyrene	0.0644	0.0682	0.0833	0.0833	77	82	54 - 132	6	15	
Indeno(1,2,3-c,d)pyrene	0.0563	0.0603	0.0833	0.0833	68	72	54 - 129	7	15	
Dibenz[a,h]anthracene	0.0644	0.0693	0.0833	0.0833	77	83	59 - 122	7	15	
Benzo[g,h,i]perylene	0.0604	0.0658	0.0833	0.0833	73	79	57 - 125	9	16	
Surrogate:										
2-Fluorobiphenyl					92	95	32 - 122			
Pyrene-d10					84	87	33 - 125			
Terphenyl-d14					89	94	36 - 118			



Date of Report: July 24, 2017
Samples Submitted: July 8, 2017
Laboratory Reference: 1707-061
Project: 4082-039-01

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

Date Extracted: 7-12&13-17

Date Analyzed: 7-12&13-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0712SM1&MB0713S2

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



Date of Report: July 24, 2017
 Samples Submitted: July 8, 2017
 Laboratory Reference: 1707-061
 Project: 4082-039-01

**TOTAL METALS
 EPA 6010C/7471B
 DUPLICATE QUALITY CONTROL**

Date Extracted: 7-12&13-17
 Date Analyzed: 7-12&13-17

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 07-050-18

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	10	
Barium	39.8	42.4	7	2.5	
Cadmium	ND	ND	NA	0.50	
Chromium	11.8	11.4	3	0.50	
Lead	6.45	5.20	21	5.0	C
Mercury	ND	ND	NA	0.25	
Selenium	ND	ND	NA	10	
Silver	ND	ND	NA	1.0	



Date of Report: July 24, 2017
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 Laboratory Reference: 1707-061
 Project: 4082-039-01

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

Date Extracted: 7-12&13-17

Date Analyzed: 7-12&13-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 07-050-18

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	87.4	87	88.1	88	1	
Barium	100	129	90	130	91	1	
Cadmium	50.0	45.8	92	45.2	90	1	
Chromium	100	104	92	104	92	0	
Lead	250	233	91	232	90	1	
Mercury	0.500	0.549	110	0.542	108	1	
Selenium	100	86.7	87	85.4	85	2	
Silver	25.0	20.9	83	21.0	84	0	



Date of Report: July 24, 2017
Samples Submitted: July 8, 2017
Laboratory Reference: 1707-061
Project: 4082-039-01

**TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL**

Date Extracted: 7-21-17

Date Analyzed: 7-21-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0721SM3

Analyte	Method	Result	PQL
Arsenic	6010C	ND	5.0
Lead	6010C	ND	5.0



Date of Report: July 24, 2017
Samples Submitted: July 8, 2017
Laboratory Reference: 1707-061
Project: 4082-039-01

**TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL**

Date Extracted: 7-21-17
Date Analyzed: 7-21-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 07-210-04

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	5.0	
Lead	8.65	9.75	12	5.0	



Date of Report: July 24, 2017
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Laboratory Reference: 1707-061
Project: 4082-039-01

**TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL**

Date Extracted: 7-21-17

Date Analyzed: 7-21-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 07-210-04

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	93.3	93	95.6	96	3	
Lead	250	240	92	237	92	1	



Date of Report: July 24, 2017
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**SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
METHOD BLANK QUALITY CONTROL**

Date Extracted: 7-24-17
Date Analyzed: 7-24-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: MB0724S1

Analyte	Method	Result	PQL
Hexavalent Chromium	7196A mod	ND	1.0



Date of Report: July 24, 2017
Samples Submitted: July 8, 2017
Laboratory Reference: 1707-061
Project: 4082-039-01

**SOLUBLE HEXAVALENT CHROMIUM
WATER EXTRACTION
EPA 7196A
DUPLICATE QUALITY CONTROL**

Date Extracted: 7-24-17
Date Analyzed: 7-24-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 07-045-10

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



Date of Report: July 24, 2017
Samples Submitted: July 8, 2017
Laboratory Reference: 1707-061
Project: 4082-039-01

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

Date Extracted: 7-24-17
Date Analyzed: 7-24-17

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 07-045-10

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Hexavalent Chromium	5.00	4.09	82	4.38	88	7	



Date of Report: July 24, 2017
Samples Submitted: July 8, 2017
Laboratory Reference: 1707-061
Project: 4082-039-01

% MOISTURE

Date Analyzed: 7-12&14-17

Client ID	Lab ID	% Moisture
FL209-B8-27.5-28	07-061-01	6
FL209-B8-30-30.5	07-061-02	7
FL209-B9-1-2	07-061-03	7
FL209-B9-5.5-6.5	07-061-04	21
FL209-B11-1-2	07-061-07	7
FL209-B11-3-4	07-061-08	20
FL209-B11-6-6.5	07-061-09	11





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





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

Chain of Custody

Page 1 of 1

Turnaround Request
(in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☒ 3 Days

☒ Standard (7 Days)
(TPH analysis 5 Days)

☐ (other) _____

Laboratory Number:

07-061

Company: GFI
Project Number: 4082-039-0
Project Name: Sand Transit
Project Manager: Ticia DePauli
Sampled by: Chelsy Gorr/Paul Romette

Lab ID Sample Identification
1 FL209-B8-27.5-28
2 FL209-B8-30-30.5
3 FL209-B9-1-2
4 FL209-B9-5.5-6.5
5 FL209-B9-12.5-13
6 FL209-B9-17.5-18
7 FL209-B11-1-2
8 FL209-B11-3-4
9 FL209-B11-6-6.5
10 FL209-B11-12.5-13.5

Number of Containers

NWTPH-HCID	(X)
NWTPH-Gx/BTEX	(X)
NWTPH-Gx	(X)
NWTPH-Dx (☐ Acid / SG Clean-up)	(X)
Volatiles 8260C	(X)
Halogenated Volatiles 8260C	
EDB EPA 8011 (Waters Only)	
Semivolatiles 8270D/SIM (with low-level PAHs)	(X)
PAHs 8270D/SIM (low-level)	(X)
PCBs 8082A	
Organochlorine Pesticides 8081B	
Organophosphorus Pesticides 8270D/SIM	
Chlorinated Acid Herbicides 8151A	
Total RCRA Metals	
Total MTCA Metals	
TCLP Metals	
HEM (oil and grease) 1664A	
TOTAL AS + Pb	
Hex chromc	
% Moisture	(X)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	TOTAL AS + Pb	Hex chromc	% Moisture
1	FL209-B8-27.5-28	7/7/17	10:15	Soil	5	(X)	(X)	(X)	(X)	(X)			(X)	(X)										(X)	(X)
2	FL209-B8-30-30.5		10:35			(X)	(X)	(X)	(X)				(X)	(X)										(X)	(X)
3	FL209-B9-1-2		12:10			(X)	(X)	(X)	(X)				(X)	(X)										(X)	(X)
4	FL209-B9-5.5-6.5		12:30			(X)	(X)	(X)	(X)				(X)	(X)										(X)	(X)
5	FL209-B9-12.5-13		13:10																						
6	FL209-B9-17.5-18		13:45																						
7	FL209-B11-1-2		15:15			(X)	(X)	(X)	(X)	(X)			(X)	(X)										(X)	(X)
8	FL209-B11-3-4		15:25			(X)	(X)	(X)	(X)	(X)			(X)	(X)										(X)	(X)
9	FL209-B11-6-6.5		15:35			(X)	(X)	(X)	(X)	(X)			(X)	(X)										(X)	(X)
10	FL209-B11-12.5-13.5		16:25			(X)	(X)	(X)	(X)	(X)			(X)	(X)										(X)	(X)

Signature

Company

Date

Time

Comments/Special Instructions

Relinquished

Received

Relinquished

Received

Relinquished

Received

Reviewed/Date

Signature

Company

Date

Time

Comments/Special Instructions

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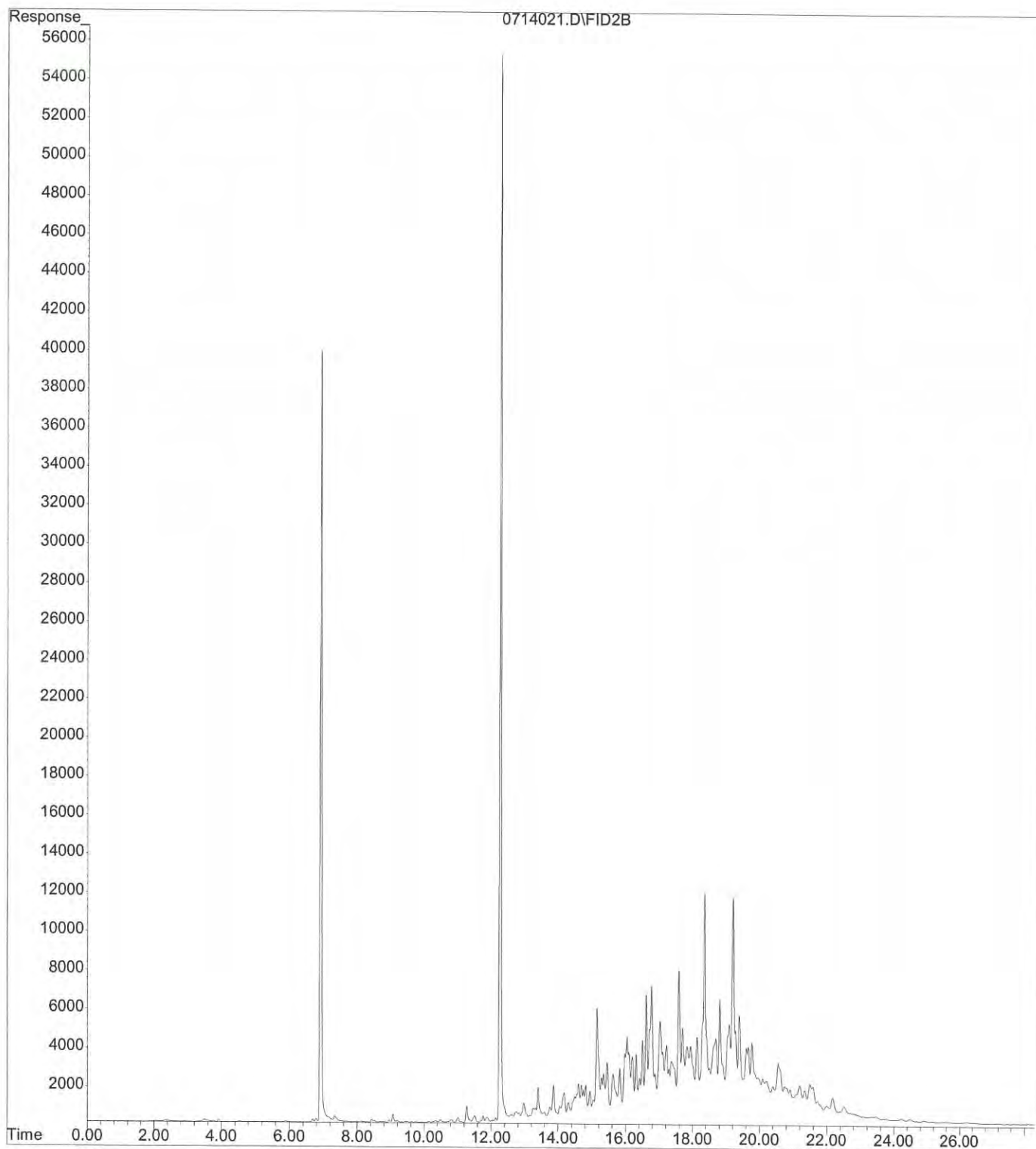
Date

Time

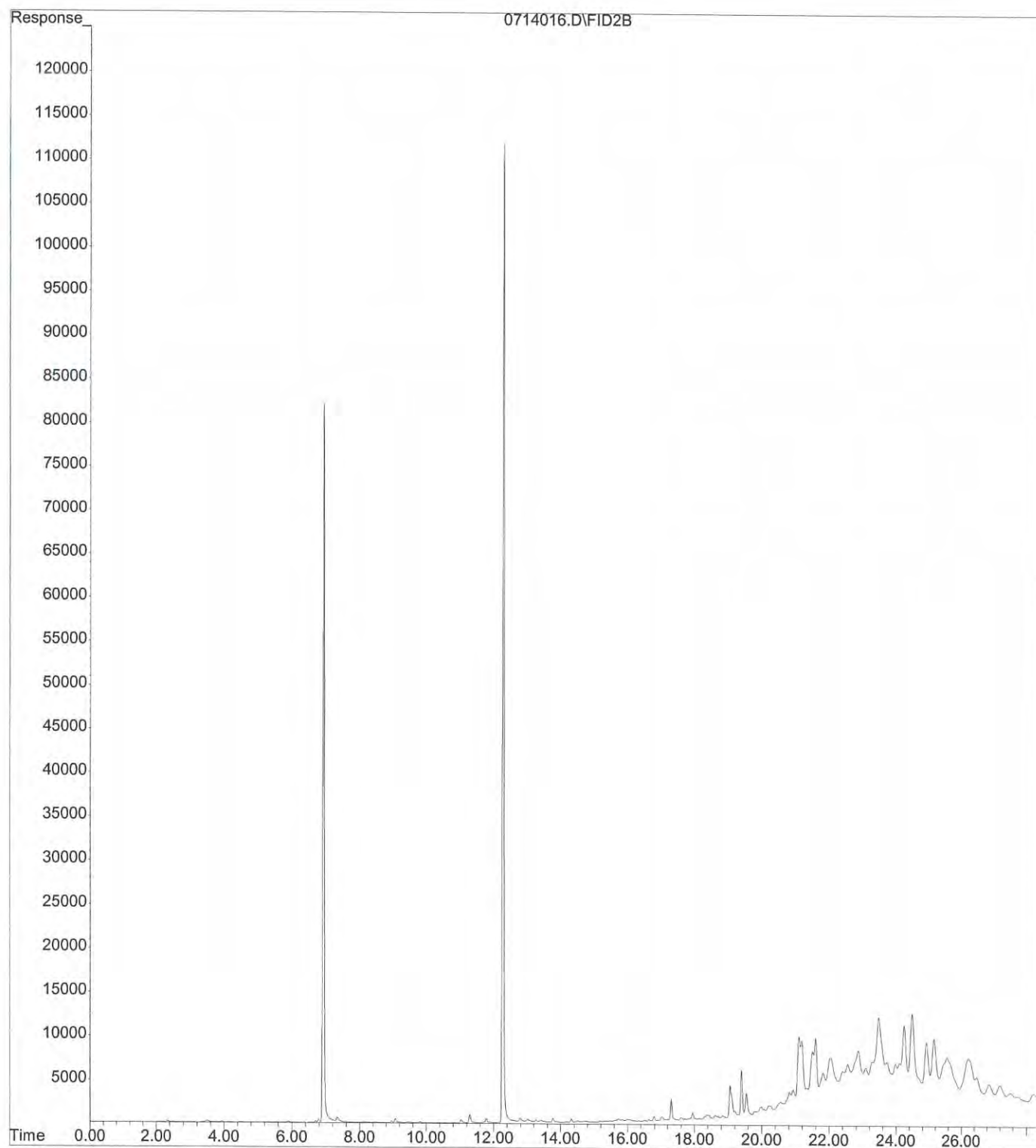
Comments/Special Instructions

Signature

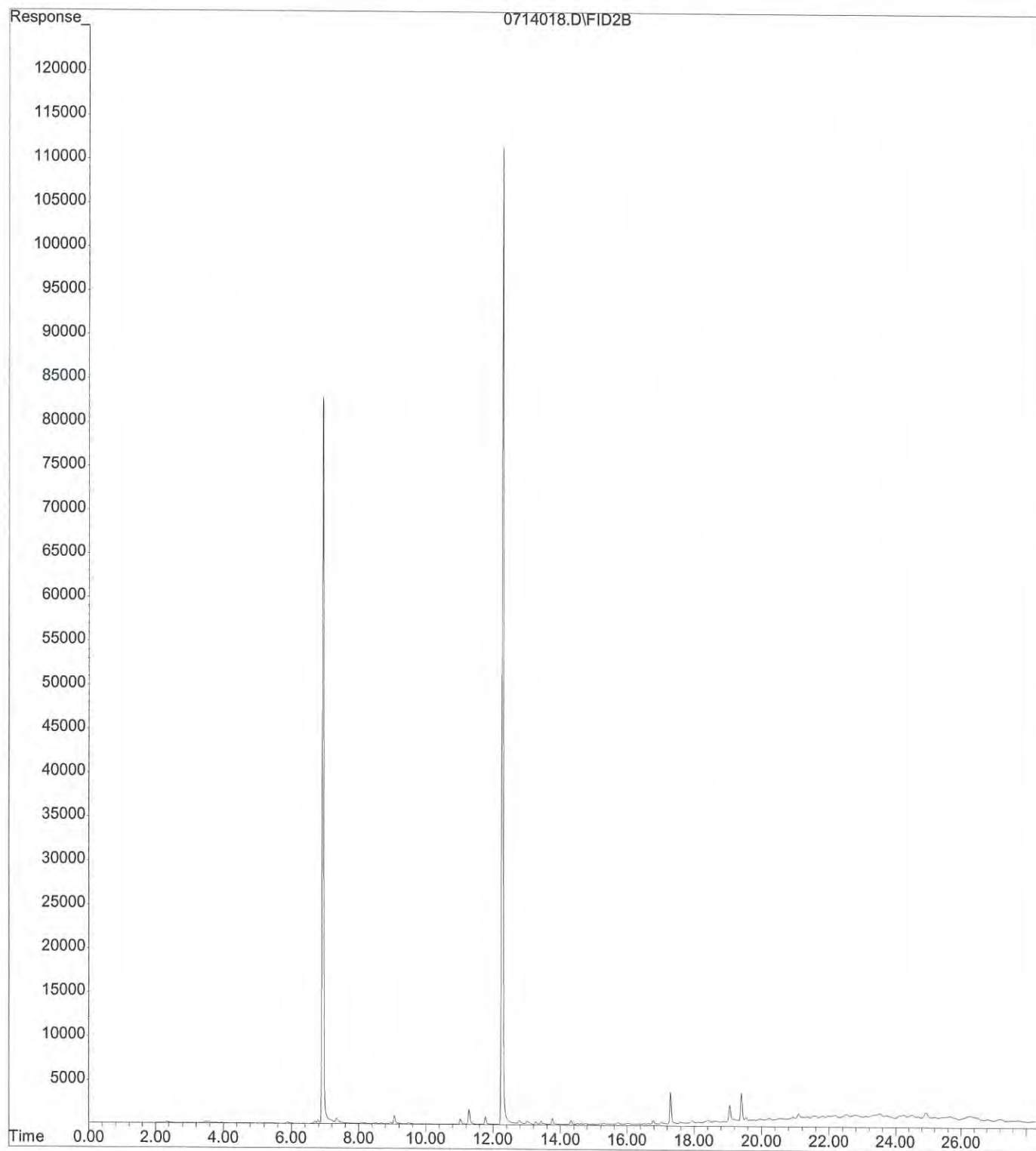
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Acquired : 14 Jul 2017 21:23 using AcqMethod 170710G.M
Instrument : Daryl
Sample Name: 07-061-01s 1:100
Misc Info :
Vial Number: 21



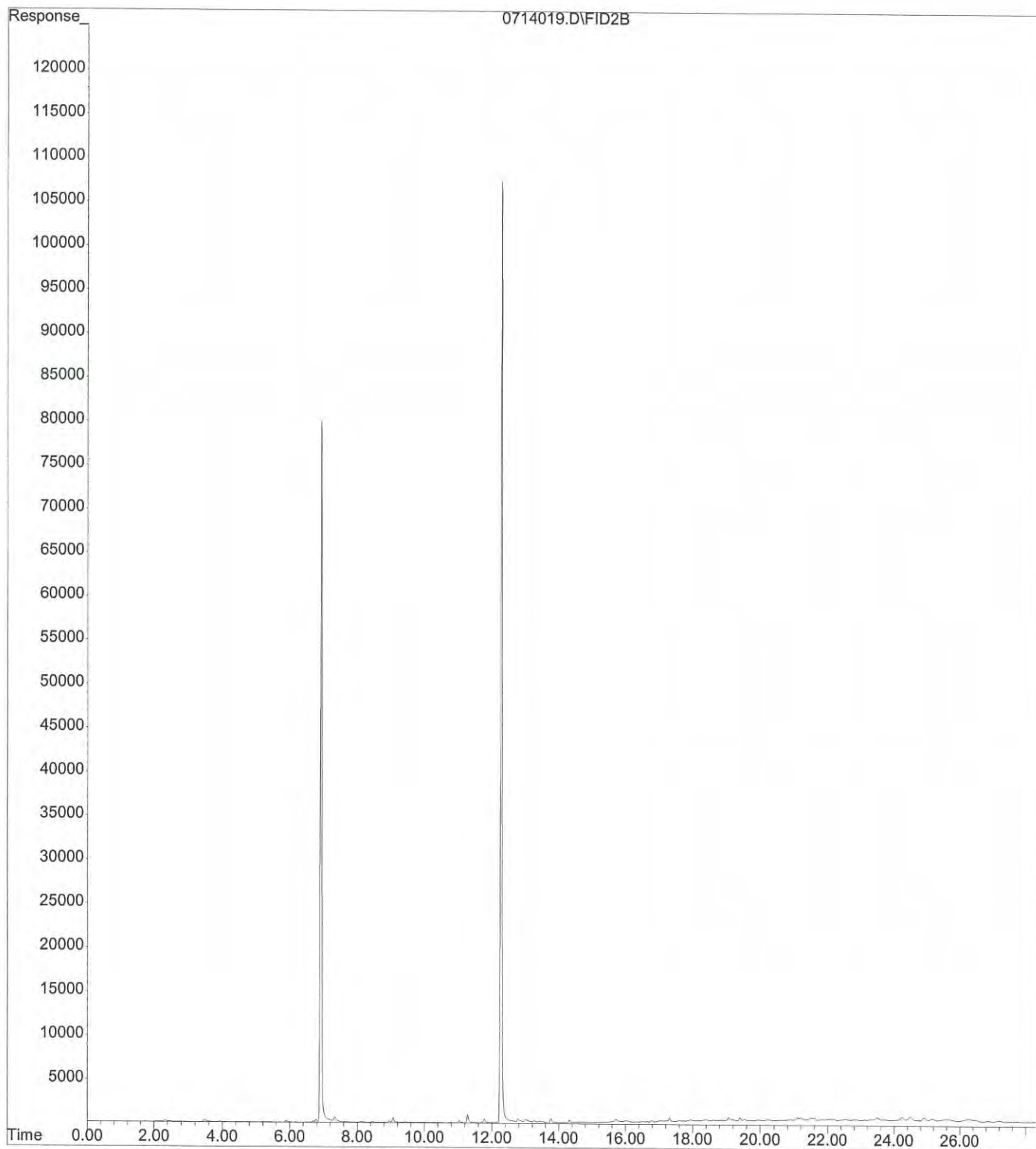
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Operator :
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Instrument : Daryl
Sample Name: 07-061-02s
Misc Info :
Vial Number: 16



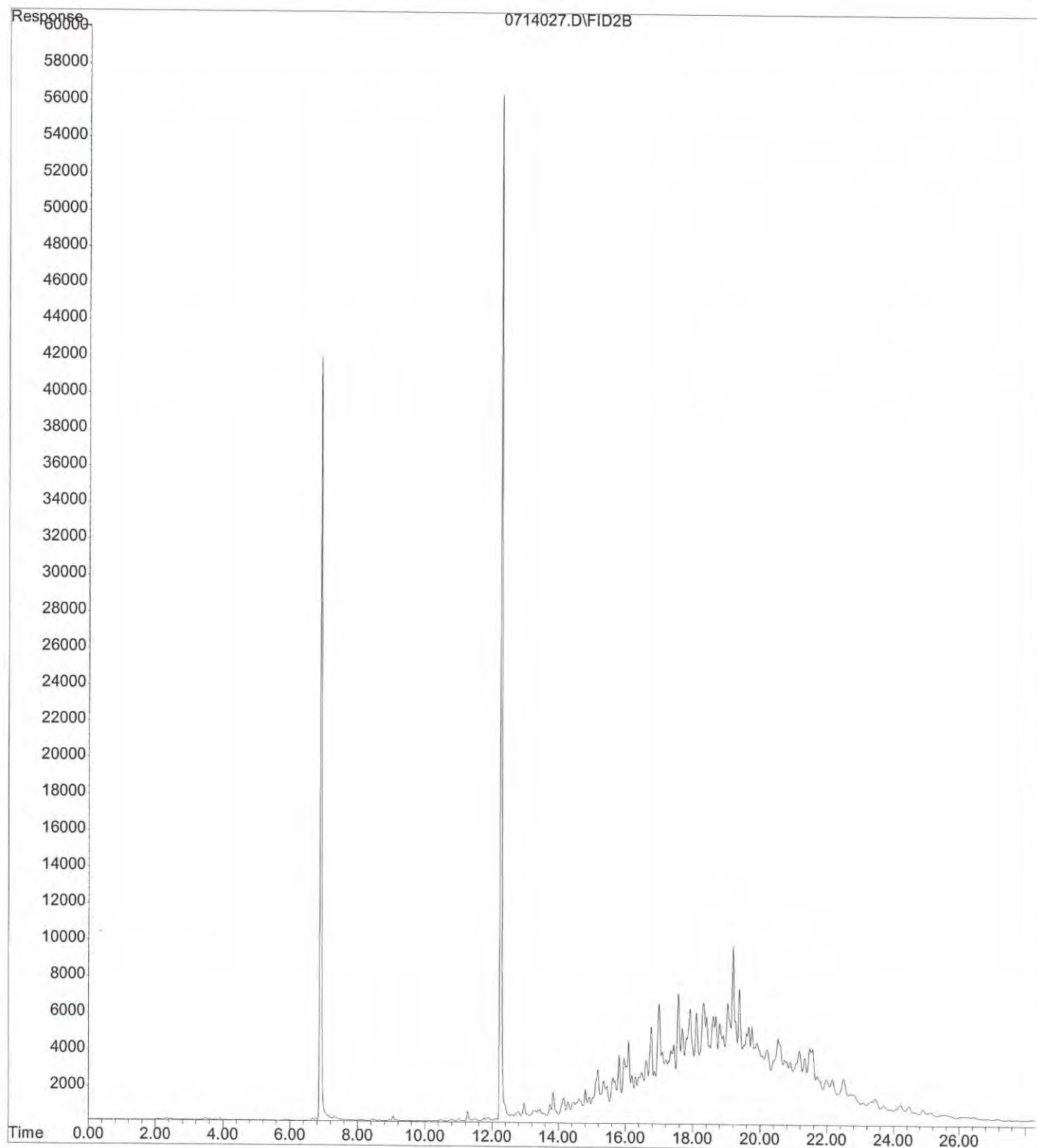
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Operator :
Acquired : 14 Jul 2017 19:42 using AcqMethod 170710G.M
Instrument : Daryl
Sample Name: 07-061-03s
Misc Info :
Vial Number: 18



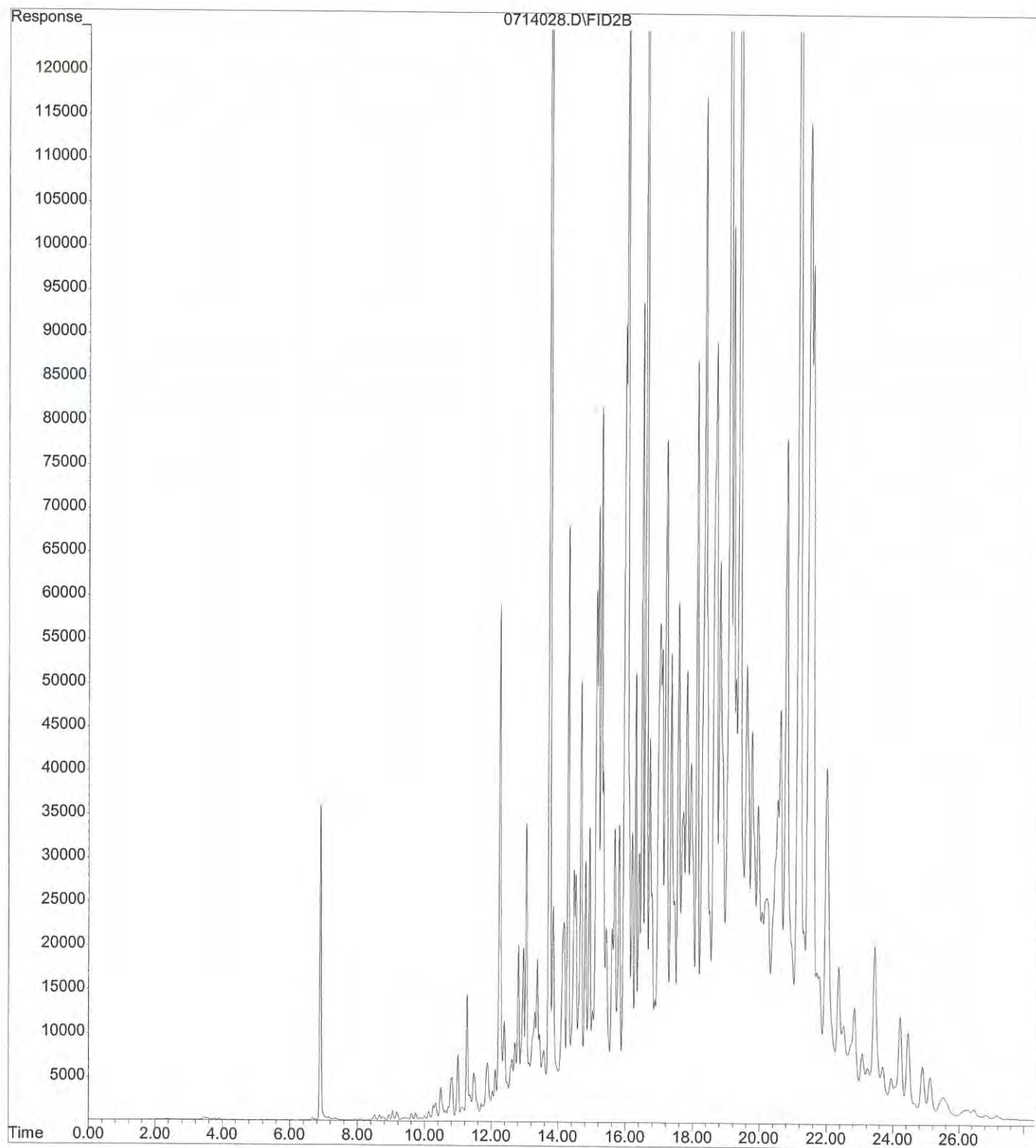
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Operator :
Acquired : 14 Jul 2017 20:16 using AcqMethod 170710G.M
Instrument : Daryl
Sample Name: 07-061-04s
Misc Info :
Vial Number: 19



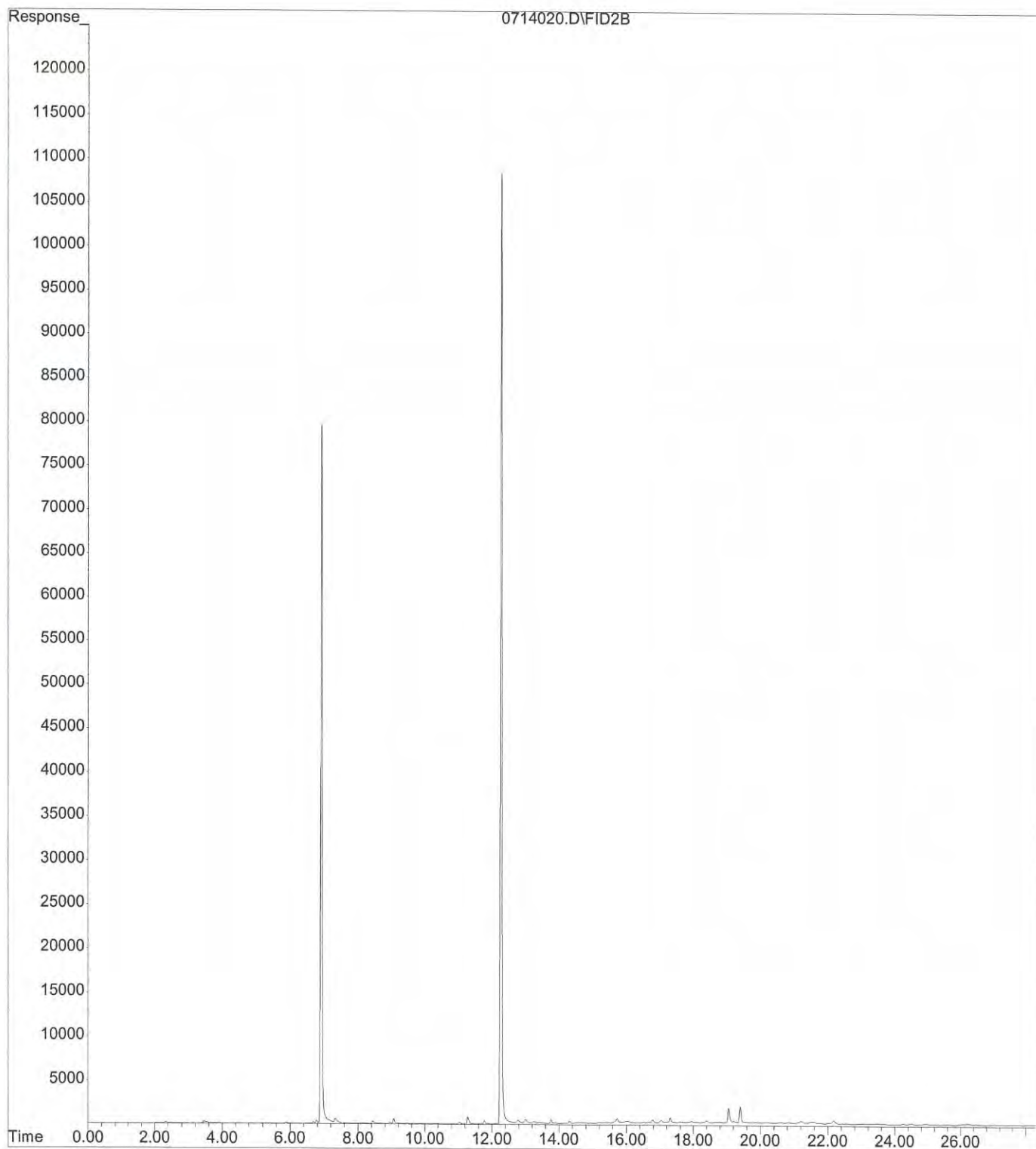
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Acquired : 15 Jul 2017 00:43 using AcqMethod 170710G.M
Instrument : Daryl
Sample Name: 07-061-07s 1:100
Misc Info :
Vial Number: 27



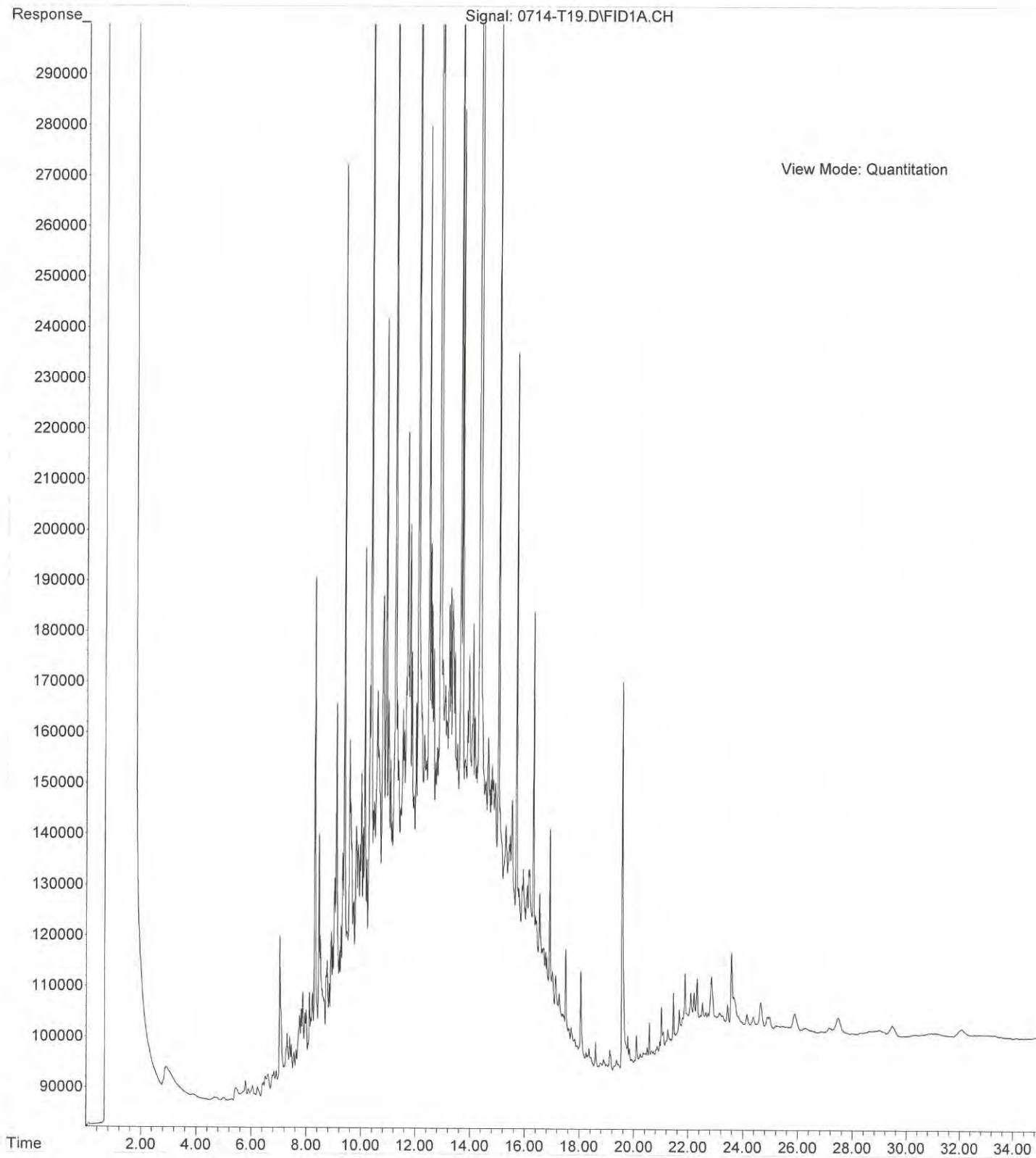
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Operator :
Acquired : 15 Jul 2017 1:17 using AcqMethod 170710G.M
Instrument : Daryl
Sample Name: 07-061-08s 1:100
Misc Info :
Vial Number: 28



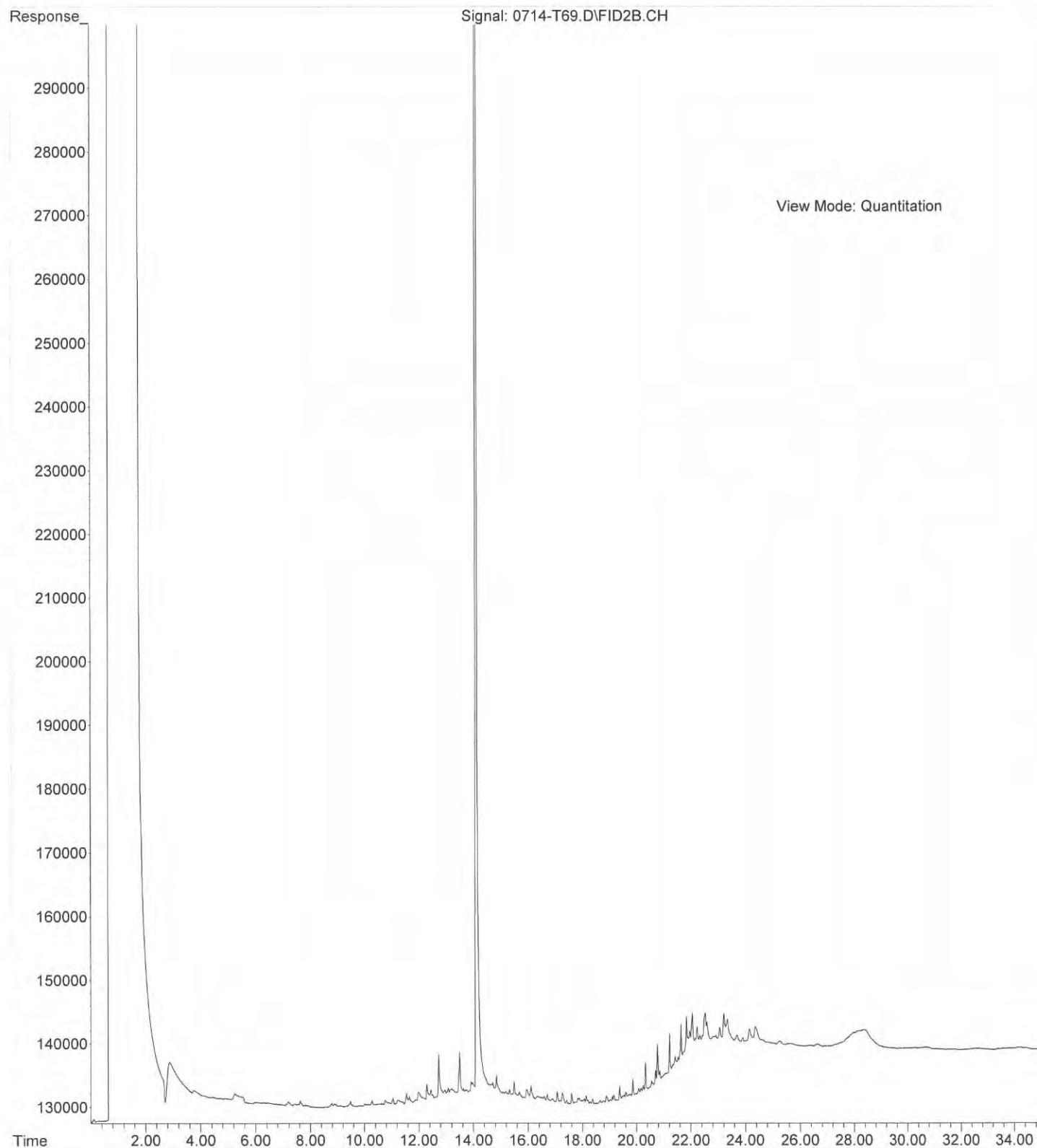
File : X:\BTEX\DARYL\DATA\D170714\0714020.D
Operator :
Acquired : 14 Jul 2017 20:50 using AcqMethod 170710G.M
Instrument : Daryl
Sample Name: 07-061-09s
Misc Info :
Vial Number: 20



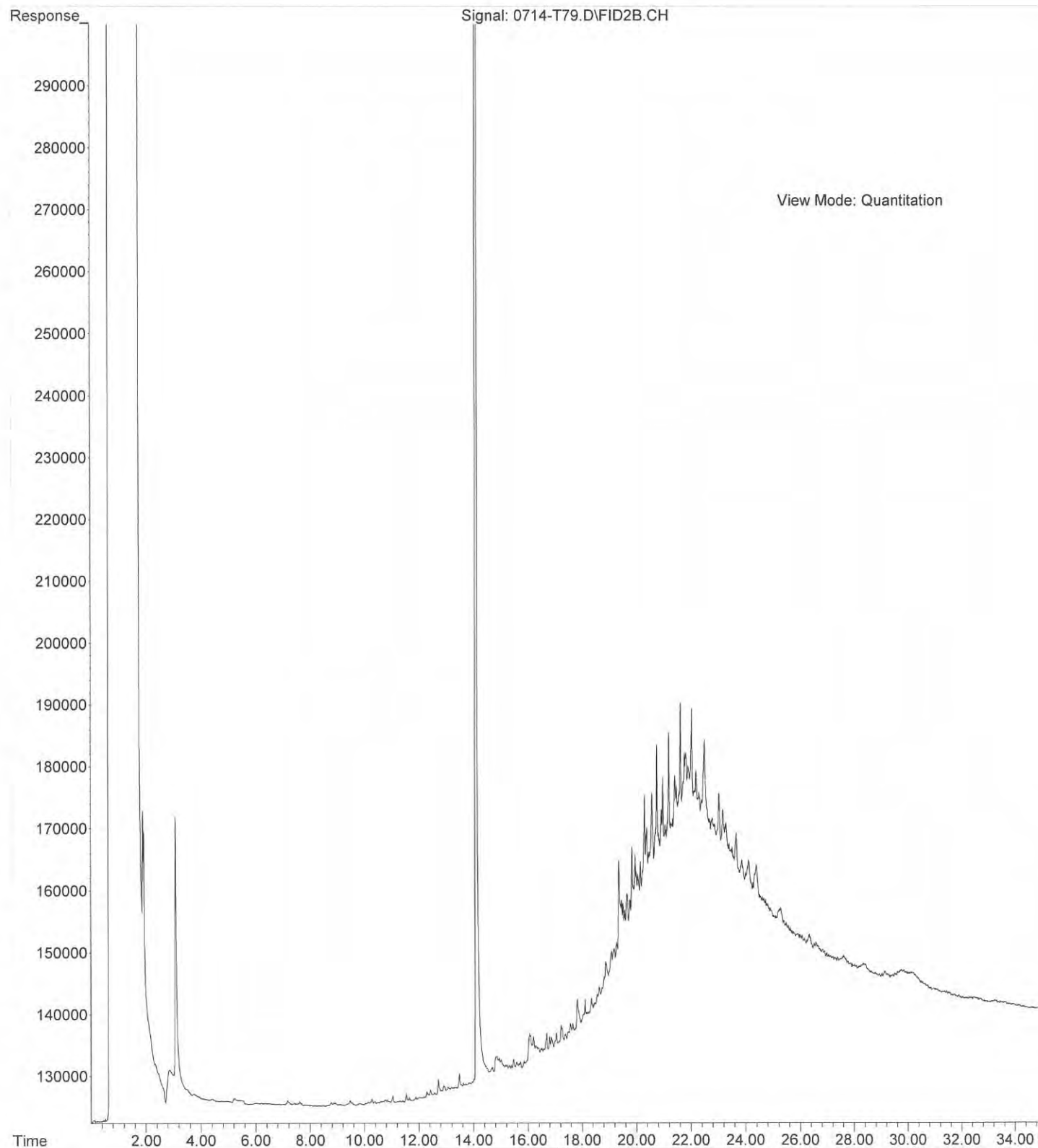
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Operator : ZT
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Instrument : Teri
Sample Name: 07-061-01
Misc Info :
Vial Number: 19



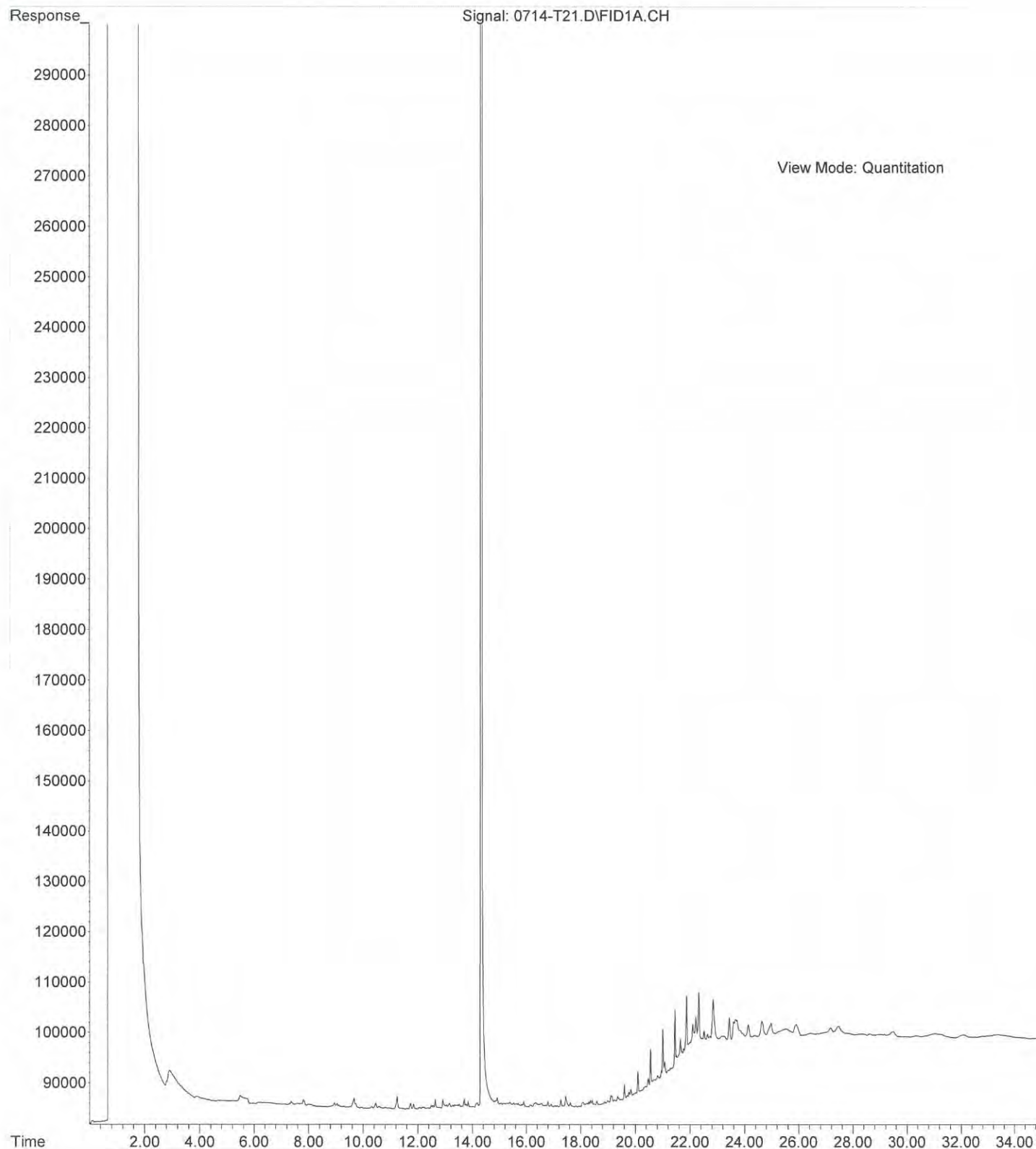
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Operator : ZT
Acquired : 14 Jul 2017 22:33 using AcqMethod T161216F.M
Instrument : Teri
Sample Name: 07-061-02
Misc Info :
Vial Number: 69



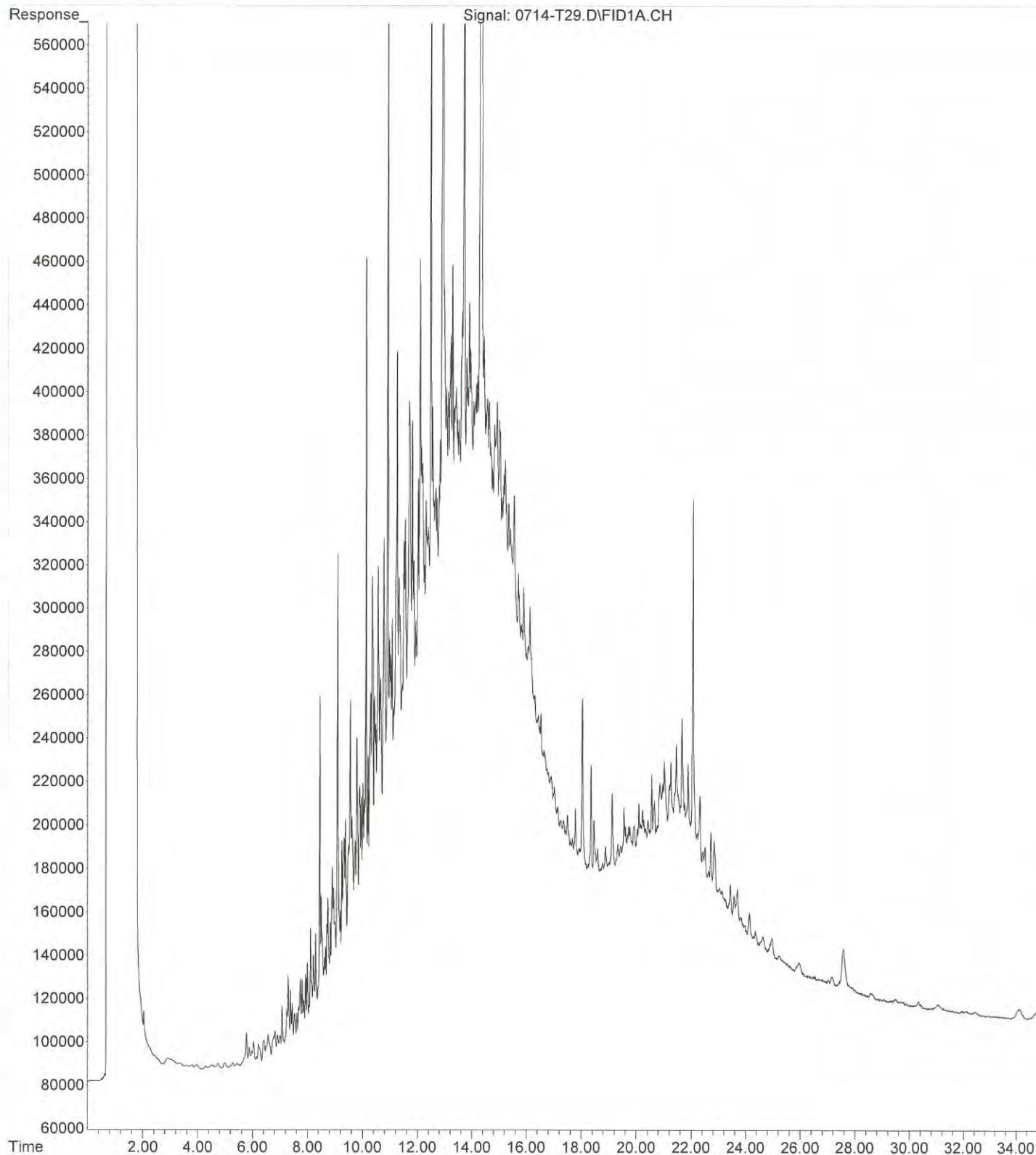
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Instrument : Teri
Sample Name: 07-061-03
Misc Info :
Vial Number: 79



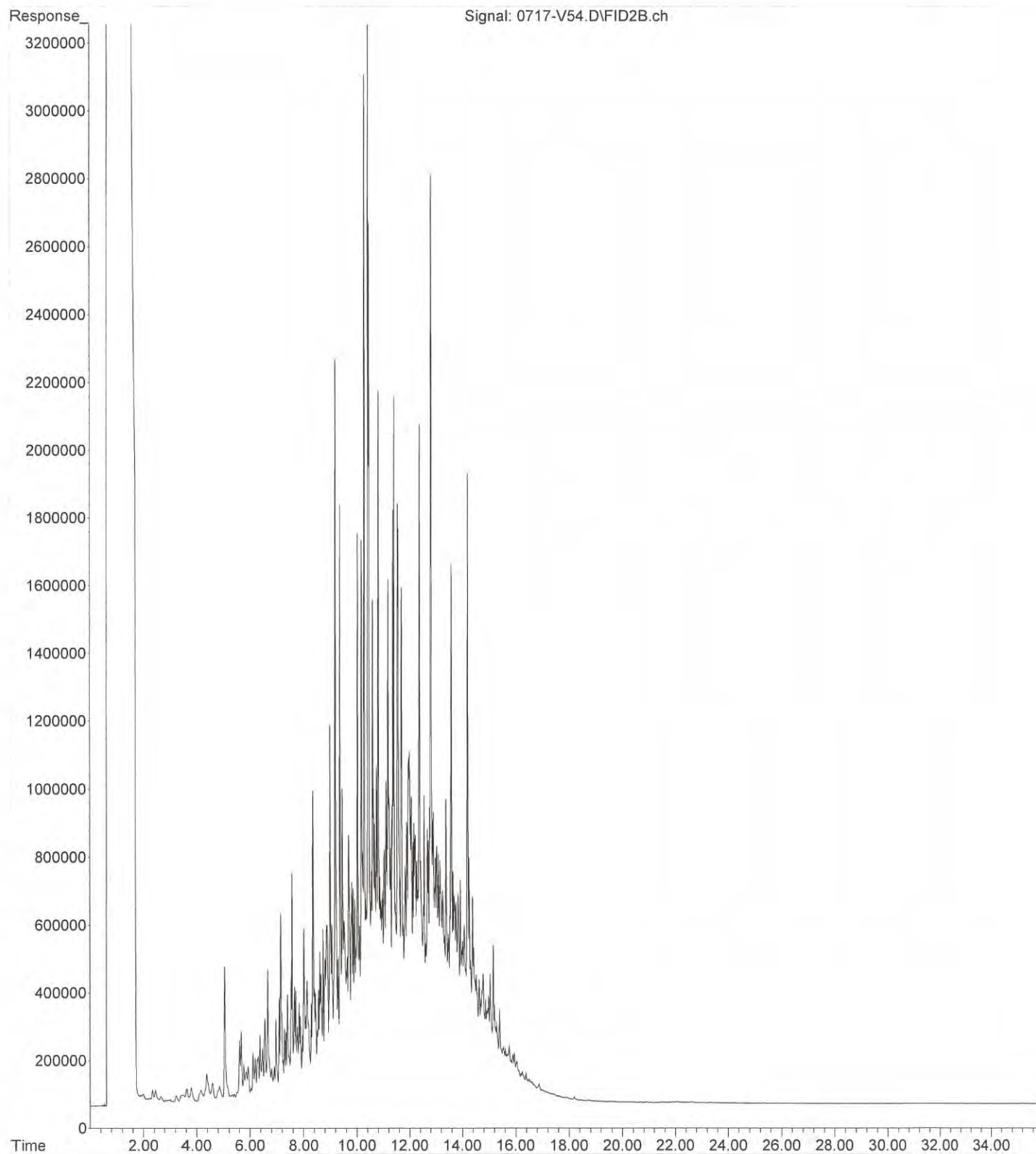
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Operator : ZT
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Instrument : Teri
Sample Name: 07-061-04
Misc Info :
Vial Number: 21



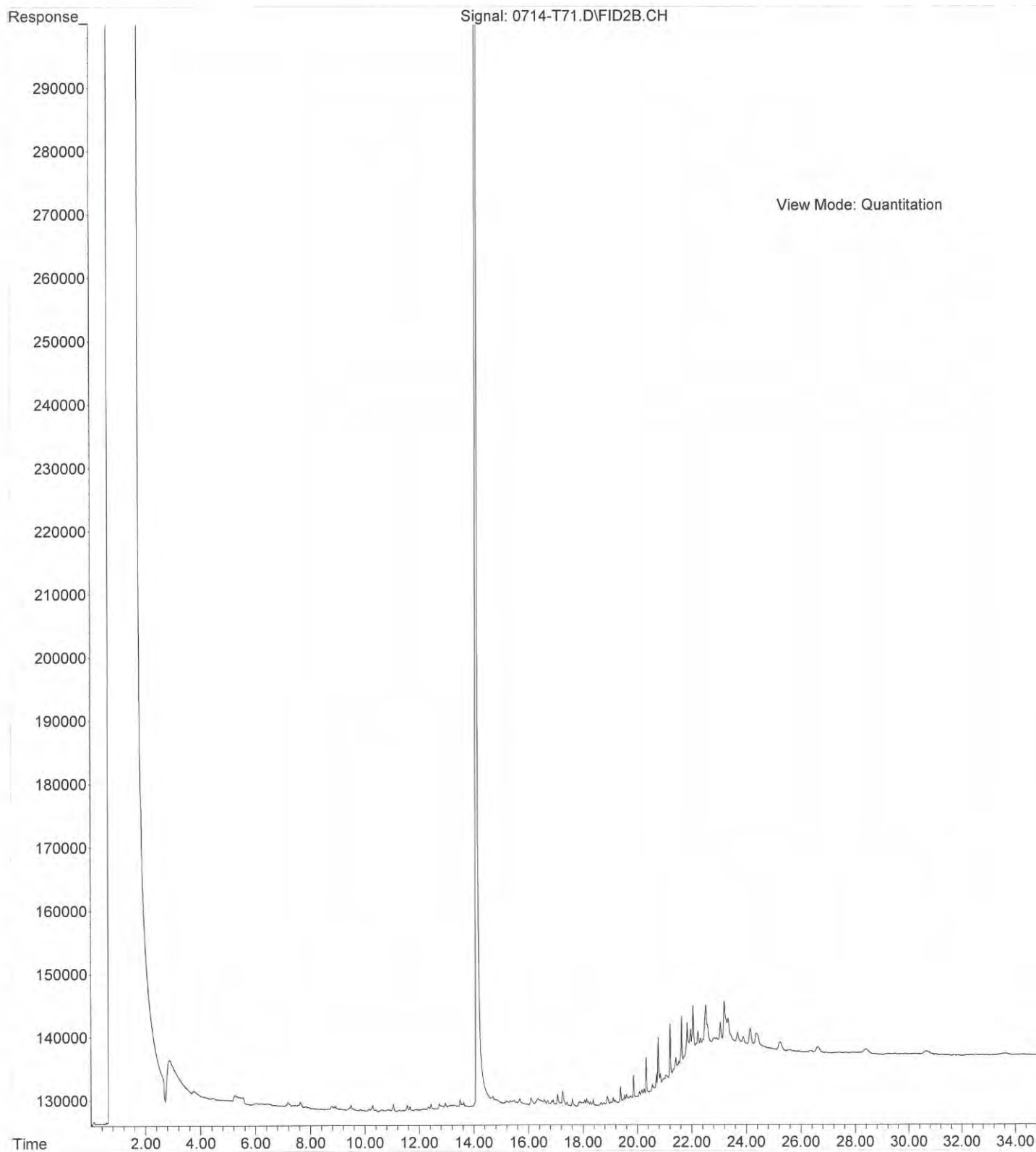
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Operator : ZT
Acquired : 15 Jul 2017 5:43 using AcqMethod T161216F.M
Instrument : Teri
Sample Name: 07-061-07
Misc Info :
Vial Number: 29



File : C:\msdchem\2\DATA\V170717.SEC\0717-V54.D
Operator :
Acquired : 17 Jul 2017 10:57 using AcqMethod V170615F.M
Instrument : Vigo
Sample Name: 07-061-08 5X
Misc Info :
Vial Number: 54



File :C:\msdchem\1\DATA\T170714.SEC\0714-T71.D
Operator : ZT
Acquired : 15 Jul 2017 0:00 using AcqMethod T161216F.M
Instrument : Teri
Sample Name: 07-061-09
Misc Info :
Vial Number: 71





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

July 27, 2017

Marsi Beeson
GeoEngineers, Inc.
12000 NW Naito Prkway, Suite 180
Portland, OR 97209

Re: Analytical Data for Project 4082-039-01
Laboratory Reference No. 1707-210

Dear Marsi:

Enclosed are the analytical results and associated quality control data for samples submitted on July 21, 2017.

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,

A handwritten signature in black ink, appearing to read 'DB' followed by a stylized flourish.

David Baumeister
Project Manager

Enclosures



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

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

Date of Report: July 27, 2017
Samples Submitted: July 21, 2017
Laboratory Reference: 1707-210
Project: 4082-039-01

Case Narrative

Samples were collected on July 20, 2017 and received by the laboratory on July 21, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

Total Metals EPA 6010C/7471B Analysis

Due to the high concentration of Mercury in the QC sample, the amount spiked was insufficient for meaningful MS/MSD recovery data. The Spike Blank recovery was 106%.

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: July 27, 2017
Samples Submitted: July 21, 2017
Laboratory Reference: 1707-210
Project: 4082-039-01

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
FL209-B12-1-2	07-210-01	Soil	7-20-17	7-21-17	
FL209-B12-3.5-4	07-210-02	Soil	7-20-17	7-21-17	
FL209-B12-5.5-6.5	07-210-03	Soil	7-20-17	7-21-17	
FL209-B10-1-2	07-210-04	Soil	7-20-17	7-21-17	
FL209-B10-5.5-6.5	07-210-05	Soil	7-20-17	7-21-17	
FL209-B10-10-10.5	07-210-06	Soil	7-20-17	7-21-17	
FL209-B10-25-26	07-210-07	Soil	7-20-17	7-21-17	
FL209-Drum-C	07-210-08	Soil	7-20-17	7-21-17	



Date of Report: July 27, 2017
 Samples Submitted: July 21, 2017
 Laboratory Reference: 1707-210
 Project: 4082-039-01

NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B12-1-2						
Laboratory ID: 07-210-01						
Gasoline	ND	10	NWTPH-Gx	7-24-17	7-25-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	76	63-124				
Client ID: FL209-B12-3.5-4						
Laboratory ID: 07-210-02						
Gasoline	ND	12	NWTPH-Gx	7-24-17	7-24-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	80	63-124				
Client ID: FL209-B12-5.5-6.5						
Laboratory ID: 07-210-03						
Gasoline	ND	10	NWTPH-Gx	7-24-17	7-24-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	79	63-124				
Client ID: FL209-B10-5.5-6.5						
Laboratory ID: 07-210-05						
Gasoline	ND	5.0	NWTPH-Gx	7-24-17	7-24-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	63-124				
Client ID: FL209-B10-10-10.5						
Laboratory ID: 07-210-06						
Gasoline	ND	5.4	NWTPH-Gx	7-24-17	7-24-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	88	63-124				
Client ID: FL209-B10-25-26						
Laboratory ID: 07-210-07						
Gasoline	ND	4.8	NWTPH-Gx	7-24-17	7-24-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	85	63-124				



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 Project: 4082-039-01

NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-Drum-C					
Laboratory ID:	07-210-08					
Gasoline	ND	5.0	NWTPH-Gx	7-24-17	7-24-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	90	63-124				



Date of Report: July 27, 2017
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NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B12-1-2						
Laboratory ID:	07-210-01					
Diesel Fuel #2	320	25	NWTPH-Dx	7-24-17	7-25-17	
Lube Oil Range Organics	ND	50	NWTPH-Dx	7-24-17	7-25-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	102	50-150				
Client ID: FL209-B12-3.5-4						
Laboratory ID:	07-210-02					
Diesel Fuel #2	1200	30	NWTPH-Dx	7-24-17	7-25-17	
Lube Oil Range Organics	330	60	NWTPH-Dx	7-24-17	7-25-17	N1
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	90	50-150				
Client ID: FL209-B12-5.5-6.5						
Laboratory ID:	07-210-03					
Diesel Range Organics	ND	27	NWTPH-Dx	7-24-17	7-24-17	
Lube Oil Range Organics	ND	54	NWTPH-Dx	7-24-17	7-24-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	102	50-150				
Client ID: FL209-B10-5.5-6.5						
Laboratory ID:	07-210-05					
Diesel Range Organics	ND	28	NWTPH-Dx	7-24-17	7-24-17	
Lube Oil Range Organics	ND	55	NWTPH-Dx	7-24-17	7-24-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	98	50-150				
Client ID: FL209-B10-10-10.5						
Laboratory ID:	07-210-06					
Diesel Range Organics	ND	27	NWTPH-Dx	7-24-17	7-24-17	
Lube Oil Range Organics	ND	54	NWTPH-Dx	7-24-17	7-24-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	81	50-150				
Client ID: FL209-B10-25-26						
Laboratory ID:	07-210-07					
Diesel Range Organics	ND	28	NWTPH-Dx	7-24-17	7-24-17	
Lube Oil Range Organics	ND	55	NWTPH-Dx	7-24-17	7-24-17	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	89	50-150				



Date of Report: July 27, 2017
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NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-Drum-C					
Laboratory ID:	07-210-08					
Diesel Fuel #2	370	27	NWTPH-Dx	7-24-17	7-26-17	
Lube Oil Range Organics	160	55	NWTPH-Dx	7-24-17	7-26-17	N1
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>o-Terphenyl</i>	98	50-150				



Date of Report: July 27, 2017
 Samples Submitted: July 21, 2017
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 Project: 4082-039-01

VOLATILES EPA 8260C
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B12-1-2				
Laboratory ID:		07-210-01				
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Chloromethane	ND	0.0053	EPA 8260C	7-25-17	7-25-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Bromomethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Chloroethane	ND	0.0053	EPA 8260C	7-25-17	7-25-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Acetone	0.036	0.011	EPA 8260C	7-25-17	7-25-17	Y
Iodomethane	ND	0.0053	EPA 8260C	7-25-17	7-25-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Methylene Chloride	ND	0.011	EPA 8260C	7-25-17	7-25-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Vinyl Acetate	ND	0.0053	EPA 8260C	7-25-17	7-25-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
2-Butanone	ND	0.0053	EPA 8260C	7-25-17	7-25-17	
Bromochloromethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Chloroform	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Benzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Trichloroethene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Dibromomethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
2-Chloroethyl Vinyl Ether	ND	0.0053	EPA 8260C	7-25-17	7-25-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260C	7-25-17	7-25-17	
Toluene	ND	0.0053	EPA 8260C	7-25-17	7-25-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	



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 Project: 4082-039-01

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-B12-1-2					
Laboratory ID:	07-210-01					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
2-Hexanone	ND	0.0053	EPA 8260C	7-25-17	7-25-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Chlorobenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Ethylbenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
m,p-Xylene	ND	0.0021	EPA 8260C	7-25-17	7-25-17	
o-Xylene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Styrene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Bromoform	ND	0.0053	EPA 8260C	7-25-17	7-25-17	
Isopropylbenzene	0.0020	0.0011	EPA 8260C	7-25-17	7-25-17	
Bromobenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,1,2,2-Tetrachloroethane	ND	0.0014	EPA 8260C	7-25-17	7-25-17	
1,2,3-Trichloropropane	ND	0.0014	EPA 8260C	7-25-17	7-25-17	
n-Propylbenzene	0.0059	0.0011	EPA 8260C	7-25-17	7-25-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,3,5-Trimethylbenzene	0.0074	0.0011	EPA 8260C	7-25-17	7-25-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,2,4-Trimethylbenzene	0.022	0.0011	EPA 8260C	7-25-17	7-25-17	
sec-Butylbenzene	0.011	0.0011	EPA 8260C	7-25-17	7-25-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
p-Isopropyltoluene	0.012	0.0011	EPA 8260C	7-25-17	7-25-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
n-Butylbenzene	0.021	0.0011	EPA 8260C	7-25-17	7-25-17	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260C	7-25-17	7-25-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Hexachlorobutadiene	ND	0.0053	EPA 8260C	7-25-17	7-25-17	
Naphthalene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	110	73-134				
Toluene-d8	102	81-124				
4-Bromofluorobenzene	104	80-131				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B12-3.5-4						
Laboratory ID: 07-210-02						
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Chloromethane	ND	0.0054	EPA 8260C	7-25-17	7-25-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Bromomethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Chloroethane	ND	0.0054	EPA 8260C	7-25-17	7-25-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Acetone	ND	0.011	EPA 8260C	7-25-17	7-25-17	
Iodomethane	ND	0.0054	EPA 8260C	7-25-17	7-25-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Methylene Chloride	ND	0.011	EPA 8260C	7-25-17	7-25-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Vinyl Acetate	ND	0.0054	EPA 8260C	7-25-17	7-25-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
2-Butanone	ND	0.0054	EPA 8260C	7-25-17	7-25-17	
Bromochloromethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Chloroform	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Benzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Trichloroethene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Dibromomethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260C	7-25-17	7-25-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Methyl Isobutyl Ketone	ND	0.0054	EPA 8260C	7-25-17	7-25-17	
Toluene	ND	0.0054	EPA 8260C	7-25-17	7-25-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	



Date of Report: July 27, 2017
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VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-B12-3.5-4					
Laboratory ID:	07-210-02					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Tetrachloroethene	0.0026	0.0011	EPA 8260C	7-25-17	7-25-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
2-Hexanone	ND	0.0054	EPA 8260C	7-25-17	7-25-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Chlorobenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Ethylbenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
m,p-Xylene	ND	0.0021	EPA 8260C	7-25-17	7-25-17	
o-Xylene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Styrene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Bromoform	ND	0.0054	EPA 8260C	7-25-17	7-25-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Bromobenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,1,2,2-Tetrachloroethane	ND	0.0014	EPA 8260C	7-25-17	7-25-17	
1,2,3-Trichloropropane	ND	0.0014	EPA 8260C	7-25-17	7-25-17	
n-Propylbenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260C	7-25-17	7-25-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Hexachlorobutadiene	ND	0.0054	EPA 8260C	7-25-17	7-25-17	
Naphthalene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	7-25-17	7-25-17	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	127	73-134				
Toluene-d8	107	81-124				
4-Bromofluorobenzene	102	80-131				



Date of Report: July 27, 2017
 Samples Submitted: July 21, 2017
 Laboratory Reference: 1707-210
 Project: 4082-039-01

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B12-5.5-6.5				
Laboratory ID:		07-210-03				
Dichlorodifluoromethane	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Chloromethane	ND	0.0046	EPA 8260C	7-25-17	7-25-17	
Vinyl Chloride	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Bromomethane	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Chloroethane	ND	0.0046	EPA 8260C	7-25-17	7-25-17	
Trichlorofluoromethane	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,1-Dichloroethene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Acetone	ND	0.0092	EPA 8260C	7-25-17	7-25-17	
Iodomethane	ND	0.0046	EPA 8260C	7-25-17	7-25-17	
Carbon Disulfide	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Methylene Chloride	ND	0.0092	EPA 8260C	7-25-17	7-25-17	
(trans) 1,2-Dichloroethene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Methyl t-Butyl Ether	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,1-Dichloroethane	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Vinyl Acetate	ND	0.0046	EPA 8260C	7-25-17	7-25-17	
2,2-Dichloropropane	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
(cis) 1,2-Dichloroethene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
2-Butanone	ND	0.0046	EPA 8260C	7-25-17	7-25-17	
Bromochloromethane	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Chloroform	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,1,1-Trichloroethane	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Carbon Tetrachloride	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,1-Dichloropropene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Benzene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,2-Dichloroethane	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Trichloroethene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,2-Dichloropropane	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Dibromomethane	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Bromodichloromethane	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
2-Chloroethyl Vinyl Ether	ND	0.0046	EPA 8260C	7-25-17	7-25-17	
(cis) 1,3-Dichloropropene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Methyl Isobutyl Ketone	ND	0.0046	EPA 8260C	7-25-17	7-25-17	
Toluene	ND	0.0046	EPA 8260C	7-25-17	7-25-17	
(trans) 1,3-Dichloropropene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B12-5.5-6.5						
Laboratory ID: 07-210-03						
1,1,2-Trichloroethane	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Tetrachloroethene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,3-Dichloropropane	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
2-Hexanone	ND	0.0046	EPA 8260C	7-25-17	7-25-17	
Dibromochloromethane	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,2-Dibromoethane	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Chlorobenzene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,1,1,2-Tetrachloroethane	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Ethylbenzene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
m,p-Xylene	ND	0.0018	EPA 8260C	7-25-17	7-25-17	
o-Xylene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Styrene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Bromoform	ND	0.0046	EPA 8260C	7-25-17	7-25-17	
Isopropylbenzene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Bromobenzene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	7-25-17	7-25-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	7-25-17	7-25-17	
n-Propylbenzene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
2-Chlorotoluene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
4-Chlorotoluene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,3,5-Trimethylbenzene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
tert-Butylbenzene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,2,4-Trimethylbenzene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
sec-Butylbenzene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,3-Dichlorobenzene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
p-Isopropyltoluene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,4-Dichlorobenzene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,2-Dichlorobenzene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
n-Butylbenzene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,2-Dibromo-3-chloropropane	ND	0.0046	EPA 8260C	7-25-17	7-25-17	
1,2,4-Trichlorobenzene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
Hexachlorobutadiene	ND	0.0046	EPA 8260C	7-25-17	7-25-17	
Naphthalene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
1,2,3-Trichlorobenzene	ND	0.00092	EPA 8260C	7-25-17	7-25-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	<i>115</i>	<i>73-134</i>				
<i>Toluene-d8</i>	<i>109</i>	<i>81-124</i>				
<i>4-Bromofluorobenzene</i>	<i>111</i>	<i>80-131</i>				



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 Samples Submitted: July 21, 2017
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 Project: 4082-039-01

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B10-5.5-6.5						
Laboratory ID: 07-210-05						
Dichlorodifluoromethane	ND	0.0016	EPA 8260C	7-24-17	7-24-17	
Chloromethane	ND	0.0064	EPA 8260C	7-24-17	7-24-17	
Vinyl Chloride	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Bromomethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Chloroethane	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
Trichlorofluoromethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,1-Dichloroethene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Acetone	ND	0.0095	EPA 8260C	7-24-17	7-24-17	
Iodomethane	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
Carbon Disulfide	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Methylene Chloride	ND	0.0095	EPA 8260C	7-24-17	7-24-17	
(trans) 1,2-Dichloroethene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Methyl t-Butyl Ether	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,1-Dichloroethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Vinyl Acetate	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
2,2-Dichloropropane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
(cis) 1,2-Dichloroethene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
2-Butanone	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
Bromochloromethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Chloroform	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,1,1-Trichloroethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Carbon Tetrachloride	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,1-Dichloropropene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Benzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,2-Dichloroethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Trichloroethene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,2-Dichloropropane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Dibromomethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Bromodichloromethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
2-Chloroethyl Vinyl Ether	ND	0.0060	EPA 8260C	7-24-17	7-24-17	
(cis) 1,3-Dichloropropene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Methyl Isobutyl Ketone	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
Toluene	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
(trans) 1,3-Dichloropropene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	



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

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

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 Samples Submitted: July 21, 2017
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B10-5.5-6.5						
Laboratory ID: 07-210-05						
1,1,2-Trichloroethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Tetrachloroethene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,3-Dichloropropane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
2-Hexanone	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
Dibromochloromethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,2-Dibromoethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Chlorobenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,1,1,2-Tetrachloroethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Ethylbenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
m,p-Xylene	ND	0.0019	EPA 8260C	7-24-17	7-24-17	
o-Xylene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Styrene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Bromoform	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
Isopropylbenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Bromobenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	7-24-17	7-24-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	7-24-17	7-24-17	
n-Propylbenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
2-Chlorotoluene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
4-Chlorotoluene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,3,5-Trimethylbenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
tert-Butylbenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,2,4-Trimethylbenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
sec-Butylbenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,3-Dichlorobenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
p-Isopropyltoluene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,4-Dichlorobenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,2-Dichlorobenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
n-Butylbenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,2-Dibromo-3-chloropropane	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
1,2,4-Trichlorobenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Hexachlorobutadiene	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
Naphthalene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,2,3-Trichlorobenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	98	73-134				
Toluene-d8	95	81-124				
4-Bromofluorobenzene	95	80-131				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B10-10-10.5				
Laboratory ID:		07-210-06				
Dichlorodifluoromethane	ND	0.0016	EPA 8260C	7-24-17	7-24-17	
Chloromethane	ND	0.0064	EPA 8260C	7-24-17	7-24-17	
Vinyl Chloride	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Bromomethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Chloroethane	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
Trichlorofluoromethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,1-Dichloroethene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Acetone	ND	0.0095	EPA 8260C	7-24-17	7-24-17	
Iodomethane	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
Carbon Disulfide	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Methylene Chloride	ND	0.0095	EPA 8260C	7-24-17	7-24-17	
(trans) 1,2-Dichloroethene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Methyl t-Butyl Ether	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,1-Dichloroethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Vinyl Acetate	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
2,2-Dichloropropane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
(cis) 1,2-Dichloroethene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
2-Butanone	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
Bromochloromethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Chloroform	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,1,1-Trichloroethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Carbon Tetrachloride	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,1-Dichloropropene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Benzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,2-Dichloroethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Trichloroethene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,2-Dichloropropane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Dibromomethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Bromodichloromethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
2-Chloroethyl Vinyl Ether	ND	0.0060	EPA 8260C	7-24-17	7-24-17	
(cis) 1,3-Dichloropropene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Methyl Isobutyl Ketone	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
Toluene	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
(trans) 1,3-Dichloropropene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B10-10-10.5				
Laboratory ID:		07-210-06				
1,1,2-Trichloroethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Tetrachloroethene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,3-Dichloropropane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
2-Hexanone	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
Dibromochloromethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,2-Dibromoethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Chlorobenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,1,1,2-Tetrachloroethane	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Ethylbenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
m,p-Xylene	ND	0.0019	EPA 8260C	7-24-17	7-24-17	
o-Xylene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Styrene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Bromoform	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
Isopropylbenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Bromobenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	7-24-17	7-24-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	7-24-17	7-24-17	
n-Propylbenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
2-Chlorotoluene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
4-Chlorotoluene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,3,5-Trimethylbenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
tert-Butylbenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,2,4-Trimethylbenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
sec-Butylbenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,3-Dichlorobenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
p-Isopropyltoluene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,4-Dichlorobenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,2-Dichlorobenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
n-Butylbenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,2-Dibromo-3-chloropropane	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
1,2,4-Trichlorobenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
Hexachlorobutadiene	ND	0.0048	EPA 8260C	7-24-17	7-24-17	
Naphthalene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
1,2,3-Trichlorobenzene	ND	0.00095	EPA 8260C	7-24-17	7-24-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	98	73-134				
Toluene-d8	93	81-124				
4-Bromofluorobenzene	94	80-131				



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 Samples Submitted: July 21, 2017
 Laboratory Reference: 1707-210
 Project: 4082-039-01

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B10-25-26				
Laboratory ID:		07-210-07				
Dichlorodifluoromethane	ND	0.0015	EPA 8260C	7-24-17	7-24-17	
Chloromethane	ND	0.0058	EPA 8260C	7-24-17	7-24-17	
Vinyl Chloride	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Bromomethane	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Chloroethane	ND	0.0044	EPA 8260C	7-24-17	7-24-17	
Trichlorofluoromethane	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,1-Dichloroethene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Acetone	ND	0.0087	EPA 8260C	7-24-17	7-24-17	
Iodomethane	ND	0.0044	EPA 8260C	7-24-17	7-24-17	
Carbon Disulfide	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Methylene Chloride	ND	0.0087	EPA 8260C	7-24-17	7-24-17	
(trans) 1,2-Dichloroethene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Methyl t-Butyl Ether	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,1-Dichloroethane	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Vinyl Acetate	ND	0.0044	EPA 8260C	7-24-17	7-24-17	
2,2-Dichloropropane	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
(cis) 1,2-Dichloroethene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
2-Butanone	ND	0.0044	EPA 8260C	7-24-17	7-24-17	
Bromochloromethane	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Chloroform	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,1,1-Trichloroethane	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Carbon Tetrachloride	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,1-Dichloropropene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Benzene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,2-Dichloroethane	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Trichloroethene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,2-Dichloropropane	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Dibromomethane	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Bromodichloromethane	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
2-Chloroethyl Vinyl Ether	ND	0.0055	EPA 8260C	7-24-17	7-24-17	
(cis) 1,3-Dichloropropene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Methyl Isobutyl Ketone	ND	0.0044	EPA 8260C	7-24-17	7-24-17	
Toluene	ND	0.0044	EPA 8260C	7-24-17	7-24-17	
(trans) 1,3-Dichloropropene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-B10-25-26				
Laboratory ID:		07-210-07				
1,1,2-Trichloroethane	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Tetrachloroethene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,3-Dichloropropane	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
2-Hexanone	ND	0.0044	EPA 8260C	7-24-17	7-24-17	
Dibromochloromethane	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,2-Dibromoethane	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Chlorobenzene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,1,1,2-Tetrachloroethane	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Ethylbenzene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
m,p-Xylene	ND	0.0017	EPA 8260C	7-24-17	7-24-17	
o-Xylene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Styrene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Bromoform	ND	0.0044	EPA 8260C	7-24-17	7-24-17	
Isopropylbenzene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Bromobenzene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	7-24-17	7-24-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	7-24-17	7-24-17	
n-Propylbenzene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
2-Chlorotoluene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
4-Chlorotoluene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,3,5-Trimethylbenzene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
tert-Butylbenzene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,2,4-Trimethylbenzene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
sec-Butylbenzene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,3-Dichlorobenzene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
p-Isopropyltoluene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,4-Dichlorobenzene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,2-Dichlorobenzene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
n-Butylbenzene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,2-Dibromo-3-chloropropane	ND	0.0044	EPA 8260C	7-24-17	7-24-17	
1,2,4-Trichlorobenzene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
Hexachlorobutadiene	ND	0.0044	EPA 8260C	7-24-17	7-24-17	
Naphthalene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
1,2,3-Trichlorobenzene	ND	0.00087	EPA 8260C	7-24-17	7-24-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
<i>Dibromofluoromethane</i>	96	73-134				
<i>Toluene-d8</i>	92	81-124				
<i>4-Bromofluorobenzene</i>	91	80-131				



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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:		FL209-Drum-C				
Laboratory ID:		07-210-08				
Dichlorodifluoromethane	ND	0.0016	EPA 8260C	7-24-17	7-24-17	
Chloromethane	ND	0.0061	EPA 8260C	7-24-17	7-24-17	
Vinyl Chloride	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Bromomethane	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Chloroethane	ND	0.0046	EPA 8260C	7-24-17	7-24-17	
Trichlorofluoromethane	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
1,1-Dichloroethene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Acetone	ND	0.0092	EPA 8260C	7-24-17	7-24-17	
Iodomethane	ND	0.0046	EPA 8260C	7-24-17	7-24-17	
Carbon Disulfide	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Methylene Chloride	ND	0.0092	EPA 8260C	7-24-17	7-24-17	
(trans) 1,2-Dichloroethene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Methyl t-Butyl Ether	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
1,1-Dichloroethane	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Vinyl Acetate	ND	0.0046	EPA 8260C	7-24-17	7-24-17	
2,2-Dichloropropane	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
(cis) 1,2-Dichloroethene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
2-Butanone	ND	0.0046	EPA 8260C	7-24-17	7-24-17	
Bromochloromethane	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Chloroform	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
1,1,1-Trichloroethane	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Carbon Tetrachloride	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
1,1-Dichloropropene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Benzene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
1,2-Dichloroethane	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Trichloroethene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
1,2-Dichloropropane	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Dibromomethane	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Bromodichloromethane	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
2-Chloroethyl Vinyl Ether	ND	0.0058	EPA 8260C	7-24-17	7-24-17	
(cis) 1,3-Dichloropropene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Methyl Isobutyl Ketone	ND	0.0046	EPA 8260C	7-24-17	7-24-17	
Toluene	ND	0.0046	EPA 8260C	7-24-17	7-24-17	
(trans) 1,3-Dichloropropene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	FL209-Drum-C					
Laboratory ID:	07-210-08					
1,1,2-Trichloroethane	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Tetrachloroethene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
1,3-Dichloropropane	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
2-Hexanone	ND	0.0046	EPA 8260C	7-24-17	7-24-17	
Dibromochloromethane	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
1,2-Dibromoethane	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Chlorobenzene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
1,1,1,2-Tetrachloroethane	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Ethylbenzene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
m,p-Xylene	ND	0.0018	EPA 8260C	7-24-17	7-24-17	
o-Xylene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Styrene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Bromoform	ND	0.0046	EPA 8260C	7-24-17	7-24-17	
Isopropylbenzene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Bromobenzene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	7-24-17	7-24-17	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	7-24-17	7-24-17	
n-Propylbenzene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
2-Chlorotoluene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
4-Chlorotoluene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
1,3,5-Trimethylbenzene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
tert-Butylbenzene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
1,2,4-Trimethylbenzene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
sec-Butylbenzene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
1,3-Dichlorobenzene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
p-Isopropyltoluene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
1,4-Dichlorobenzene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
1,2-Dichlorobenzene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
n-Butylbenzene	0.0013	0.00092	EPA 8260C	7-24-17	7-24-17	
1,2-Dibromo-3-chloropropane	ND	0.0046	EPA 8260C	7-24-17	7-24-17	
1,2,4-Trichlorobenzene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Hexachlorobutadiene	ND	0.0046	EPA 8260C	7-24-17	7-24-17	
Naphthalene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
1,2,3-Trichlorobenzene	ND	0.00092	EPA 8260C	7-24-17	7-24-17	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	99	73-134				
Toluene-d8	89	81-124				
4-Bromofluorobenzene	90	80-131				



Date of Report: July 27, 2017
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 Laboratory Reference: 1707-210
 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B12-1-2						
Laboratory ID: 07-210-01						
Naphthalene	0.020	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
2-Methylnaphthalene	0.19	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
1-Methylnaphthalene	0.28	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
Acenaphthylene	0.021	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
Acenaphthene	0.071	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
Fluorene	0.15	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
Phenanthrene	0.41	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
Anthracene	0.027	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
Fluoranthene	0.0088	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
Pyrene	0.033	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
Benzo[a]anthracene	ND	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
Chrysene	ND	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
Benzo[b]fluoranthene	ND	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
Benzo[j,k]fluoranthene	ND	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
Benzo[a]pyrene	ND	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
Dibenz[a,h]anthracene	ND	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
Benzo[g,h,i]perylene	ND	0.0071	EPA 8270D/SIM	7-24-17	7-25-17	
Surrogate:						
	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	66	32 - 122				
Pyrene-d10	68	33 - 125				
Terphenyl-d14	77	36 - 118				



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 Project: 4082-039-01

PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B12-3.5-4						
Laboratory ID: 07-210-02						
Naphthalene	0.011	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
2-Methylnaphthalene	0.065	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
1-Methylnaphthalene	0.068	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
Acenaphthylene	0.027	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
Acenaphthene	ND	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
Fluorene	0.017	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
Phenanthrene	0.036	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
Anthracene	0.0086	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
Fluoranthene	ND	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
Pyrene	ND	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
Benzo[a]anthracene	0.013	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
Chrysene	0.010	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
Benzo[b]fluoranthene	ND	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
Benzo[j,k]fluoranthene	ND	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
Benzo[a]pyrene	ND	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
Indeno(1,2,3-c,d)pyrene	0.018	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
Dibenz[a,h]anthracene	ND	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
Benzo[g,h,i]perylene	0.016	0.0080	EPA 8270D/SIM	7-24-17	7-26-17	
<i>Surrogate: Percent Recovery Control Limits</i>						
2-Fluorobiphenyl	73	32 - 122				
Pyrene-d10	75	33 - 125				
Terphenyl-d14	94	36 - 118				



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PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-B12-5.5-6.5						
Laboratory ID: 07-210-03						
Naphthalene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
2-Methylnaphthalene	0.0073	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
1-Methylnaphthalene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
Acenaphthylene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
Acenaphthene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
Fluorene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
Phenanthrene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
Anthracene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
Fluoranthene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
Pyrene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
Benzo[a]anthracene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
Chrysene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
Benzo[b]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
Benzo[j,k]fluoranthene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
Benzo[a]pyrene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
Dibenz[a,h]anthracene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
Benzo[g,h,i]perylene	ND	0.0072	EPA 8270D/SIM	7-24-17	7-25-17	
Surrogate:						
	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	71	32 - 122				
Pyrene-d10	77	33 - 125				
Terphenyl-d14	87	36 - 118				



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PAHs EPA 8270D/SIM

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: FL209-Drum-C						
Laboratory ID: 07-210-08						
Naphthalene	0.018	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
2-Methylnaphthalene	0.065	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
1-Methylnaphthalene	0.075	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
Acenaphthylene	0.011	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
Acenaphthene	0.037	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
Fluorene	0.079	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
Phenanthrene	0.17	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
Anthracene	0.018	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
Fluoranthene	0.0099	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
Pyrene	0.031	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
Benzo[a]anthracene	ND	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
Chrysene	0.011	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
Benzo[b]fluoranthene	ND	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
Benzo(j,k)fluoranthene	ND	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
Benzo[a]pyrene	ND	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
Dibenz[a,h]anthracene	ND	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
Benzo[g,h,i]perylene	ND	0.0073	EPA 8270D/SIM	7-24-17	7-26-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	76	32 - 122				
Pyrene-d10	78	33 - 125				
Terphenyl-d14	102	36 - 118				



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**TOTAL METALS
 EPA 6010C/7471B**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	07-210-01					
Client ID:	FL209-B12-1-2					
Arsenic	ND	5.3	6010C	7-21-17	7-21-17	
Barium	69	2.7	6010C	7-21-17	7-21-17	
Cadmium	ND	0.53	6010C	7-21-17	7-21-17	
Chromium	35	0.53	6010C	7-21-17	7-21-17	
Lead	ND	5.3	6010C	7-21-17	7-21-17	
Mercury	ND	0.27	7471B	7-24-17	7-24-17	
Selenium	ND	11	6010C	7-21-17	7-21-17	
Silver	ND	1.1	6010C	7-21-17	7-21-17	

Lab ID:	07-210-04					
Client ID:	FL209-B10-1-2					
Arsenic	ND	5.3	6010C	7-21-17	7-21-17	
Lead	9.2	5.3	6010C	7-21-17	7-21-17	

Lab ID:	07-210-08					
Client ID:	FL209-Drum-C					
Arsenic	ND	5.5	6010C	7-21-17	7-21-17	
Barium	54	2.7	6010C	7-21-17	7-21-17	
Cadmium	ND	0.55	6010C	7-21-17	7-21-17	
Chromium	34	0.55	6010C	7-21-17	7-21-17	
Lead	ND	5.5	6010C	7-21-17	7-21-17	
Mercury	ND	0.27	7471B	7-24-17	7-24-17	
Selenium	ND	11	6010C	7-21-17	7-21-17	
Silver	ND	1.1	6010C	7-21-17	7-21-17	



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**NWTPH-Gx
 QUALITY CONTROL**

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0724S1					
Gasoline	ND	5.0	NWTPH-Gx	7-24-17	7-24-17	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	86	63-124				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	07-137-01							
	ORIG	DUP						
Gasoline	40.5	40.5	NA	NA	NA	NA	0	30
Surrogate:								
Fluorobenzene				82	83	63-124		



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**NWTPH-Dx
QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0724S2					
Diesel Range Organics	ND	25	NWTPH-Dx	7-24-17	7-24-17	
Lube Oil Range Organics	ND	50	NWTPH-Dx	7-24-17	7-24-17	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	92	50-150				

				Source	Percent	Recovery			RPD	
Analyte	Result		Spike Level		Result	Recovery	Limits	RPD	Limit	Flags
DUPLICATE										
Laboratory ID:	07-210-06									
	ORIG	DUP								
Diesel Range	ND	ND	NA	NA		NA	NA	NA	NA	
Lube Oil Range	ND	ND	NA	NA		NA	NA	NA	NA	
Surrogate:										
o-Terphenyl						81	101	50-150		



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VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0724S1					
Dichlorodifluoromethane	ND	0.0017	EPA 8260C	7-24-17	7-24-17	
Chloromethane	ND	0.0067	EPA 8260C	7-24-17	7-24-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Bromomethane	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Chloroethane	ND	0.0050	EPA 8260C	7-24-17	7-24-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Acetone	ND	0.010	EPA 8260C	7-24-17	7-24-17	
Iodomethane	ND	0.0050	EPA 8260C	7-24-17	7-24-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Methylene Chloride	ND	0.010	EPA 8260C	7-24-17	7-24-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	7-24-17	7-24-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
2-Butanone	ND	0.0050	EPA 8260C	7-24-17	7-24-17	
Bromochloromethane	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Chloroform	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Benzene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Trichloroethene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Dibromomethane	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
2-Chloroethyl Vinyl Ether	ND	0.0063	EPA 8260C	7-24-17	7-24-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	7-24-17	7-24-17	
Toluene	ND	0.0050	EPA 8260C	7-24-17	7-24-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	



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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0724S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
2-Hexanone	ND	0.0050	EPA 8260C	7-24-17	7-24-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Chlorobenzene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Ethylbenzene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
m,p-Xylene	ND	0.0020	EPA 8260C	7-24-17	7-24-17	
o-Xylene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Styrene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Bromoform	ND	0.0050	EPA 8260C	7-24-17	7-24-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Bromobenzene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	7-24-17	7-24-17	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	7-24-17	7-24-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	7-24-17	7-24-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	7-24-17	7-24-17	
Naphthalene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-24-17	7-24-17	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	97	73-134				
Toluene-d8	94	81-124				
4-Bromofluorobenzene	95	80-131				



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METHOD BLANK QUALITY CONTROL
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0725S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Chloromethane	ND	0.0050	EPA 8260C	7-25-17	7-25-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Bromomethane	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Chloroethane	ND	0.0050	EPA 8260C	7-25-17	7-25-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Acetone	ND	0.010	EPA 8260C	7-25-17	7-25-17	
Iodomethane	ND	0.0050	EPA 8260C	7-25-17	7-25-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Methylene Chloride	ND	0.010	EPA 8260C	7-25-17	7-25-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	7-25-17	7-25-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
2-Butanone	ND	0.0050	EPA 8260C	7-25-17	7-25-17	
Bromochloromethane	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Chloroform	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Benzene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Trichloroethene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Dibromomethane	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	7-25-17	7-25-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	7-25-17	7-25-17	
Toluene	ND	0.0050	EPA 8260C	7-25-17	7-25-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	



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METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0725S1						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
2-Hexanone	ND	0.0050	EPA 8260C	7-25-17	7-25-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Chlorobenzene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Ethylbenzene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
m,p-Xylene	ND	0.0020	EPA 8260C	7-25-17	7-25-17	
o-Xylene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Styrene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Bromoform	ND	0.0050	EPA 8260C	7-25-17	7-25-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Bromobenzene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	7-25-17	7-25-17	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	7-25-17	7-25-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	7-25-17	7-25-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	7-25-17	7-25-17	
Naphthalene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	7-25-17	7-25-17	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	116	73-134				
Toluene-d8	110	81-124				
4-Bromofluorobenzene	108	80-131				



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 Project: 4082-039-01

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits		RPD	Limit	Flags
					Recovery				RPD		
SPIKE BLANKS											
Laboratory ID:	SB0724S1										
	SB	SBD	SB	SBD	SB	SBD					
1,1-Dichloroethene	0.0525	0.0495	0.0500	0.0500	105	99	66-127	6		15	
Benzene	0.0525	0.0502	0.0500	0.0500	105	100	76-122	4		15	
Trichloroethene	0.0529	0.0530	0.0500	0.0500	106	106	78-120	0		15	
Toluene	0.0541	0.0546	0.0500	0.0500	108	109	83-120	1		15	
Chlorobenzene	0.0471	0.0462	0.0500	0.0500	94	92	81-120	2		15	
Surrogate:											
Dibromofluoromethane					94	89	73-134				
Toluene-d8					93	89	81-124				
4-Bromofluorobenzene					94	88	80-131				



Date of Report: July 27, 2017
 Samples Submitted: July 21, 2017
 Laboratory Reference: 1707-210
 Project: 4082-039-01

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits		RPD	RPD Limit	Flags
					Recovery						
SPIKE BLANKS											
Laboratory ID:	SB0725S1										
	SB	SBD	SB	SBD	SB	SBD					
1,1-Dichloroethene	0.0483	0.0499	0.0500	0.0500	97	100	66-127	3		15	
Benzene	0.0505	0.0518	0.0500	0.0500	101	104	76-122	3		15	
Trichloroethene	0.0511	0.0525	0.0500	0.0500	102	105	78-120	3		15	
Toluene	0.0530	0.0551	0.0500	0.0500	106	110	83-120	4		15	
Chlorobenzene	0.0447	0.0407	0.0500	0.0500	89	81	81-120	9		15	
Surrogate:											
Dibromofluoromethane					109	104	73-134				
Toluene-d8					106	99	81-124				
4-Bromofluorobenzene					107	100	80-131				



Date of Report: July 27, 2017
 Samples Submitted: July 21, 2017
 Laboratory Reference: 1707-210
 Project: 4082-039-01

**PAHs EPA 8270D/SIM
 METHOD BLANK QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB0724S1						
Naphthalene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
2-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
1-Methylnaphthalene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
Acenaphthylene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
Acenaphthene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
Fluorene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
Phenanthrene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
Anthracene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
Fluoranthene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
Pyrene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
Benzo[a]anthracene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
Chrysene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
Benzo[b]fluoranthene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
Benzo[j,k]fluoranthene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
Benzo[a]pyrene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
Indeno(1,2,3-c,d)pyrene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
Dibenz[a,h]anthracene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
Benzo[g,h,i]perylene	ND	0.0067	EPA 8270D/SIM	7-24-17	7-25-17	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
2-Fluorobiphenyl	71	32 - 122				
Pyrene-d10	81	33 - 125				
Terphenyl-d14	91	36 - 118				



Date of Report: July 27, 2017
 Samples Submitted: July 21, 2017
 Laboratory Reference: 1707-210
 Project: 4082-039-01

**PAHs EPA 8270D/SIM
 SB/SBD QUALITY CONTROL**

Matrix: Soil
 Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0724S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	0.0618	0.0658	0.0833	0.0833	74	79	58 - 114	6	18	
Acenaphthylene	0.0688	0.0701	0.0833	0.0833	83	84	54 - 127	2	15	
Acenaphthene	0.0652	0.0691	0.0833	0.0833	78	83	58 - 119	6	15	
Fluorene	0.0693	0.0732	0.0833	0.0833	83	88	60 - 123	5	15	
Phenanthrene	0.0672	0.0697	0.0833	0.0833	81	84	54 - 120	4	15	
Anthracene	0.0718	0.0742	0.0833	0.0833	86	89	55 - 152	3	15	
Fluoranthene	0.0680	0.0699	0.0833	0.0833	82	84	56 - 129	3	15	
Pyrene	0.0689	0.0700	0.0833	0.0833	83	84	60 - 126	2	15	
Benzo[a]anthracene	0.0763	0.0759	0.0833	0.0833	92	91	56 - 137	1	15	
Chrysene	0.0686	0.0703	0.0833	0.0833	82	84	59 - 122	2	15	
Benzo[b]fluoranthene	0.0675	0.0709	0.0833	0.0833	81	85	46 - 133	5	21	
Benzo(j,k)fluoranthene	0.0689	0.0682	0.0833	0.0833	83	82	47 - 129	1	21	
Benzo[a]pyrene	0.0676	0.0689	0.0833	0.0833	81	83	54 - 132	2	15	
Indeno(1,2,3-c,d)pyrene	0.0641	0.0653	0.0833	0.0833	77	78	54 - 129	2	15	
Dibenz[a,h]anthracene	0.0694	0.0711	0.0833	0.0833	83	85	59 - 122	2	15	
Benzo[g,h,i]perylene	0.0642	0.0656	0.0833	0.0833	77	79	57 - 125	2	16	
Surrogate:										
2-Fluorobiphenyl					79	83	32 - 122			
Pyrene-d10					83	86	33 - 125			
Terphenyl-d14					89	90	36 - 118			



Date of Report: July 27, 2017
Samples Submitted: July 21, 2017
Laboratory Reference: 1707-210
Project: 4082-039-01

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

Date Extracted: 7-21&24-17

Date Analyzed: 7-21&24-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB0721SM3&MB0724S2

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



Date of Report: July 27, 2017
 Samples Submitted: July 21, 2017
 Laboratory Reference: 1707-210
 Project: 4082-039-01

**TOTAL METALS
 EPA 6010C/7471B
 DUPLICATE QUALITY CONTROL**

Date Extracted: 7-21&24-17
 Date Analyzed: 7-21&24-17

Matrix: Soil
 Units: mg/kg (ppm)

Lab ID: 07-210-04

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	ND	ND	NA	5.0	
Barium	58.1	59.1	2	2.5	
Cadmium	ND	ND	NA	0.50	
Chromium	28.1	26.6	6	0.50	
Lead	8.65	9.75	12	5.0	
Mercury	5.98	5.52	8	5.0	
Selenium	ND	ND	NA	10	
Silver	ND	ND	NA	1.0	



Date of Report: July 27, 2017
 Samples Submitted: July 21, 2017
 Laboratory Reference: 1707-210
 Project: 4082-039-01

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

Date Extracted: 7-21&24-17

Date Analyzed: 7-21&24-17

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 07-210-04

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	93.3	93	95.6	96	3	
Barium	100	162	104	160	102	1	
Cadmium	50.0	47.2	94	47.2	94	0	
Chromium	100	121	93	122	94	0	
Lead	250	240	92	237	92	1	
Mercury	0.500	6.20	44	6.82	168	10	A
Selenium	100	90.5	91	92.6	93	2	
Silver	25.0	20.5	82	21.1	84	3	



Date of Report: July 27, 2017
Samples Submitted: July 21, 2017
Laboratory Reference: 1707-210
Project: 4082-039-01

% MOISTURE

Date Analyzed: 7-24&25-17

Client ID	Lab ID	% Moisture
FL209-B12-1-2	07-210-01	6
FL209-B12-3.5-4	07-210-02	17
FL209-B12-5.5-6.5	07-210-03	7
FL209-B10-1-2	07-210-04	6
FL209-B10-5.5-6.5	07-210-05	9
FL209-B10-10-10.5	07-210-06	8
FL209-B10-25-26	07-210-07	9
FL209-Drum-C	07-210-08	9





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





Page 1 of 1

07-210

Lab ID	Sample Identification

Date	Time	Matrix
Sampled	Sampled	Sampled

% Moisture

×	×	×	×	×	×	×	×

Comments/Special Instructions

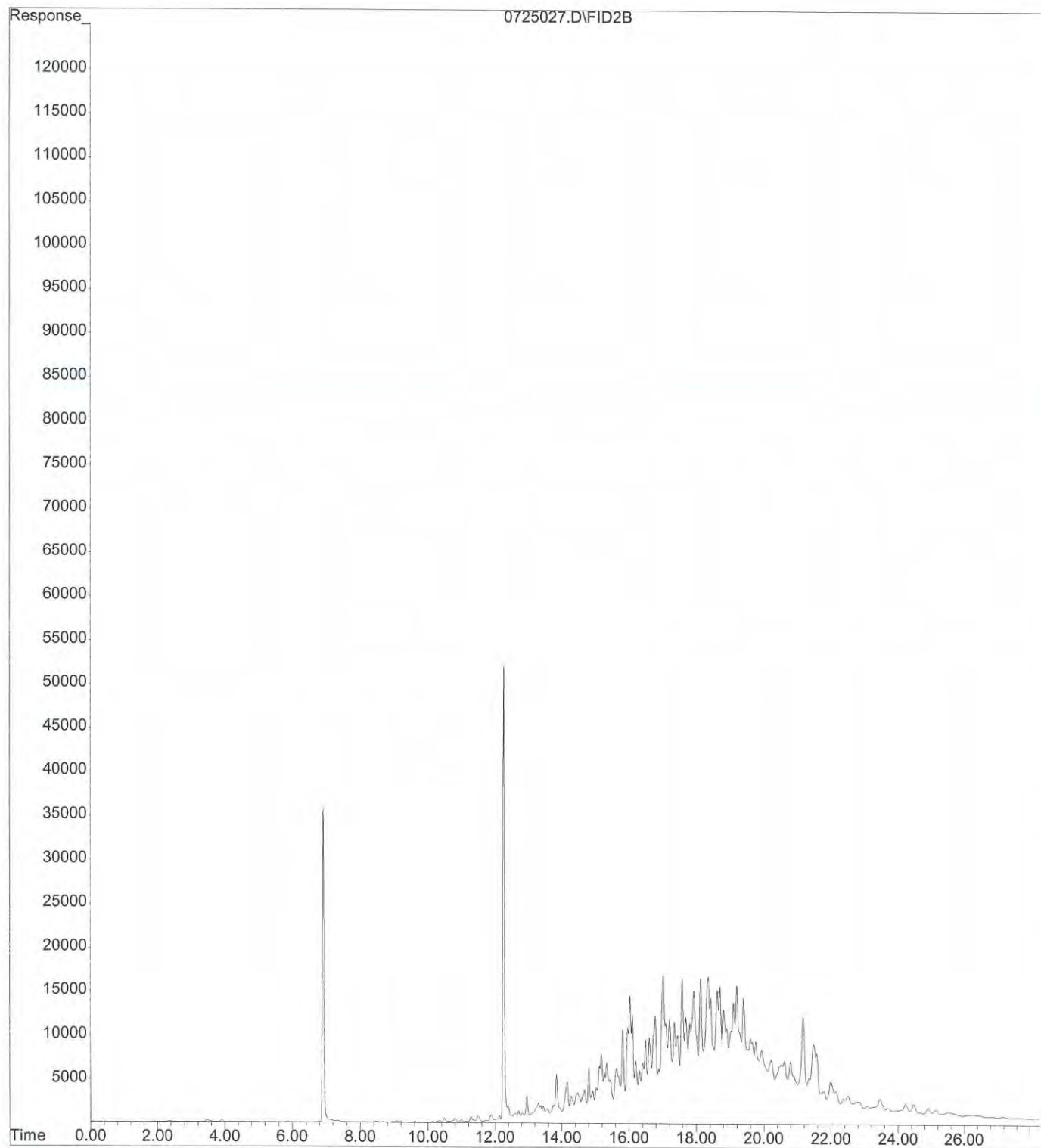
AK repeating burst - 7 ppm/sec

Reviewed/Date

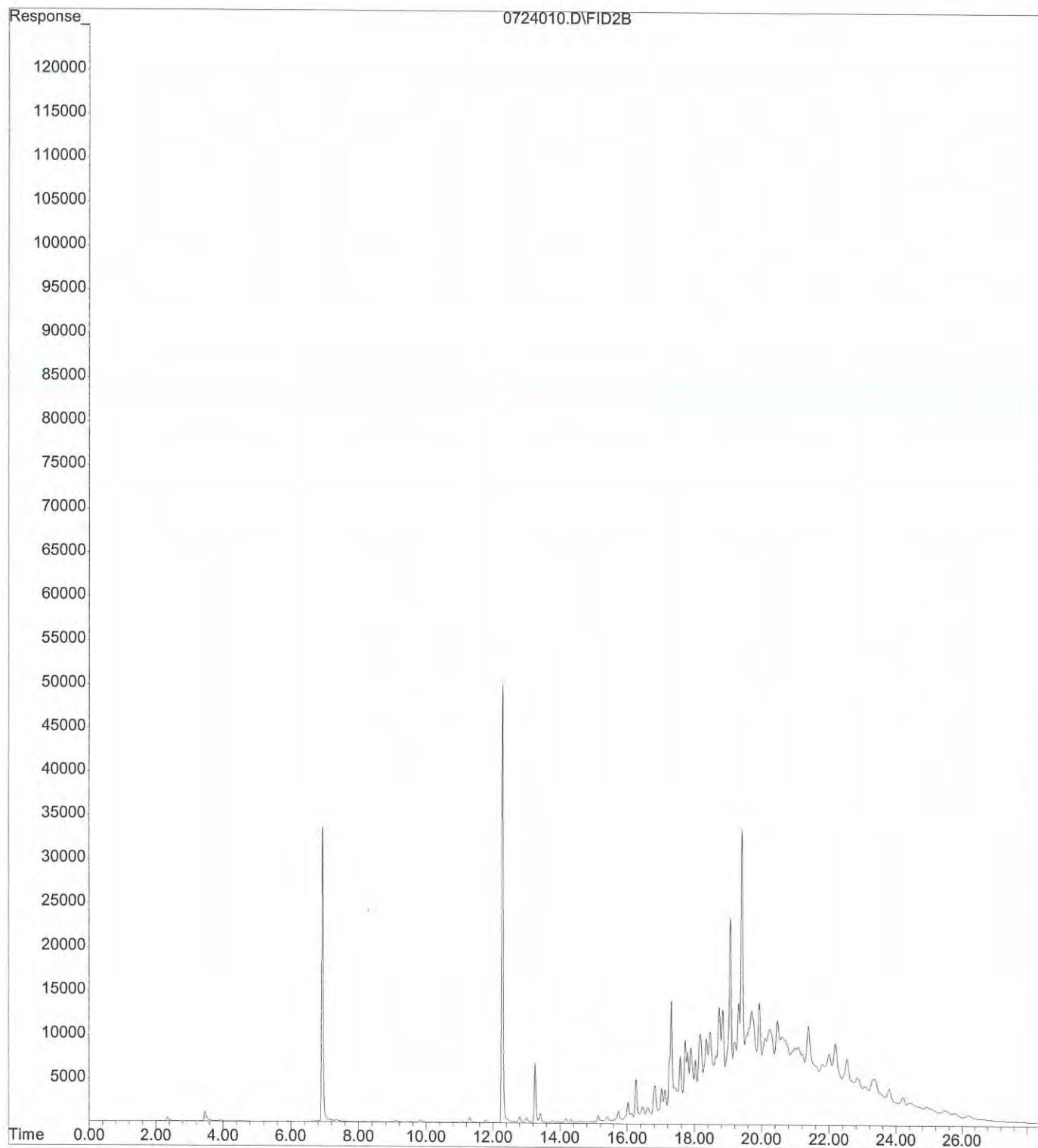
Data Package: Standard ☐ Level III ☐ Level IV ☐

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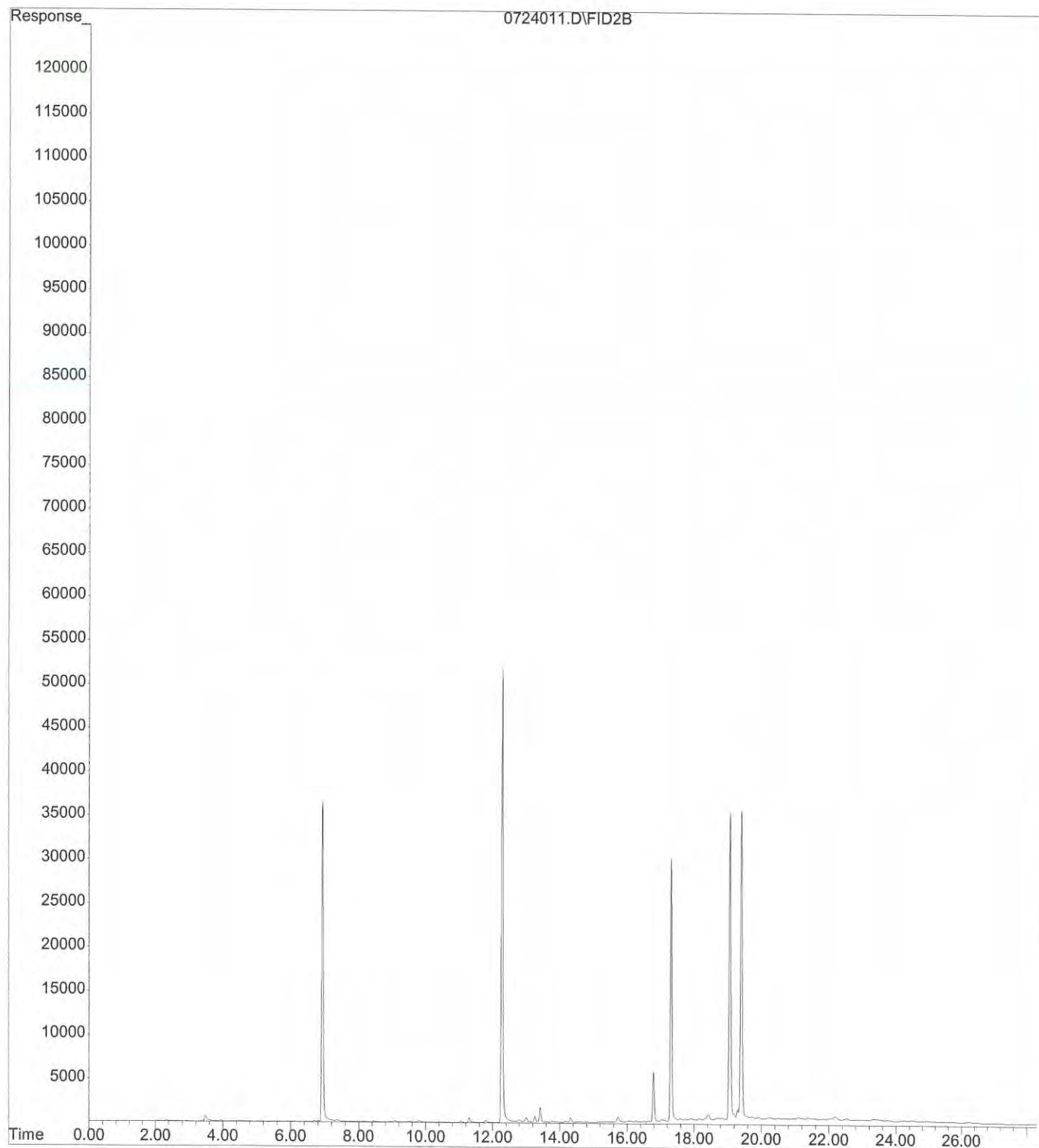
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Instrument : Daryl
Sample Name: 07-210-01s 1:100 rr
Misc Info :
Vial Number: 27



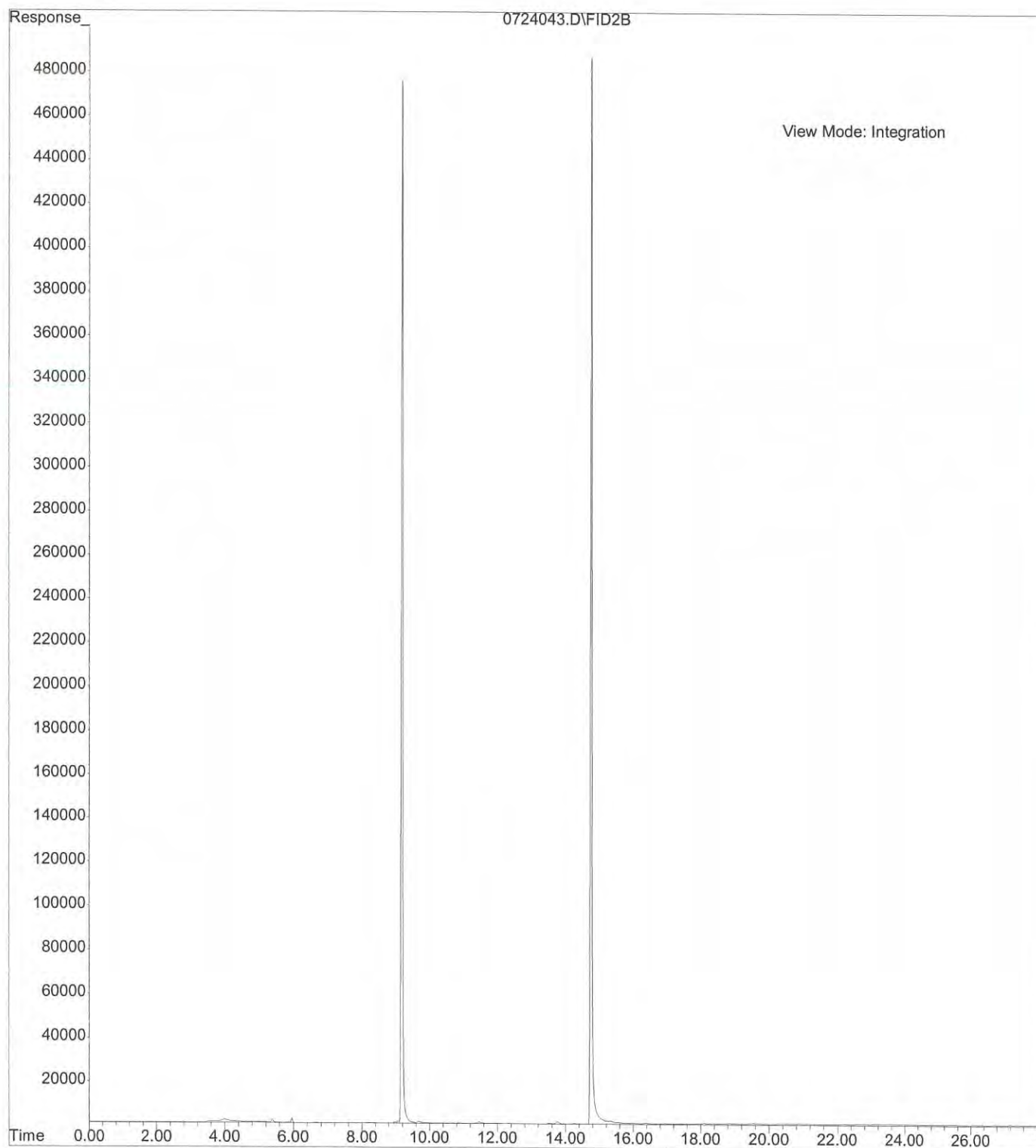
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Acquired : 24 Jul 2017 17:19 using AcqMethod 170710G.M
Instrument : Daryl
Sample Name: 07-210-02s 1:100
Misc Info :
Vial Number: 10



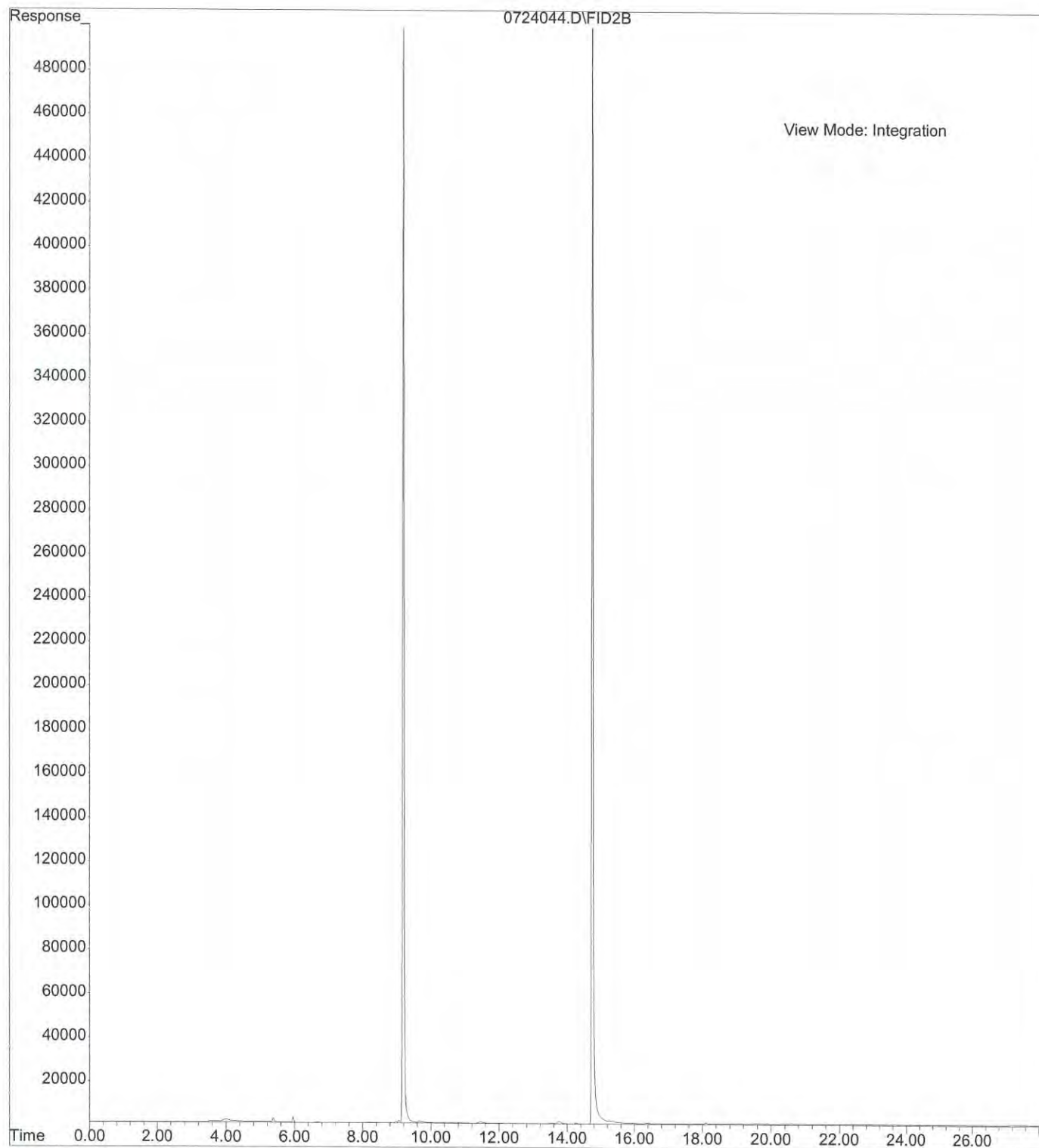
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Acquired : 24 Jul 2017 17:54 using AcqMethod 170710G.M
Instrument : Daryl
Sample Name: 07-210-03s 1:100
Misc Info :
Vial Number: 11



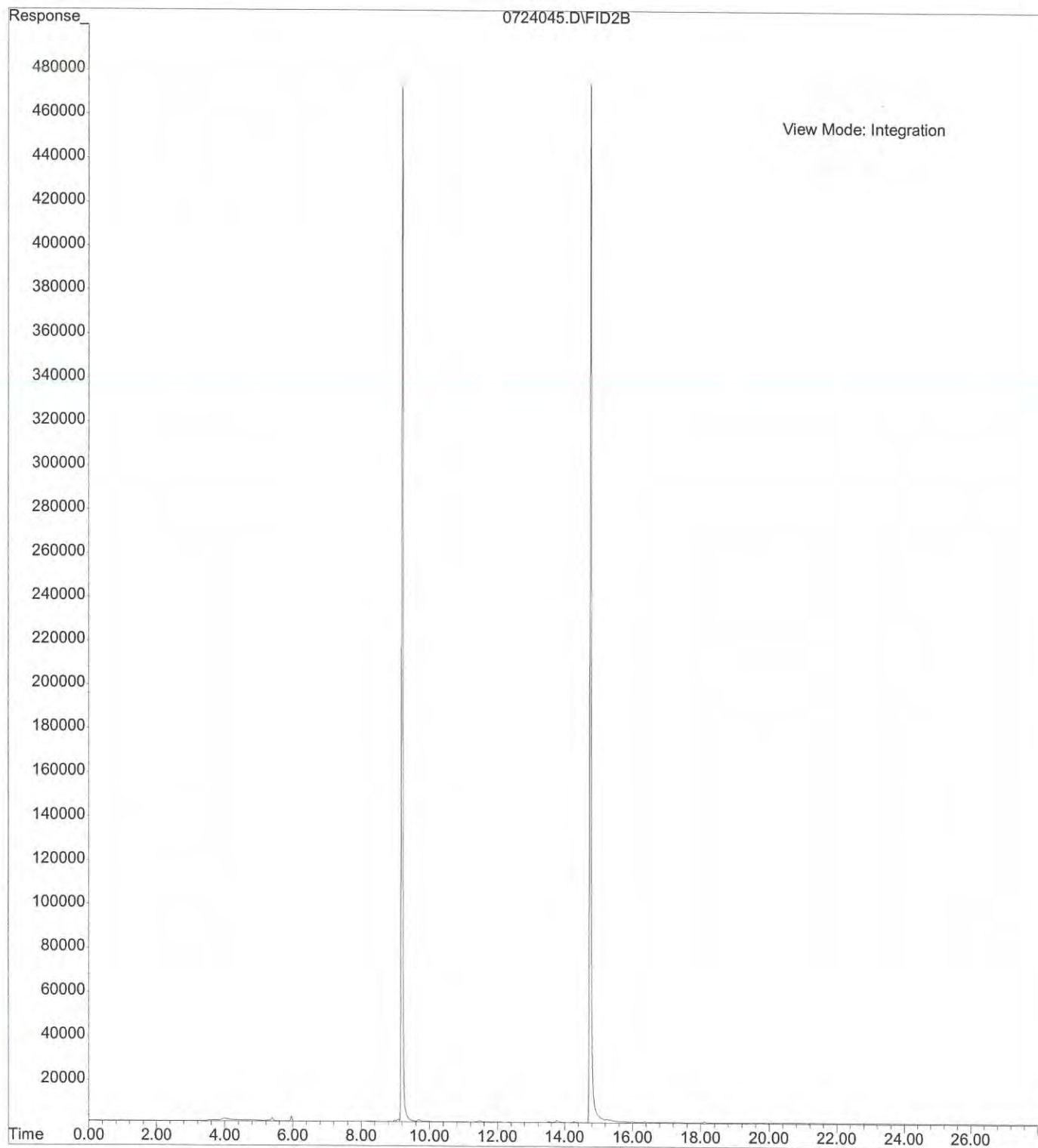
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Instrument : Hope
Sample Name: 07-210-05s
Misc Info :
Vial Number: 43



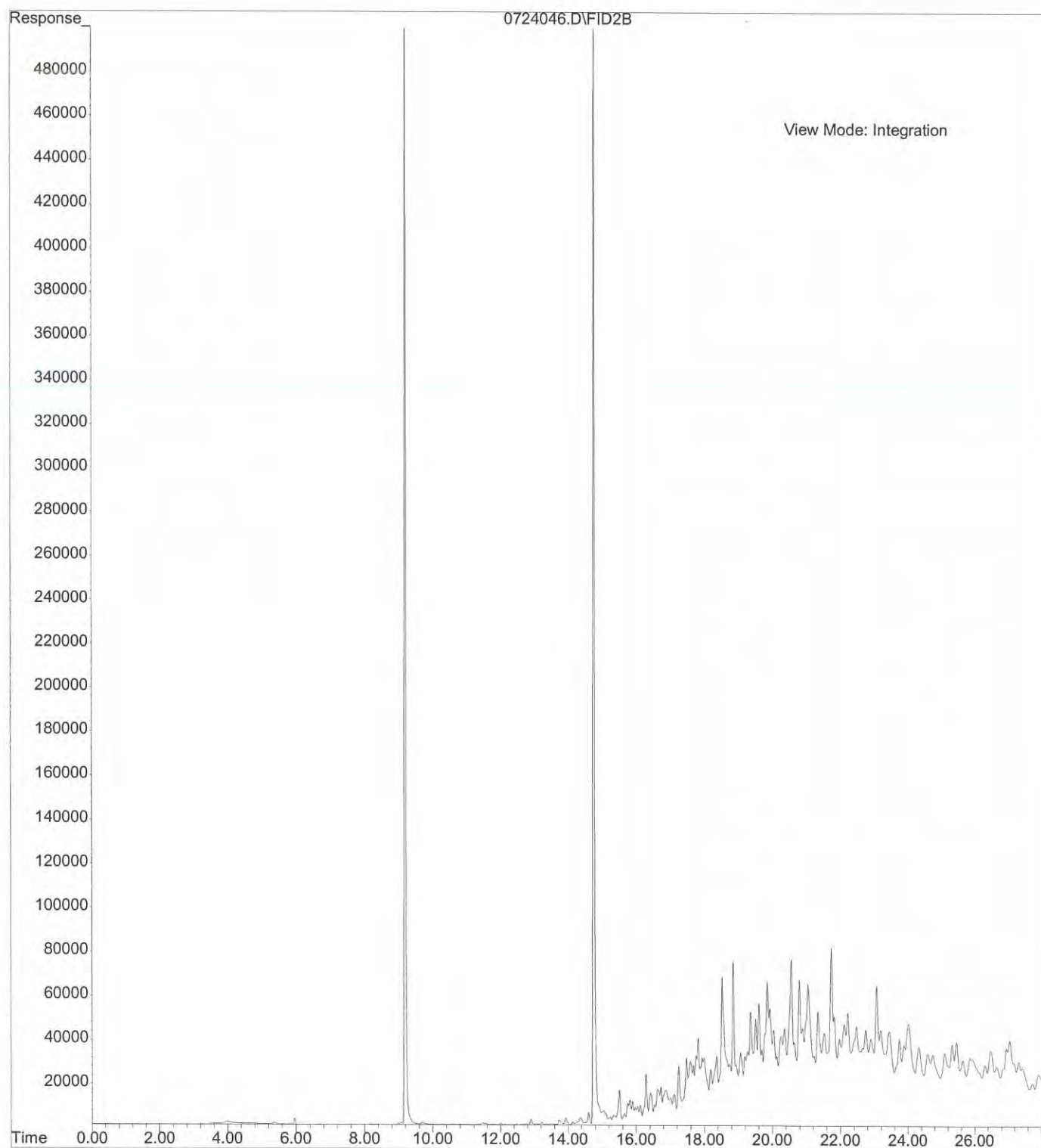
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Instrument : Hope
Sample Name: 07-210-06s
Misc Info :
Vial Number: 44



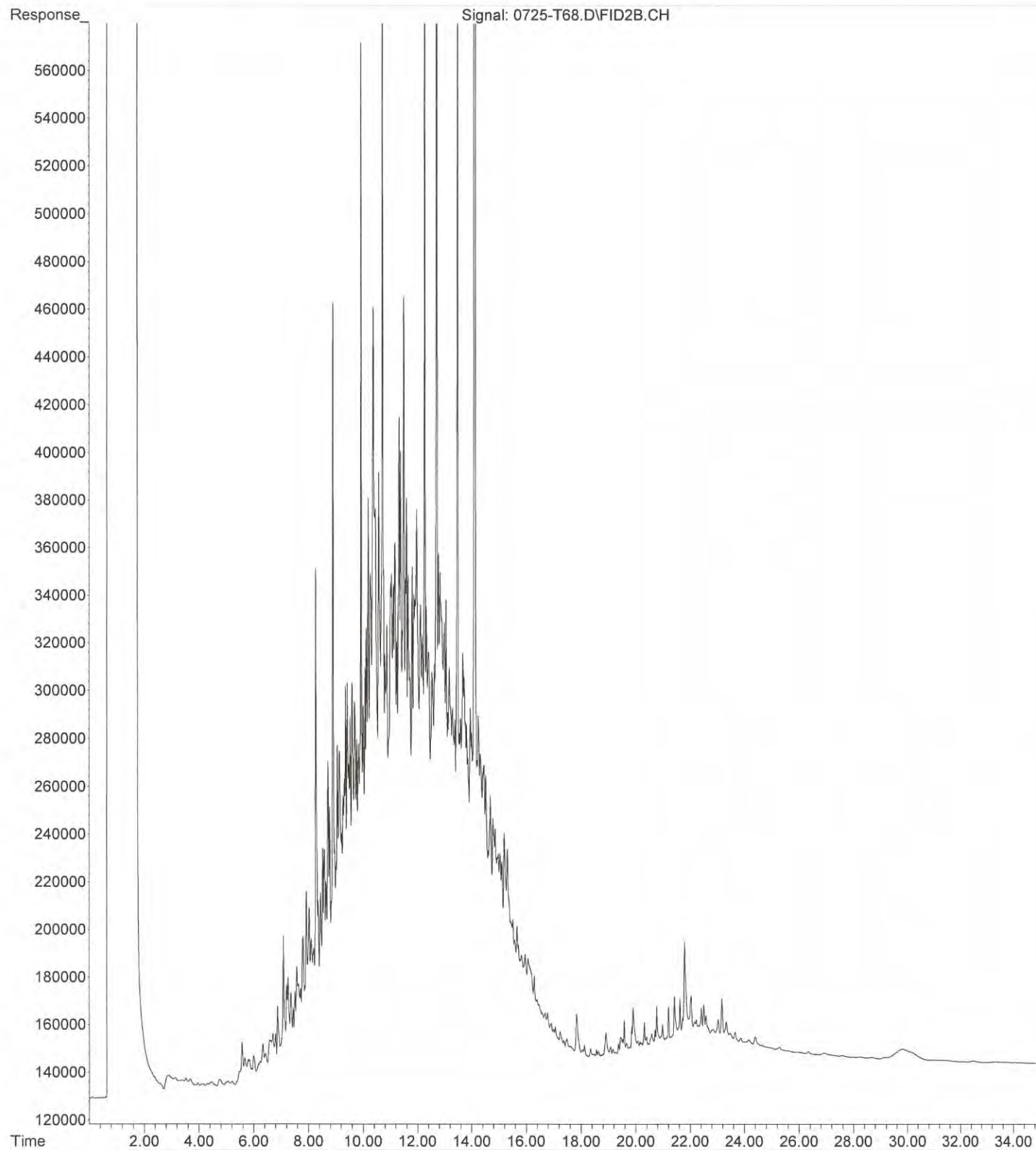
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Operator :
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Instrument : Hope
Sample Name: 07-210-07s
Misc Info :
Vial Number: 45



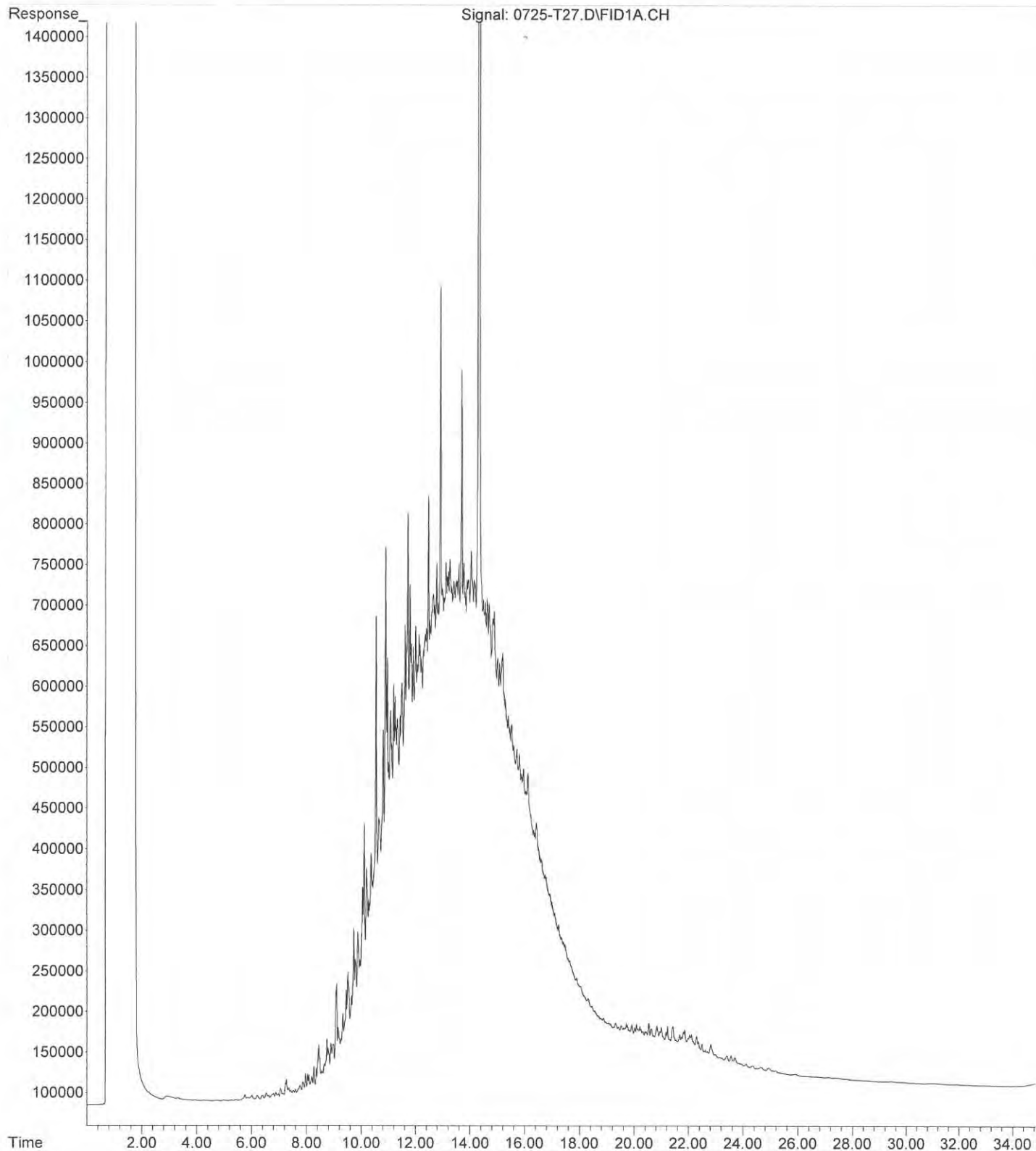
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Operator :
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Instrument : Hope
Sample Name: 07-210-08s
Misc Info :
Vial Number: 46



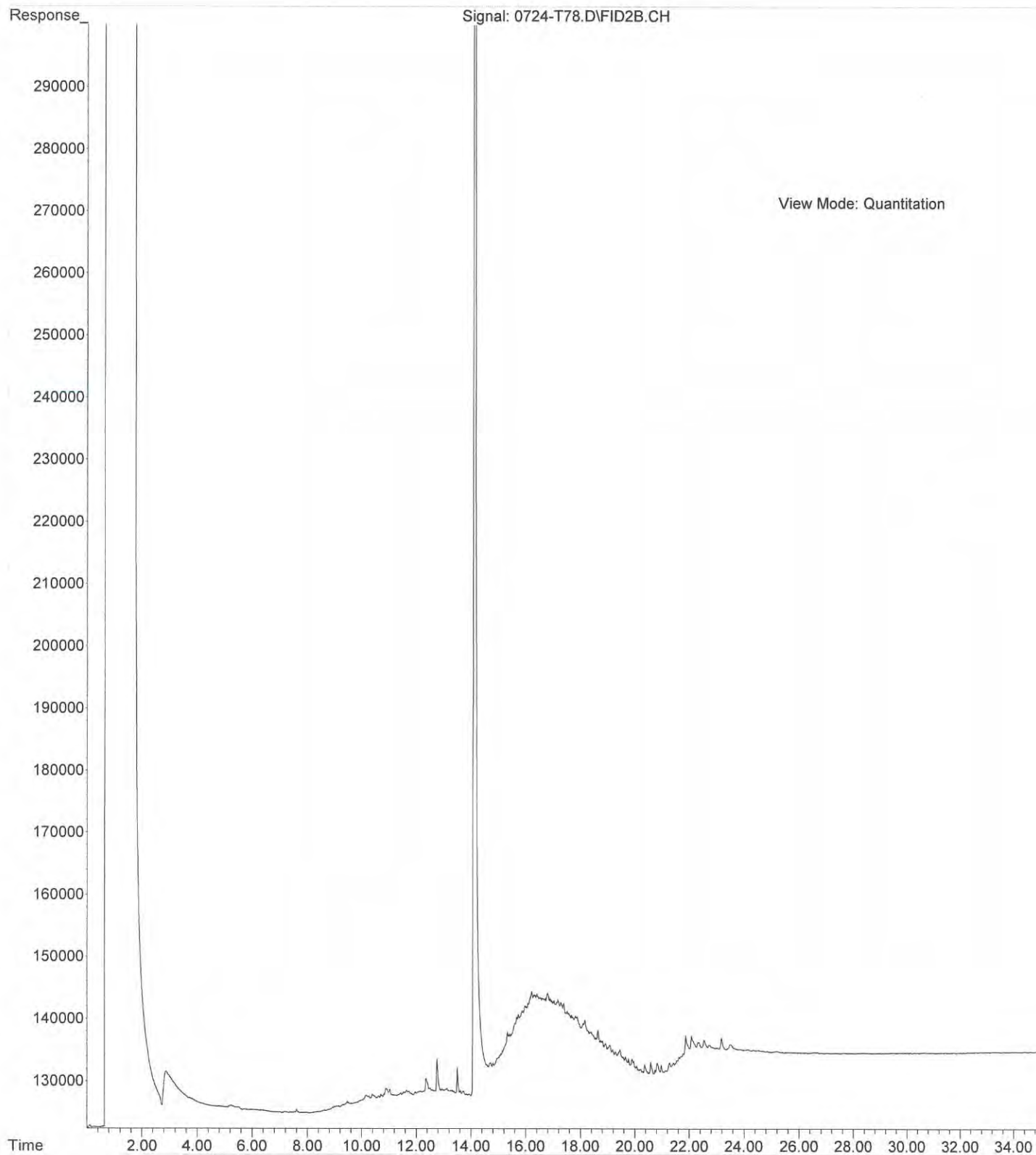
File :C:\msdchem\1\DATA\T170725.SEC\0725-T68.D
Operator : ZT
Acquired : 26 Jul 2017 1:19 using AcqMethod T161216F.M
Instrument : Teri
Sample Name: 07-210-01
Misc Info :
Vial Number: 68



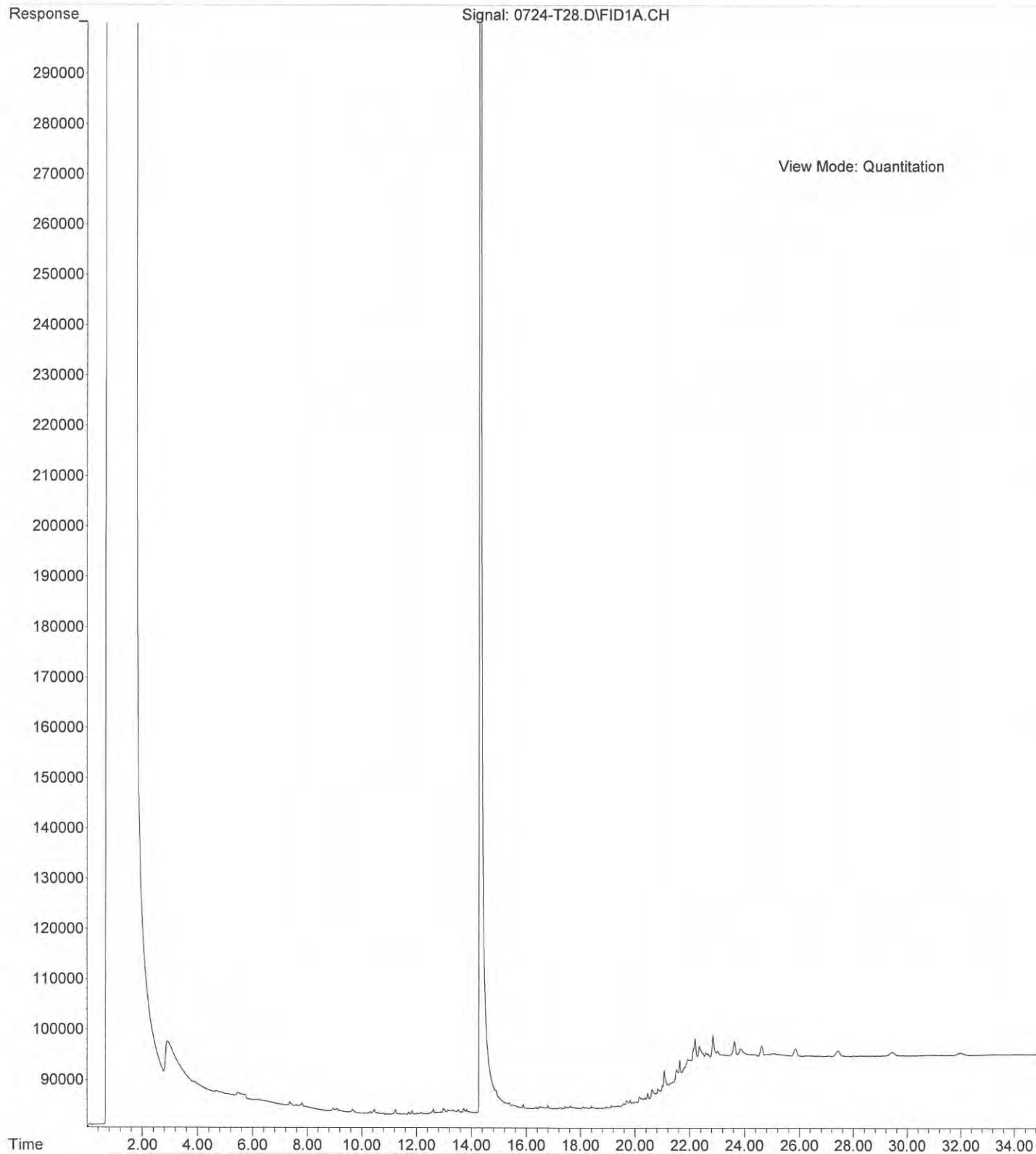
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Operator : ZT
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Instrument : Teri
Sample Name: 07-210-02
Misc Info :
Vial Number: 27



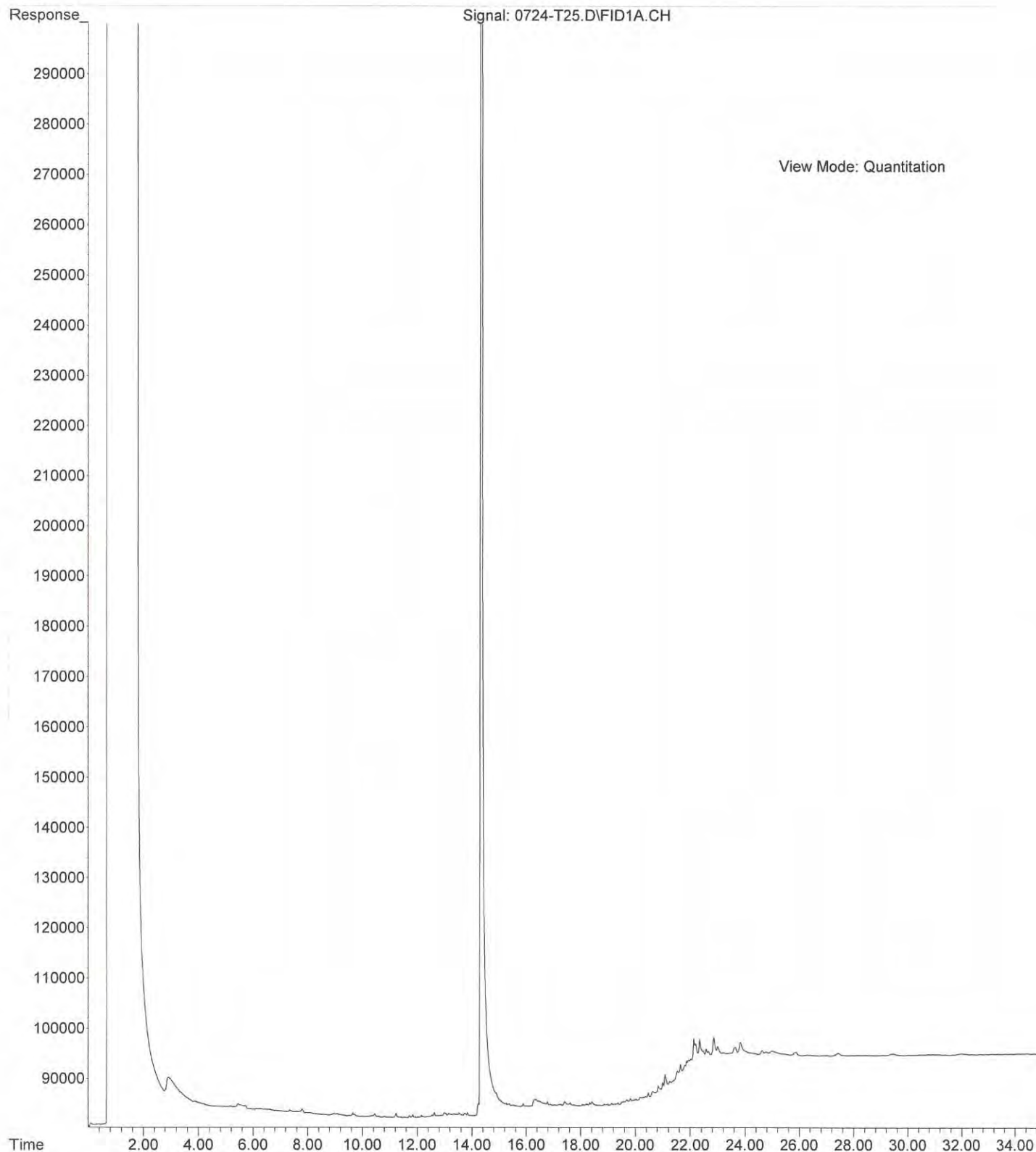
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Operator : ZT
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Instrument : Teri
Sample Name: 07-210-03
Misc Info :
Vial Number: 78



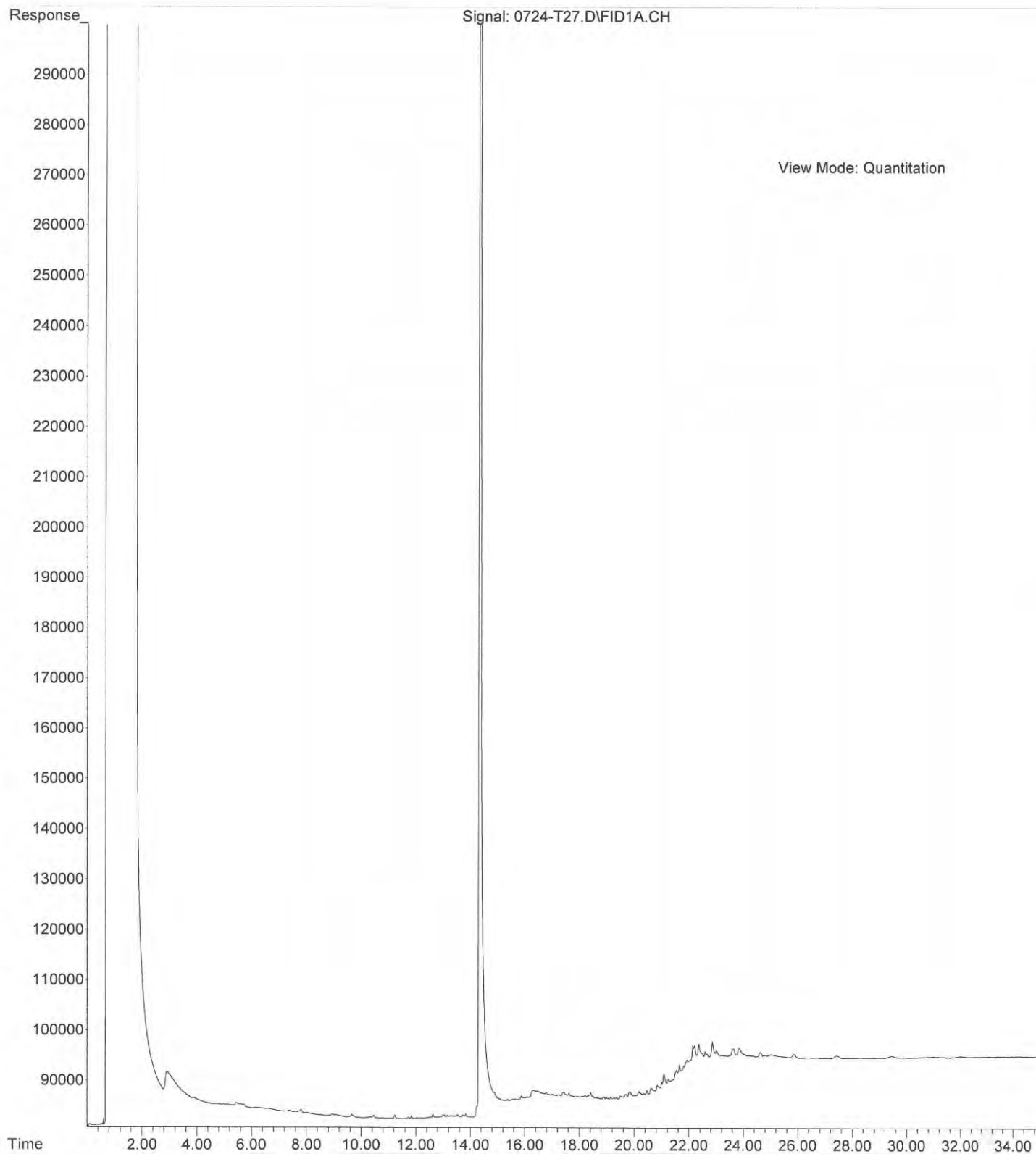
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Instrument : Teri
Sample Name: 07-210-05
Misc Info :
Vial Number: 28



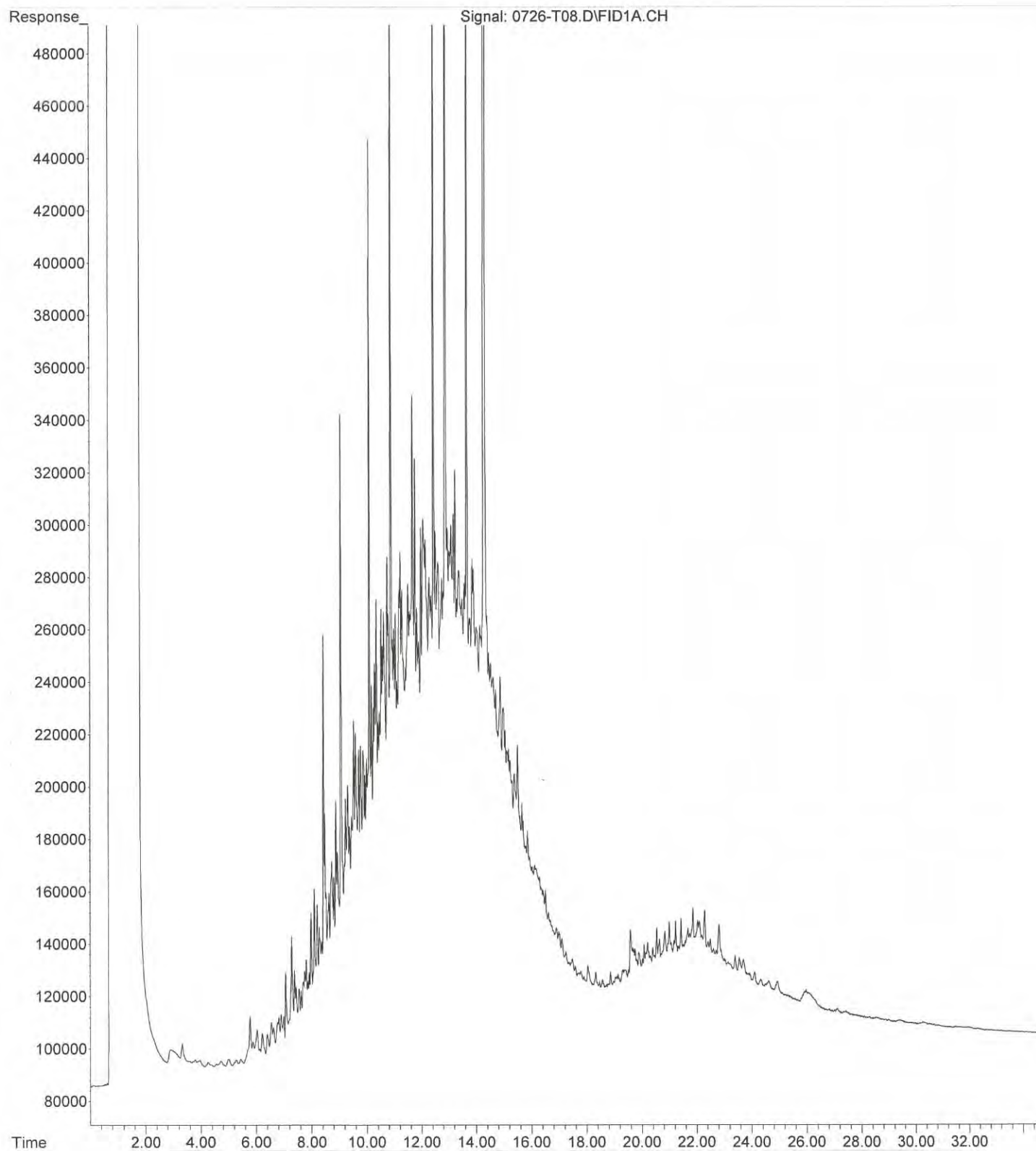
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Operator : ZT
Acquired : 25 Jul 2017 2:08 using AcqMethod T161216F.M
Instrument : Teri
Sample Name: 07-210-06
Misc Info :
Vial Number: 25



File :C:\msdchem\1\DATA\T170724\0724-T27.D
Operator : ZT
Acquired : 25 Jul 2017 3:34 using AcqMethod T161216F.M
Instrument : Teri
Sample Name: 07-210-07
Misc Info :
Vial Number: 27



File :C:\msdchem\1\DATA\T170726\0726-T08.D
Operator : ZT
Acquired : 26 Jul 2017 16:38 using AcqMethod T161216F.M
Instrument : Teri
Sample Name: 07-210-08
Misc Info :
Vial Number: 8



APPENDIX C
EXCERPTS FROM SOUTHGATE OIL ECOLOGY FILE



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

P.O. Box 47600 • Olympia, Washington 98504-7600
(360) 407-6000 • TDD Only (Hearing Impaired) (360) 407-6006

June 9, 2006

MARSILIO DIGIOVANNI
17015 53RD AVE S
SEATTLE WA

**Re: Further Action Determination under WAC 173-340-515(5) for the following
Hazardous Waste Site:**

- Site Name: SOUTHGATE OIL
- Site Address: 23428 PACIFIC HWY S KENT WA
- Facility/Site No.: 84946863
- VCP No.: NW0982

Dear: MR DIGIOVANNI

Thank you for submitting your independent remedial action report for the SOUTHGATE OIL facility (Site) for review by the State of Washington Department of Ecology (Ecology) under the Voluntary Cleanup Program (VCP). Ecology appreciates your initiative in pursuing this administrative option for cleaning up hazardous waste sites under the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

This letter constitutes an advisory opinion regarding whether further remedial action is necessary at the Site to meet the substantive requirements of MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC. Ecology is providing this advisory opinion under the specific authority of RCW 70.105D.030(1)(i) and WAC 173-340-515(5).

This opinion does not resolve a person's liability to the state under MTCA or protect a person from contribution claims by third parties for matters addressed by the opinion. The state does not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70.105D.040(4). The opinion is advisory only and not binding on Ecology.

Ecology's Toxics Cleanup Program has reviewed the following information regarding the Site:

1. April 10, 2006 Notification of Pending Inactive Determination Status for the following Hazardous Waste Site enrolled in the Voluntary Cleanup Program by Ecology

2. June 9, 2006 Determination Status for the following Hazardous Waste Site enrolled in the Voluntary Cleanup Program by Ecology

The documents listed above will be kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. Appointments can be made by calling the NWRO resource contact at (425) 649-7190.

The Site is defined by the extent of contamination caused by the following release(s):

- TPH diesel in the Soil;

The Site is more particularly described in Enclosure A to this letter, which includes a detailed Site diagram. The description of the Site is based solely on the information contained in the documents listed above.

Based on a review of the independent remedial action report and supporting documentation listed above, **Ecology has determined that the independent remedial action(s) performed at the Site are not sufficient to meet the substantive requirements contained in MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing any of the contamination at the Site.** Therefore, pursuant to WAC 173-340-515(5), Ecology is issuing this opinion that **further remedial action is necessary** at the Site under MTCA.

Further Action is required at this site for the following reasons:

- Potential Off property migration of TPH diesel north of the site. Cleanup stopped at the property boundary
- Restrictive Covenant may be needed for residual contamination off property limits
- Lack of active cleanup activity in the past 12 months.

Ecology's Interim NFA of 2/10/03 issued to this site is hereby rescinded.

Please note that this opinion is based solely on the information contained in the documents listed above. Therefore, if any of the information contained in those documents is materially false or misleading, then this opinion will automatically be rendered null and void.

The state, Ecology, and its officers and employees make no guarantees or assurances by providing this opinion, and no cause of action against the state, Ecology, its officers or employees may arise from any act or omission in providing this opinion.

Again, Ecology appreciates your initiative in conducting independent remedial action and requesting technical consultation under the VCP. As the cleanup of the Site progresses, you may request additional consultative services under the VCP, including assistance in identifying

Identify & Terminate Inactive Sites
Further Action Determination
VCP- SOUTHGATE OIL TCP ID# NW0982
June 9, 2006

applicable regulatory requirements and opinions regarding whether remedial actions proposed for or performed at the Site meet those requirements.

If you have any questions you may reach me at (360) 407-7244.

Sincerely



Nnamdi Madakor, VCP Coordinator
HQ - Toxic Cleanup Program

cc: Mark Edens, NWRO VCP Unit Manager.
Dale Myers, NWRO Data Coordinator
Trish Akana, Ecology (NW0982)

NM:nm



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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(360) 407-6000 • TDD Only (Hearing Impaired) (360) 407-6006

CERTIFIED MAIL

June 9, 2006

MARSILIO DIGIOVANNI
17015 53RD AVE S
SEATTLE WA

Re: Determination Status for the following Hazardous Waste Site enrolled in the Voluntary Cleanup Program:

- Site Name: SOUTHGATE OIL
- Site Address: 23428 PACIFIC HWY S KENT WA
- Facility/Site No.: 84946863
- VCP No.: NW0982

Dear: MR DIGIOVANNI

This is a follow-up to the Notification of Pending Inactive Determination letter (Notification letter) we sent to you on April 10, 2006. The Notification letter requested a site status update from you within 30 days of the date of the letter. Because we did not receive the update by May 10, 2006, **we are removing your site from the Voluntary Cleanup Program (VCP).**

The status of this site has been updated in Department of Ecology's database of contaminated sites. Once you are ready to pursue cleanup activities, you are welcome to reapply to the VCP. If you have any questions you may reach me at (360) 407-7244.

Sincerely



Nnamdi Madakor, VCP Coordinator
HQ - Toxic Cleanup Program

cc: Mark Edens, NWRO VCP Unit Manager.
Dale Myers, NWRO Data Coordinator
Trish Akana, Ecology (NW0982)

NM:nm



STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

P.O. Box 47600 • Olympia, Washington 98504-7600
(360) 407-6000 • TDD Only (Hearing Impaired) (360) 407-6006

CERTIFIED MAIL

April 10, 2006

MARSILIO DIGIOVANNI
17015 53RD AVE S
SEATTLE WA

Re: Notification of Pending Inactive Determination Status for the following Hazardous Waste Site enrolled in the Voluntary Cleanup Program:

- Site Name: SOUTHGATE OIL
- Site Address: 23428 PACIFIC HWY S KENT WA
- Facility/Site No.: 84946863
- VCP No.: NW0982

Dear: MR DIGIOVANNI

Our records indicate that you applied for the Voluntary Cleanup Program (VCP) on 10/11/02. The Department of Ecology (Ecology) appreciates your initiative in pursuing this administrative option for cleaning up hazardous waste sites under the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

The following details site activity since the date of application:

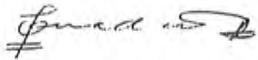
- Interim NFA for soil only on 2/10/03

The VCP is staffed to provide assistance to applicants who are actively pursuing site cleanup. Our records indicate that we have not received information regarding your progress on this site's clean up in the past twelve months. If you are still actively cleaning this site you have 30 days to provide a work summary, report, or other documentation that demonstrates you have taken cleanup actions during this past 12 months.

If no cleanup activities have occurred during the past year, or we do not hear from you by (May 10, 2006), this site will be removed from the VCP due to inactivity. The status of this site will be updated in Ecology's database of contaminated sites.

Due to significant interest in the Voluntary Cleanup Program we are not able to keep inactive sites in the program. If this site is deemed inactive, we encourage you to reapply to the VCP when you are ready to actively continue site cleanup. Your commitment to site cleanup is greatly appreciated. If you have any questions you may reach me at 360-407-7244.

Sincerely



Nnamdi Madakor, VCP Coordinator
HQ - Toxic Cleanup Program

cc: Mark Edens, NWRO VCP Unit Manager.
Dale Myers, NWRO Data Coordinator
Trish Akana, Ecology (NW0982)



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

Northwest Regional Office • 3190 160th Avenue SE • Bellevue, Washington 98008-5452 • (425) 649-7000

February 10, 2003

Mr. Marsilio DiGiovanni
Midway I & P LLC
17015 53rd Avenue South
Seattle, WA 98188

Dear Mr. DiGiovanni:

Thank you for submitting the results of your independent remedial action for review by the State of Washington Department of Ecology (Ecology). Ecology appreciates your initiative in pursuing this administrative option under the Model Toxics Control Act (MTCA).

Ecology's Toxics Cleanup Program has reviewed the following information regarding the Former Southgate Oil, 23428 Pacific Highway South, Kent:

1. Progress Site Assessment, prepared by Nowicki & Associates, Inc. / May 3, 2001.
2. Underground Storage Tank Decommissioning and Soil Remediation Project, prepared by Sound Environmental Strategies, Corp. / February 25, 2002.

The reports listed above will be kept in the Central Files of the Northwest Regional Office (NWRO) of Ecology for review by appointment only. Appointments can be made by calling Sally Perkins at the NWRO at (425) 649-7190.

Based upon the information in the report(s), Ecology has determined that, at this time, the releases of diesel-range hydrocarbons into the soil within the property boundary no longer poses a threat to human health or the environment.

Therefore, Ecology is issuing this determination that no further remedial action is necessary at this site under MTCA, chapter 70.105D RCW. However, please note that because your actions were not conducted under a consent decree with Ecology, this letter is written pursuant to RCW 70.105D030(1)(i) and does not constitute a settlement under RCW 70.105D.040(4) and is not binding to Ecology.

Ecology's "No Further Action" determination is made only with respect to the release identified in the reports listed in the reports above. This "No Further Action" determination applies to soil only within the property boundary of the Former Southgate Oil, 23428 Pacific Highway South, Kent. Diesel-range petroleum hydrocarbon soils exist along the northern property boundary of the subject property off-site beneath a paved alley.



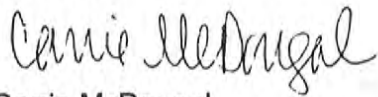
Mr. DiGiovanni
February 10, 2003
Page 2

Ecology will update its database to reflect this "No Further Action" determination for soil only within the property boundary of the Former Southgate Oil, 23428 Pacific Highway South, Kent. Your site will continue to appear in future publications of the Confirmed and Suspected Contaminated Sites Report (previously known as the Affected Media and Contaminants Report) and the Leaking Underground Storage Tank List.

The state, Ecology, and its officers and employees are immune from all liability and no cause of action of any nature may arise from any act or omission in providing this determination.

If you have questions, please contact Carrie McDougal at (425) 649-7254.

Sincerely,

A handwritten signature in cursive script that reads "Carrie McDougal".

Carrie McDougal
Toxics Cleanup Program

cm

Underground Storage Tank Decommissioning And Soil Remediation Project



DiGiovanni UST Decommissioning Project
23428 Pacific Highway South
Kent, Washington

February 25, 2002

Prepared For:
Marsilio DiGiovanni
17015 53rd Avenue South
Seattle, Washington

Prepared By:
Sound Environmental Strategies, Corp.
12351 Lake City Way NE
Seattle, Washington 98125
P: 206.306.1900 F: 206.306.1907

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1.0 INTRODUCTION

1.1 DOCUMENT PURPOSE

Sound Environmental Strategies, Corp. (SES), has prepared this underground storage tank (UST) assessment and independent cleanup report describing environmental activities conducted on behalf of Mr. Marsilio Di Giovanni, property owner for property located at 23428 Pacific Highway, Kent, Washington (Site).

Tank closure and site assessment activities were completed in accordance with the following documents published by the Washington State Department of Ecology (Ecology):

- Guidance for Site Checks and Site Assessments for Underground Storage Tanks (Ecology, February 1991);
- Guidance for Remediation of Releases from Underground Storage Tanks (Ecology, July, 1991); and,
- The Model Toxics Control Act Cleanup Regulation, Chapter 173-340 WAC (Ecology, February 2001).

SES was hired by the property owner to decommission by removal 1 - 20,000 gallon heating oil UST (UST 1) and 1 - 25,000 gallon heating oil UST (UST 2). During the UST closure activities hydrocarbon contaminated soil was identified in one of the two UST excavations. Subsequent remedial activities were completed on behalf of the property owner to address a release associated with UST 1 that had resulted in impacts to subsurface soil. This report describes subsurface investigation results, site activities and observations during UST closure and site remedial activities. This report is divided into three main sections supported by tables, figures and photographs.

SES services performed for this project, including this report, were conducted in accordance with generally accepted professional practices ordinarily exercised by other members of the environmental consulting profession, for the nature and conditions of the work completed in the same or similar localities, at the time the work was performed. These services were conducted subject to project-specific time limits and financial, physical and any other constraints applicable to this project. It is intended for the use of the client, Marsi DiGiovanni, for specific application to the referenced property. This report is not meant to represent a legal opinion. No other warranty, express or implied, is made.

1.2 SITE LOCATION AND DESCRIPTION

The Property is located at 23428 Pacific Highway S., Kent, Washington two blocks south of the Pacific Highway and Kent DeMoines Highway intersection.

1.3 PREVIOUS ON SITE ENVIRONMENTAL ACTIVITIES

Previous underground storage tank closure and environmental remediation efforts have been successfully completed at the site. In an effort to put all previous work into a single report and provide more comprehensive documentation, SES has included all available environmental reports previously completed (Appendix C). Previous environmental work conducted at the site included:

- Global Environmental, Initial Site Assessment
- Global Environmental, Progress Site Assessment 12/01/00
- Global Environmental, Progress Site Assessment 03/22/01
- Global Environmental, Progress Site Assessment 05/03/01

2.0 PRE-EXCAVATION ACTIVITIES

2.1 ANTICIPATED SITE CONDITIONS

After reviewing the previous UST Closure and environmental remediation reports prepared by Global Environmental, previous sampling activities completed on site identified gasoline and diesel-range hydrocarbons as the only constituents of concern. Based on work conducted by others, the only petroleum-contaminated soil that was anticipated was in the general vicinity of the western end of UST 1. Global encountered diesel-range hydrocarbons in soil (3100 mg/kg) near this UST. This soil was not removed by Global due its proximity to UST 1.

Further, no groundwater impacts were anticipated based on previous investigations and remediation efforts. No groundwater has been observed in any excavations at the site. The depth to groundwater at the site is approximately 50 to 75 feet below ground surface based on conversations with the Kent Fire Department, Mr. Jon Napier.

2.2 HEALTH AND SAFETY

A site-specific Health and Safety Plan was prepared in accordance with Chapter 296-62 of the Washington Administrative Code (WAC) and 29 CFR 1910.120 (Code of Federal Regulations). The HASP identified potential physical and chemical hazards and specified personal protection and safety monitoring requirements. Site health and safety meetings were conducted during fieldwork at the beginning of each workday to review aspects of the HASP, and to provide an opportunity for SES site workers and contractor personnel to discuss health and safety issues or concerns. On-site SES personnel associated with the field activities were required to be familiar with and comply with provisions put forth in the HASP. Subcontractors on-site were required to have their own HASP that identified potential physical and chemical hazards associated with their own work activities.

During intrusive field activities, the on-site SES site manager performed air monitoring using an organic vapor monitor (Mini Ray 5 Gas Analyzer [PID]). The PID was properly calibrated to 100 parts per million (ppm) isobutylene daily. Organic vapors and particulates were not recorded above normal background levels, as described in the HASP, during remedial activities at the Site. No other incidences, releases, or worker injuries were recorded during the project.

2.3 UTILITY LOCATION

Prior to implementing remedial procedures at the Site the public underground utilities alert network was notified of intrusive activities. The service contacted appropriate agencies or companies with underground utilities in the area. These agencies then marked the location of their utilities along the right-of-ways and easements of the property.

3.0 UST CLOSURE

SES utilized a vacuum pump truck to remove all liquid from each of the USTs. The liquid was disposed of at a local disposal and treatment facility. A total of 1200 gallons of liquid was removed and disposed. Once emptied, the USTs were triple rinsed with water and inerted with carbon dioxide (dry ice). An oxygen detector was used to monitor the oxygen content until oxygen levels were reduced to 10% and removal could continue.

3.1 PRODUCT DISTRIBUTION ASSEMBLY

The product distribution assembly was decommissioned by removing the backflow devices and allowing any residual product to drain back into the USTs. Water was pumped through the piping system and also drained in to the USTs. Following the draining and cleaning of the system, the assembly was dismantled and transported to Schnitger Steel, a local steel recycling facility.

3.1 UST NUMBER 1 - 20,000 GALLON HEATING OIL UST

The 20,000 gallon UST 1 was excavated using two Hitachi PC 200 excavators following the removal of the concrete driveway. Snell Crane Service used a 65-ton crane to remove the UST from the excavation. Following the removal of the UST from the excavation, the UST was inspected and showed no obvious sign of leakage. Further inspection of the UST identified that it had been lined inside with fiberglass and had a tar coating on its exterior. Two six-inch vertical piping structures were removed from the UST during the excavation process. The UST was of steel construction, measured forty feet in length by ten feet in diameter and weighed 42,000 pounds. The UST was transported by trailer to Fife Sand & Gravel for disposal.

During the excavation of UST 1, hydrocarbon odor was observed on the western end of the excavation area. This coincides with the previous finding by Global. Soil samples were collected in accordance with WAC 173-360 Washington State UST Site Assessment Requirements. The overburden to approximately 8 feet below ground surface was stockpiled and sampled in an on site laboratory by Environmental Services Network (ESN). Samples results were reported below the 2001 MTCA cleanup level for diesel-range hydrocarbons of 2000 mg/kg in all samples of stockpiled material. The excavation sidewall and bottom samples were also analyzed on site by ESN. The results of the excavation sample analysis identified diesel range hydrocarbons at depths between 8 and 25 feet below ground surface exceeding 2000 mg/kg in samples S14 (2500 mg/kg), S16 (3200 mg/kg), and S20 (6500 mg/kg) primarily on the western end of the UST excavation (Figure 3). This was consistent with the previous observations made by Global Environmental. No ground water was observed during the UST decommissioning event.

3.2 UST NUMBER 2 - 25,000 GALLON HEATING OIL UST

The 25,000 gallon UST 2 was excavated using two Hitachi PC 200 excavators following the removal of the concrete driveway and Fuel Distribution Assembly. Snell Crane Service used a 65-ton crane to remove the UST from the excavation. Following the removal of the UST from the excavation, the UST was inspected and showed no obvious sign of leakage. According to the property owner, Mr. Marsilio DiGiovanni, The UST was installed in 1996. The UST was of steel construction, double-walled and the exterior was wrapped in fiberglass. The UST measured twenty eight feet in length, by twelve feet in diameter and weighed 24,000 pounds. The UST was transported by trailer to Fife Sand & Gravel for disposal.

During the excavation of the UST, no obvious indication of hydrocarbon contamination was observed in the excavation area. Soil samples were collected in accordance with WAC 173-360 Washington State UST Site Assessment Requirements. The samples were analyzed in an on site laboratory by Environmental Services Network (ESN) (Table 3). All sample analytical results were reported below 2001 MTCA cleanup levels.

The excavated soil was stockpiled at the site. Analyses confirmed that the soil removed from the excavation was below 2000 mg/kg diesel-range hydrocarbons. No ground water was observed during the UST decommissioning event.

4.0 SUPPLEMENTAL SOIL REMEDIATION ACTIVITIES

4.1 EXCAVATION ACTIVITIES

SES removed by excavation, soil containing diesel-range hydrocarbons above the Washington Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A Diesel-Range Hydrocarbon Soil Cleanup Criteria (2000 mg/Kg) from the western half of the UST 1 excavation (Figure 3). The excavation was guided by analyses from an on site laboratory and other field parameters, including:

- Olfactory Observations
- Visual Observations
- Field Analytical Observations
 - Photoionization Detector (PID)
 - Sheen Test
 - Shaker Test

During the excavation of contaminated soil, the excavation was divided into 10-foot by 10-foot grids. Each grid extended 8 to 25 feet below ground surface. The approximate volume of soil per grid was 40 to 45 cubic yards. Soil above 8 feet in depth was consistently below 2,000 mg/kg diesel-range hydrocarbons. The soil above 8 feet was excavated and stockpiled separately (Figure 3). Using these methods, soil was identified and excavated until no indication of contaminated soil remained in the excavation along the southern, eastern and western excavation limits (Figure 3).

The excavation along the northern side was stopped at the northern property boundary. Field analytical evidence and corroborating laboratory analysis (Table 4) from samples collected along the northern property boundary show levels exceeding 2,000 mg/kg, the MTCA Method A Soil Cleanup Criteria for diesel-range hydrocarbons (Figure 2).

A total of 748 tons of soil greater than 2,000 mg/kg diesel-range hydrocarbons was excavated, loaded directly into dump truck when possible and transported to Fife Sand and Gravel, a state licensed disposal facility.

4.2 WASTE SAMPLING

During the excavation activities, soil samples were collected from areas throughout the excavation to verify that the soil being excavated was above 2,000 mg/kg diesel-range hydrocarbons (Table 4). Soil samples were also collected from soil placed into dump trucks prior to leaving the site for verification purposes (Table 4). These soil samples confirmed the presence of diesel-range hydrocarbons in the excavated soil above the 2001 MTCA Method A Soil Cleanup Criteria and validated the field parameters used to guide the soil excavation efforts.

4.3 CONFIRMATION SAMPLING

Following excavation activities, confirmation soil sampling was completed along the perimeter and the bottom of both UST excavations (Figure 3). Samples were also collected from stockpiled "clean" soil that accumulated during the excavation process.

Soil samples were collected from each sidewall and from the UST 1 excavation bottom (Table 5). Laboratory analysis of samples collected from UST 1 excavation from the southern, eastern, and western sidewalls as well as the samples collected from the excavation bottom were below 2,000 mg/kg diesel-range hydrocarbons (Table 5). Soil samples collected in native material along the northwestern sidewall at varying elevations ranged from 1900 to 4800 mg/kg, Figure 2), which exceeds the MTCA Method A Soil Cleanup Criteria for diesel-range hydrocarbons (Table 5). A horizontal lens-shaped zone, approximately twenty five feet in length and ten feet in height (tapering vertically to both the west and east) (photograph 34) remains. The off site extent of the affected soil beyond the northern property boundary is unknown.

4.4 REMAINING SOIL CONTAMINATION

An unknown amount of diesel-range hydrocarbons in soil appears to have migrated off site beyond the northern property boundary. According to the property owner, this area once housed a pump station. In order to limit cross contamination from the contaminated soil along the northern property boundary, a 10 millimeter plastic liner was placed in the excavation vertically along the northern excavation limits (Photograph 19). The liner extended twelve inches into the native soils to approximately 14.0 feet below ground surface. This liner provides a marker for the boundary between clean backfilled soil and soil with greater than 2,000 mg/kg diesel-range hydrocarbons. It is not intended to be a permanent means for eliminating cross contamination.

4.5 WASTE DISPOSAL

The excavated soil containing diesel-range hydrocarbons greater than 2,000 mg/kg was transported to Fife Sand and Gravel, a local licensed petroleum hydrocarbon contaminated soil disposal facility. A total of 748 tons of hydrocarbon contaminated soil was excavated and transported to the disposal facility. Weight tickets are provided in Appendix B.

4.6 SITE RESTORATION

Excavated soil (overburden) removed during the excavation process was backfilled into the UST excavations following confirmation sampling. Backfill was also imported from Fife Sand and Gravel and placed in both UST excavations and compacted to surface grade following receipt of the confirmation sampling results. One and one quarter-inch crushed rock was placed on top of the former excavation area.

5.0 SUMMARY

UST 1 and UST 2 were effectively decommissioned according to Ecology UST regulations. Soil contaminated in excess of MTCA Method A Soil Cleanup Criteria for diesel-range hydrocarbons was encountered near the western end of UST 1 during decommissioning excavation activities. This material was found to extend to the north from a depth of approximately 8 feet below ground surface to 20 feet below ground surface. A total of 748.11 tons of this material was effectively excavated and disposed at a licensed off site disposal facility. However, diesel-range hydrocarbons in excess of MTCA Method A Soil Cleanup Criteria for diesel-range hydrocarbons (2,000 mg/kg) remain in the northern wall of the excavation along the northern property boundary.

A paved alley is present in this area. Diesel-range hydrocarbon concentrations in confirmation soil samples taken from the northern sidewall following excavation activities ranged in concentration from 1900 to 4800 mg/kg. Based on the soil sampling conducted and field indications, it appears that this zone of soil with diesel-range hydrocarbons above 2,000 mg/kg is in the shape of a lens. Exact dimensions of the remaining contaminated material are unknown but estimated at between 8 to 10 feet vertically and 15 to 25 feet horizontally (east to west, figure 3, Photograph 34) along the northern property boundary. The extent of the off site impacts extending beneath the alley are not known but presumed to exist.

† No groundwater was encountered during the excavation activities. Confirmation sample analyses from the bottom of the excavation ranged from non-detect to 1800 mg/kg. Therefore, there is no evidence for groundwater impacts associated with the diesel release at this site. Based on earlier investigations, groundwater depths in the vicinity of the site are expected to be below 50 feet below ground surface.

The on site diesel-range hydrocarbon impacts associated with the release from the UST 1 fuel system have effectively been excavated and removed.


 文部科学省
 教育部

10.0 5.0 0 10.0
SCALE IN FEET

 SOIL SAMPLE LOCATION
 RED INDICATES SOIL ANALYSIS >2,000 MG/KG DESL. RANG. HYDROCARBONS
 GREEN INDICATES SOIL ANALYSIS <2,000 MG/KG DESL. RANG. HYDROCARBONS
 CHGS DESL. RANG. HYDROCARBON CONCENTRATION (mg/kg)
 1" sq. EXONATION VERTICAL LAST

Figure 2
Conformation Soil Sample Location Map
UST 1 Excavation - Soil Remediation Area
Bulk Diesel Terminal - UST Decommissioning Project
23428 Pacific Highway
Kent, Washington

PROJECT NAME:	DIGIOVANNI PROPERTY
LOCATION:	23428 PACIFIC HIGHWAY SOUTH KENT, WASHINGTON
SES PROJECT NUMBER:	301-1

SES Project No.: 301-1
Date: 02/25/02
Drawn By: SSpencer
Checked By: SSpencer
File ID: Figure 4 - Soil Sample Location Map

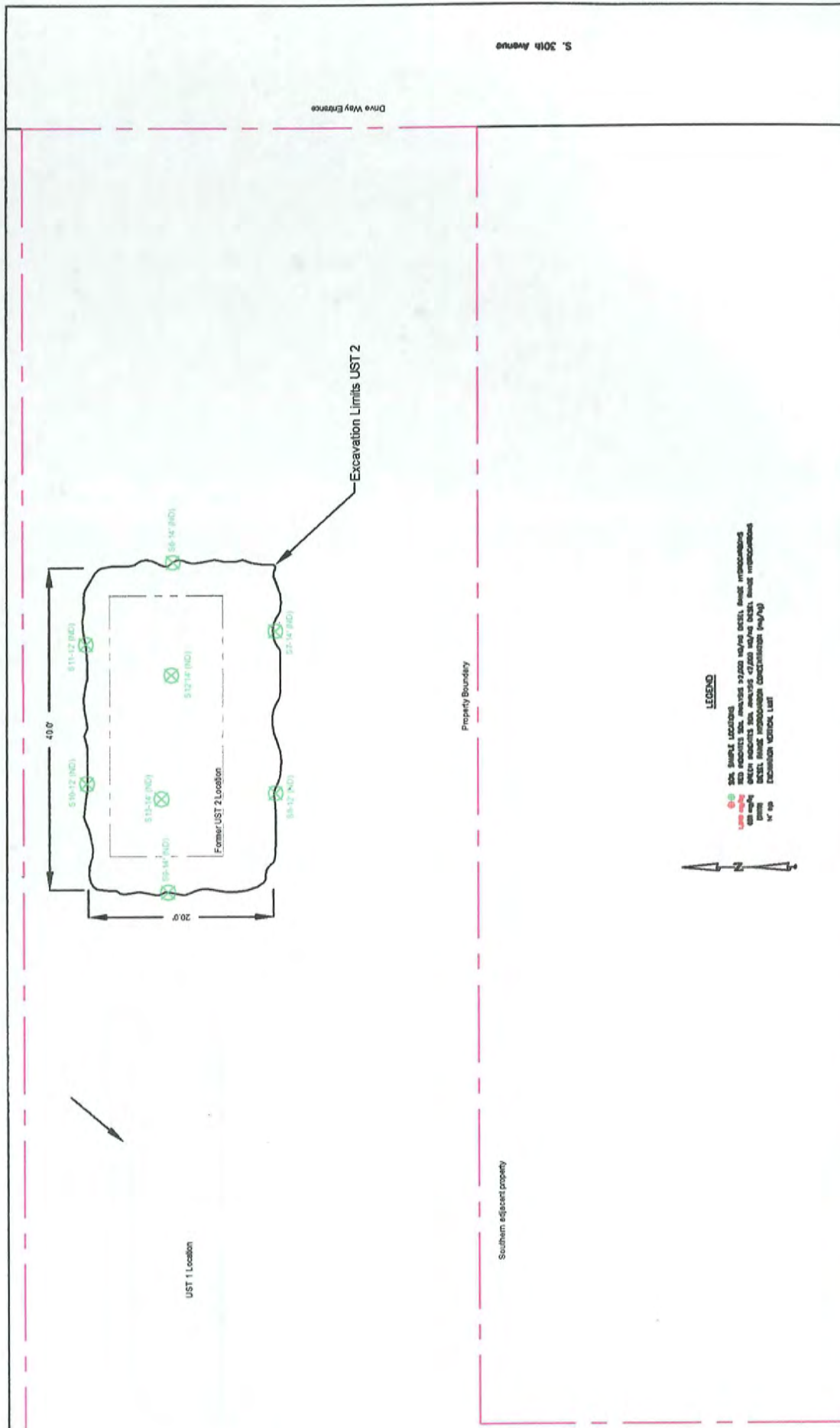


Figure 3 Conformation Soil Sample Location Map UST 2 Excavation - UST Site Assessment, Sampling Bulk Diesel Terminal - UST Decommissioning Project 23428 Pacific Highway Kent, Washington	PROJECT NAME: DIGIOVANNI PROPERTY 23428 PACIFIC HIGHWAY SOUTH KENT, WASHINGTON	PROJECT NUMBER: 301-1	Scale in Feet 10.0 5.0 0 10.0	SES Project No.: 301-1 Date: 02/25/02 Drawn By: SSPencer Checked By: SSPencer File ID: Figure 3 - Soil Sample Location Map

TABLE 1 - STOCKPILE SAMPLING

Table 1 - Soil Sample Analytical Results
UST Excavation Overburden Stockpile

DiGiovanni UST Project
23428 Pacific Highway South
Kent, Washington

Sample Number	Sample Location	Depth (ft *BGS)	Diesel/Fuel Oil Range Hydrocarbons	Heavy Oil Range Hydrocarbons	Sample Description
METHOD BLANK			ND	NA	SAMPLE DATE 2/06/2002
S1-W-SP	Stockpile		310	NA	SAMPLE DATE 2/06/2002
S2-N-SP	Stockpile		480	NA	SAMPLE DATE 2/06/2002
S3-E-SP	Stockpile		420	NA	SAMPLE DATE 2/06/2002
S4-C-SP	Stockpile		260	NA	SAMPLE DATE 2/06/2002
S5-S-SP	Stockpile		480	NA	SAMPLE DATE 2/06/2002
S28-SP	Stockpile		ND	NA	SAMPLE DATE 2/07/2002
S29-SP	Stockpile		ND	NA	SAMPLE DATE 2/07/2002
S66-SP	Stockpile		660	NA	SAMPLE DATE 2/12/2002
S67-SP	Stockpile		910	NA	SAMPLE DATE 2/12/2002
MTCA Method A Soil Cleanup Level			2000	2000	
Analytical Method Detection Limit			20	50	

Analytical method NWTPHD-Extended; milligrams per kilogram (mg/kg).

ND = Not detected above analytical method detection limits

NA = Not Analyzed

Dup. = Duplicate for Quality Assurance

BOLD = Analytical result exceeds MTCA Method A soil cleanup level for unrestricted land uses (Table 740-1)



TABLE 2 - UST 1 SOIL SAMPLING

Table 2 - Soil Sample Analytical Results - Page 1

UST Excavation Number 1
25,000 Gallon Heating Oil UST

DiGiovanni UST Project
23428 Pacific Highway South
Kent, Washington

Sample Number	Sample Location	Depth (ft *BGS)	Diesel/Fuel Oil Range Hydrocarbons	Heavy Oil Range Hydrocarbons	Sample Date
S14-WSW	West Side Wall - UST 1	14'	2,500	NA	SAMPLE DATE 2/06/2002
S15-ESW	East Side Wall - UST 1	14'	ND	NA	SAMPLE DATE 2/06/2002
S16-SSW	South Side Wall - UST 1	12'	3,200	NA	SAMPLE DATE 2/06/2002
S17-BE	Bottom East - UST 1	15'	ND	NA	SAMPLE DATE 2/06/2002
S18-NSW	Northeast Side Wall - UST 1	12'	ND	NA	SAMPLE DATE 2/06/2002
S19-BW	Bottom West - UST 1	15'	5900	NA	SAMPLE DATE 2/06/2002
S20-SSW	Southwest Side Wall - UST 1	12'	6500	NA	SAMPLE DATE 2/06/2002
S21-NSW	Northwest Side Wall - UST 1	12'	670	NA	SAMPLE DATE 2/06/2002
MTCA Method A Soil Cleanup Level			2000	2000	
Analytical Method Detection Limit			20	50	

Analytical method NWTPHD-Extended; milligrams per kilogram (mg/kg).

ND = Not detected above analytical method detection limits

NA = Not Analyzed

Dup. = Duplicate for Quality Assurance

BOLD = Analytical result exceeds MTCA Method A soil cleanup level for unrestricted land uses (Table 740-1)

TABLE 3 - UST 2 SOIL SAMPLING

Table 3 - Soil Sample Analytical Results

UST Excavation Number 2
25,000 Gallon Heating Oil UST

DiGiovanni UST Project
23428 Pacific Highway South
Kent, Washington

Sample Number	Sample Location	Depth (ft *BGS)	Diesel/Fuel Oil Range Hydrocarbons	Heavy Oil Range Hydrocarbons	Sample Date
S6-ESW	East Side Wall - UST 2	14'	ND	NA	SAMPLE DATE 2/06/2002
S7-SSW	Southeast Side Wall - UST 2	14'	ND	NA	SAMPLE DATE 2/06/2002
S7-SSW	Dup	14' DUP	ND	NA	SAMPLE DATE 2/06/2002
S8-SSW	Southwest Side Wall - UST 2	12'	ND	NA	SAMPLE DATE 2/06/2002
S9-WW	West Side Wall	12'	ND	NA	SAMPLE DATE 2/07/2002
S10-NW	Northwest Side Wall - UST 2	12'	ND	NA	SAMPLE DATE 2/07/2002
S11-NESW	Northeast Side Wall - UST 2	NA	ND	NA	SAMPLE DATE 2/07/2002
S11-NESW-DUP	Dup	NA	ND	NA	SAMPLE DATE 2/07/2002
S12-BE	Bottom East - UST 2	14'	ND	NA	SAMPLE DATE 2/07/2002
S13-BW	Bottom West - UST 2	14'	ND	NA	SAMPLE DATE 2/07/2002
MTCA Method A Soil Cleanup Level			2000	2000	
Analytical Method Detection Limit			20	50	

Analytical method NWTPHD-Extended; milligrams per kilogram (mg/kg).

ND = Not detected above analytical method detection limits

NA = Not Analyzed

Dup. = Duplicate for Quality Assurance

BOLD = Analytical result exceeds MTCA Method A soil cleanup level for unrestricted land uses (Table 740-1)



TABLE 4 - REMEDIATION & CONFIRMATION SOIL SAMPLING

Table 4 - Performance Soil Sample Analytical Results - Page 1

UST Excavation Number 1
25,000 Gallon Heating Oil UST

DiGiovanni UST Project
23428 Pacific Highway South
Kent, Washington

Sample Number	Sample Location	Depth (ft *BGS)	Diesel/Fuel Oil Range Hydrocarbons	Heavy Oil Range Hydrocarbons	Sample Date
S22	Refer to Sample Collection Map	12'	3700	NA	SAMPLE DATE 2/06/2002
S23	Refer to Sample Collection Map	8'	2600	NA	SAMPLE DATE 2/06/2002
S25*	Refer to Sample Collection Map	8'	4200	NA	SAMPLE DATE 2/06/2002
S26	Refer to Sample Collection Map	6'	4800	NA	SAMPLE DATE 2/06/2002
S31*	Refer to Sample Collection Map	14'	4000	NA	SAMPLE DATE 2/06/2002
S40*	Refer to Sample Collection Map	18'	3800	NA	SAMPLE DATE 2/11/2002
S41	Refer to Sample Collection Map	22'	5700	NA	SAMPLE DATE 2/11/2002
S42	Refer to Sample Collection Map	25'	2800	NA	SAMPLE DATE 2/11/2002
S53*	Refer to Sample Collection Map	18'	3100	NA	SAMPLE DATE 2/11/2002
S54*	Refer to Sample Collection Map	16'	3200	NA	SAMPLE DATE 2/11/2002
S59*	Refer to Sample Collection Map	10'	4600	NA	SAMPLE DATE 2/11/2002
S61*	Refer to Sample Collection Map	20'	5400	NA	SAMPLE DATE 2/11/2002
S64*	Refer to Sample Collection Map	22'	2200	NA	SAMPLE DATE 2/11/2002
S68*	Contaminated Soil Confirmation	NA	2600	NA	SAMPLE DATE 2/12/2002
S70*	Refer to Sample Collection Map	14'	2100	NA	SAMPLE DATE 2/12/2002
S74*	Contaminated Soil Confirmation	NA	6600	NA	SAMPLE DATE 2/12/2002
MTCA Method A Soil Cleanup Level			2000	2000	
Analytical Method Detection Limit			20	50	

Analytical method NWTPHD-Extended; milligrams per kilogram (mg/kg).

ND = Not detected above analytical method detection limits

NA = Not Analyzed

Dup. = Duplicate for Quality Assurance

BOLD = Analytical result exceeds MTCA Method A soil cleanup level for unrestricted land uses (Table 740-1)

* = Sample ID Non-Sequential Deviation - Samples Not Collected, analyzed or appear in Confirmation Sample Table 5



Table 5 - Confirmation Soil Sample Analytical Results - Page 1

UST Excavation Number 1
25,000 Gallon Heating Oil UST

DiGiovanni UST Project
23428 Pacific Highway South
Kent, Washington

Sample Number	Sample Location	Depth (ft *BGS)	Diesel/Fuel Oil Range Hydrocarbons	Heavy Oil Range Hydrocarbons	Sample Date
S24-Confirmation	Refer to Sample Collection Map	12'	1600	NA	SAMPLE DATE 2/06/2002
S26-Confirmation*	Refer to Sample Collection Map	6'	4300	NA	SAMPLE DATE 2/06/2002
S27-Confirmation	Refer to Sample Collection Map	8'	1900	NA	SAMPLE DATE 2/06/2002
S30-Confirmation*	Refer to Sample Collection Map	8'	800	NA	SAMPLE DATE 2/06/2002
S36-Confirmation*	Refer to Sample Collection Map	19'	ND	NA	SAMPLE DATE 2/11/2002
S38-Confirmation*	Refer to Sample Collection Map	8'	ND	NA	SAMPLE DATE 2/11/2002
S39-Confirmation	Refer to Sample Collection Map	12'	ND	NA	SAMPLE DATE 2/11/2002
S43-Confirmation*	Refer to Sample Collection Map	12'	ND	NA	SAMPLE DATE 2/11/2002
S43-Confirmation - Dup	Refer to Sample Collection Map	12'-DUP	ND	NA	SAMPLE DATE 2/11/2002
S44-Confirmation	Refer to Sample Collection Map	15'	ND	NA	SAMPLE DATE 2/11/2002
S44-Confirmation - Dup	Refer to Sample Collection Map	15'-DUP	ND	NA	SAMPLE DATE 2/11/2002
S50-Confirmation*	Refer to Sample Collection Map	17'	ND	NA	SAMPLE DATE 2/11/2002
S51-Confirmation	Refer to Sample Collection Map	10'	ND	NA	SAMPLE DATE 2/11/2002
S51-Confirmation - Dup	Refer to Sample Collection Map	10'-DUP	ND	NA	SAMPLE DATE 2/11/2002
S54-Confirmation*	Refer to Sample Collection Map	16'	3200	NA	SAMPLE DATE 2/11/2002
S57-Confirmation*	Refer to Sample Collection Map	17'	ND	NA	SAMPLE DATE 2/11/2002
S58-Confirmation	Refer to Sample Collection Map	10'	ND	NA	SAMPLE DATE 2/11/2002
S60-Confirmation*	Refer to Sample Collection Map	18'	250	NA	SAMPLE DATE 2/11/2002
S62-Confirmation*	Refer to Sample Collection Map	20'	520	NA	SAMPLE DATE 2/11/2002
S63-Confirmation*	Refer to Sample Collection Map	12'	340	NA	SAMPLE DATE 2/11/2002
S65-Confirmation*	Refer to Sample Collection Map	24'	1800	NA	SAMPLE DATE 2/11/2002
S69-Confirmation*	Refer to Sample Collection Map	12'	430	NA	SAMPLE DATE 2/12/2002
S71-Confirmation*	Refer to Sample Collection Map	14'	1200	NA	SAMPLE DATE 2/12/2002
S72-Confirmation	Refer to Sample Collection Map	14'	400	NA	SAMPLE DATE 2/12/2002
S73-Confirmation	Refer to Sample Collection Map	26'	270	NA	SAMPLE DATE 2/12/2002
S73-Confirmation - Dup	Refer to Sample Collection Map	DUP	250	NA	SAMPLE DATE 2/12/2002
S76-Confirmation*	Refer to Sample Collection Map	16'	250	NA	SAMPLE DATE 2/12/2002
S77-Confirmation	Refer to Sample Collection Map	14'	140	NA	SAMPLE DATE 2/12/2002
MTCA Method A Soil Cleanup Level			2000	2000	
Analytical Method Detection Limit			20	50	

Analytical method NWTPHD-Extended; milligrams per kilogram (mg/kg).

ND = Not detected above analytical method detection limits

NA = Not Analyzed

Dup. = Duplicate for Quality Assurance

BOLD = Analytical result exceeds MTCA Method A soil cleanup level for unrestricted land uses (Table 740-1)

* = Sample ID Non-Sequential Deviation - Samples Not Collected, analyzed or appear in Performance Sample Table 4



12/1/00 17

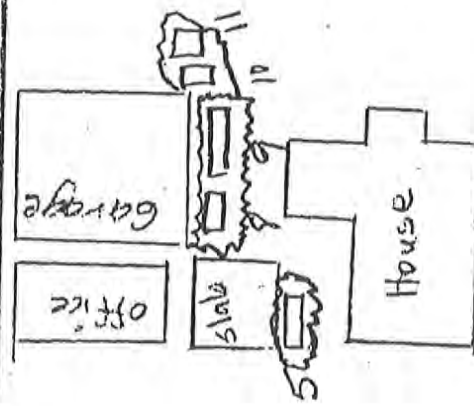
UCT, Removal
10/00
Site Plan

Southgate Oil
23428 Pacific Hwy S
Kent WA

Tax lot # 250060-0180
Site # 97588

Tasks,	# 1	25,000	# 8	650
	# 4	20,000	# 9	1000
	# 3	5,000	# 10	275
	# 2	10,000	# 11	550
	# 5	4,000		
	# 6	3000		
	# 7	3000		

334.04'



214.04

Removal Planned For:
3 - 5,000 diesel
2 - 10,000 Gas
5 - 4,000 diesel

Pacific Hwy S

30th Ave S

Progress Site Assessment

Southgate Oil Site

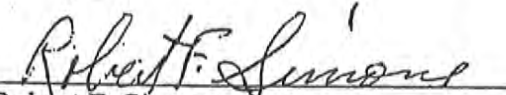
23428 Pac Hwy S
Kent, WA

Report date: 5/3/01

Facility: Southgate Oil Site
23428 Pac Hwy S
Kent, WA

Contractor: Global Environmental Soil Services
13110 NE 177th Place, Suite 114
Woodinville, WA 98072

Site Assessor:


Robert F. Simons
Nowicki & Associates, Inc.
33516 9th Avenue South
Bldg #6
Federal Way, WA 98003
(253) 927-5233
(253) 924-0323 FAX

This report is for the sole use of our Client. No additional distribution of this report is authorized without the express written consent of Nowicki & Associates, Inc.

Conclusions and recommendations prescribed by this analysis are predicated upon visual inspection, laboratory analysis, and the interview responses from involved parties. Interpretation of these elements has been performed within the generally accepted scope of a hazardous material investigation and the scope of work.

This report is an updated version of the earlier progress report including a section on the remediation that is in progress.

History

This site has a 75 year history as a fuel distribution site. Five tanks were listed as tanks for distribution. A 1000, 5,000 and 10,000 gallon tank was scheduled for removal. A 20,000 and 25,000 gallon tank are scheduled to remain and the site eventually put back in service after removal of unwanted tanks, remediation of impacted soil and restoration of the site.

Soil

Soil at the site is sandy clay or clay/sand with gravel, asphalt pavement or concrete cap. At approximately 8-10 feet below grade a sand/gravel hardpan is evident. None of the tank excavations penetrate below the hardpan.

An estimated 350 cubic yards of soil impacted by gasoline and diesel was removed from the excavations of the 9 tanks removed at the site. An additional 200 cubic yards of diesel impacted soil has now been removed from the central pump island site and the north central pump island site. With an anticipated small amount of excavation these two excavations will be closed except for the north wall of the central pump island excavation (pump #2). Excavation of this material will necessitate the disturbance of the 20,000 gallon tank excavation. This is still under evaluation at present.

Tank Removal

The initial three regulated tanks that were scheduled for removal have been removed. An additional 6 tanks not previously known to exist were discovered and removed for a total of 9 tanks removed.

This removal commenced on October 13 with the 1000-gallon diesel tank removed on October 17. Some historical research with the property's previous Owner uncovered the possibility of additional tanks and initial investigation uncovered four additional tanks in two locations. On November 7 two additional tanks were discovered. Three of the originally scheduled tank removals and 8 additional tank removals have now been completed. Tank #5 near the office that contained diesel had a suction pumping system with the pump mounted with the dispenser. The old distribution site with the 5000 (#3) and 10000 (#2) gallon tanks as well as the untouched #1 & #4 large tanks have pressure pumping systems. The 5000 gallon and 10000 gallon tanks that were removed had the primary pressure pumps mounted on one end of the tank in a large plastic sump. Secondary pumps were located at the pump island in the dispensers. There were signs of leakage around the pumps and wells of each of these tanks. Also overfilling had impacted the soil covering these tanks. A loose fitting under the #2 dispenser leaked diesel into the pipe trench and impacted the soil below the dispenser island and into the soil next to the #2 tank excavation.

On November 15 sampling and characterization of the pump island area in the middle of the property was begun. The pump on the west side of the center pump island #2 was confirmed to have leaked and by November 30, 2000 an estimated 160 cubic yards of diesel impacted soil was removed from this excavation. The north wall of the excavation is still impacted with miner

impact to the bottom and south walls. Removal of additional material is planned for the bottom and south walls. The north wall will not be excavated due to the impact to the north end of the 20,000 gallon tank.

The old pump island for large quantity fueling on the north side of the 5,000 and 10,000 gallon tank location was removed and diesel impacted soil confirmed under the this site. After initially exposing the top of these tanks leaks around the primary pumps mounted on the tanks and overfilling impacted the soil around these tanks and appears to have migrated under the old filling station. An estimated 40 cubic yards of diesel impacted soil was removed from under the old filling station. The north sidewall is still impacted above the MTCA level of 200 ppm. An additional small quantity of impacted material is planned for removal from this area.

Water

No apparent groundwater has been seen at the site.

Sampling

Enclosed is a sample log and a summary of results from testing done on the soil at this site. All appropriate sampling protocols were followed and there is nothing to indicate that the quality of the data or the validity of the results were compromised. Samples were kept cool or refrigerated until delivery to TEG Laboratories, Inc., 7110 38th Drive SE, Lacey, WA 98503. Methods used were WTPH-D,G and BTEX where appropriate. Samples were generally taken as "worst case" within the vicinity sampled based on soil coloration, odor and field screening.

Remediation

350 cubic yards of impacted soil stockpiled out of the excavation has been has been undergoing bioremediation since the end of November 2000. Cooler temperature has hampered the remediation process over the winter slowing the progress of the soil. Field screening has been done three times since February 21, 2001. Thin layer chromatography was used the last three times. The last field screening on March 14, 2001 indicated some progress. Weather conditions are presently good and final sampling is anticipated within ten days. When sampling of the 350 cubic yards is complete this soil will be used as clean backfill at the site and the remaining 200 cubic yards brought out of the excavation for remediation. It is anticipated that a small quantity of soil will be added to this.

Preliminary data has now returned that shows the remediation of the 350 cubic yards outside the excavation is complete. This will be formalized when final reports are available.

Summary & Conclusions

Petroleum from leaks and overfilling has been in contact the soil at this site. Characterization is nearing completion for the removal of the 8 tanks removed. Impacted soil has generally been

identified to have originated from the tank excavations and the pump islands presently excavated. The east two tanks and distribution island were planned to remain ready for reuse. Impacted soil has been discovered next to the north end of the 20,000 gallon tank and likely intrudes into the excavation. This discovery and its impact to the remaining tank system are still being studied. Closure of the excavations and remediation of the north and central portions of the site are presently underway with the above noted exception. Remediation of 350 cubic yards of petroleum impacted soil presently stockpiled out of the excavation is nearing completion.

UCT Removal
10/00
Site Plan

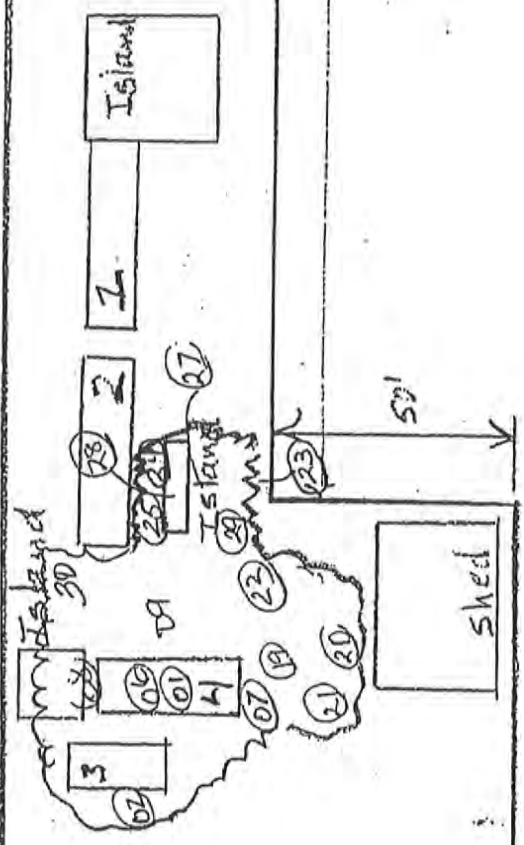
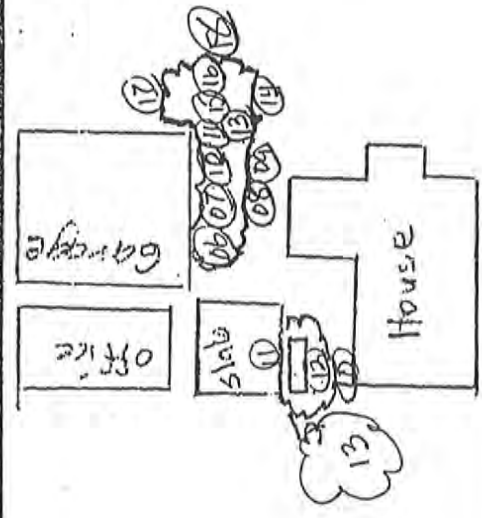
Southgate Oil
25428 Pachtway
Kent WA

Tax lot # 250060-0470
Site # 97588

- # 1 25,000
- # 2 20,000
- # 3 5,000
- # 4 10,000
- # 5 2,000

Sample Summary

334.04'



30th Ave S

214.04

Removal Planned For:
3 - 5,000 diesel
4 - 10,000 Gas
5 - 2,000 diesel

0 For 111111

Southgate Oil, Kent, WA

UST sample Log, UST Removal

Soil

Mar-01

#	Results WTPH-D Extended	Location and Description	Results WTPH-G	Results BTEX
1	1500	T3,gray sand, overfill, gray, odor		
2	47	T3,gray sand,SW wall, odo, -6r		
3	ND	T3,gray hard sand, -13	ND	ND
4	780	T3,gray dense sand, -8	ND	ND
5	ND	T3,gray sand, -8	ND	ND
6	ND	T2,bottom center,gray hard sand, -15	ND	ND
7	230	T2,SW corner, sandy soil, gray,-8	ND	ND
8	7500	T2,North end,sandy soil,-8	ND	ND
9	74	T2,East sidewall,gray hard sand,-8	ND	ND
10	ND	T5,south sidewall,gray sand,-6		
11	ND	T5,north sidewall,gray hard sand,-6		
12	ND	T5,bottom center, gravel,-7,slight odor		
13	3700	T5,stockpiled soil, odor		
6	ND	T8,west sidewall, tank sandy soil,-5		
7	ND	T8,bottom center,gray sandy soil,-7		
8	ND	T8,north sidewall, tan sandy soil, -5		
9		T9,south sidewall,tan sandy soil,-5	ND	ND
10		T9,west sidewall,tan sandy soil,-5	ND	ND
11		T9,bottom center,gray sand,-9	ND	ND
12	830	T9,stockpile,clay sand,gray-tan	ND	ND
13		T9,east sidewall, tan/gray sandy soil,-5	ND	ND
14	ND	T10&11,south sidewall,tan sand,-6		
15	ND	T10&11,bottom center,tan-gray sand,-6		
16	ND	T10&11,bottom center,tan-gray sand,-6		
17	ND	T10&11,north sidewall, tan clay sand,-5		
18	ND	T10&11, south sidewall,tan clay sand,-5		
19	7700	Old island,brown clay sand,-2	ND	ND
20		T6&T7,bottom center,gray hard sand,-13	ND	ND

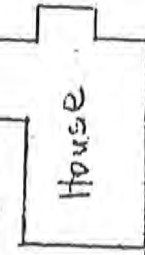
21	4800	T6&T7,stockpiled soil,gray sand, strong odor	ND	Xylene.10
22		T6&T7,east sidewall,gray hard sand,-8	ND	ND
23		T6&T7,west sidewall,gray hard sand,-8	ND	ND
24	200	#4 Pump by fence,tan sandy clay,-2	ND	ND
25	130	#3 pump,pea gravel, -3	ND	ND
26	3900	#4 pump,gray hard sand,-3	ND	ND
27	350	Bottom pump excavation,hard gray sand,		
28	3100	north sidewall,gray hard sand,-8		
29	750	south sidewall,gray hard sand,-9		
30	460	north sidewall,gray hard sand,-7		

$$\frac{25}{2} = 12 \frac{1}{2}$$

24

975.838

334.001



00017-5

214.04.

Qve S

APPENDIX D

REPORT LIMITATIONS AND GUIDELINES FOR USE

APPENDIX D

REPORT LIMITATIONS AND GUIDELINES FOR USE¹

This appendix provides information to help you manage your risks with respect to the use of this report. Please confer with GeoEngineers if you need to know more about how these “Report Limitations and Guidelines for Use” apply to your project or property.

Read These Provisions Closely

It is important to recognize that environmental engineering and geoscience practices (geotechnical engineering, geology and environmental science) are less exact than other engineering and natural science disciplines. GeoEngineers includes these explanatory “limitations” provisions in our reports to help reduce the risk of misunderstandings or unrealistic expectations that lead to disappointments, claims and disputes.

Environmental Services Are Performed for Specific Purposes, Persons and Projects

GeoEngineers has performed this Phase II ESA of the property at 23428 Pacific Highway South in Kent, Washington, King County Tax Parcel 2500600480, identified by Sound Transit as Federal Way parcel FL-209, in general accordance with the scope and limitations of the subcontract between HDR and GeoEngineers dated August 24, 2012, along with Amendments 1 through 12 and Agreement No. RTA/AE 044-12 between HDR and Sound Transit. This report has been prepared for the exclusive use of Sound Transit and their authorized agents. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

GeoEngineers structures its services to meet the specific needs of its clients. For example, an ESA study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and property. Use of this report is not recommended for any purpose or project other than as expressly stated in this report.

This Environmental Report is Based on a Unique Set of Project-Specific Factors

This report has been prepared for the property at 23428 Pacific Highway South in Kent, Washington, King County Tax Parcel 2500600480, identified by Sound Transit as Federal Way parcel FL-209. GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this Project. Unless GeoEngineers specifically indicates

¹ Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; www.asfe.org.

otherwise, it is important not to rely on this report if it was:

- not prepared for you,
- not prepared for your Project,
- not prepared for the specific site explored, or
- completed before Project changes were made.

If changes to the Project or property occur after the date of this report, GeoEngineers cannot be responsible for any consequences of such changes in relation to this report unless we have been given the opportunity to review our interpretations and recommendations in the context of such changes. Based on that review, we can provide written modifications or confirmation, as appropriate.

Reliance Conditions for Third Parties

This report was prepared for the exclusive use of Sound Transit and their authorized agents. No other party may rely on the product of our services unless we agree to such reliance in advance and in writing. Within the limitations of the agreed Project scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and generally accepted environmental practices in this area at the time this report was prepared.

Understand That Geotechnical Issues Have Not Been Addressed

Unless geotechnical engineering was specifically included in our scope of service, this report does not provide any geotechnical findings, conclusions, or recommendations, including but not limited to, the suitability of subsurface materials for construction purposes.

Do Not Separate Documentation from the Report

Environmental reports often include supplemental documentation, such as maps, figures and tables. Do not separate such documentation from the report. Further, do not, and do not permit any other party, to redraw or modify any of the supplemental documentation for incorporation into other professionals' instruments of service.

Environmental Regulations Change and Evolve

Some substances may be present in the vicinity of 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 do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substances, change or if more stringent environmental standards are developed in the future.

Uncertainty May Remain Even After This Phase II ESA is Completed

Performance of a Phase II ESA is intended to reduce uncertainty regarding the potential for

contamination in connection with a property, but no ESA can wholly eliminate that uncertainty. Our interpretation of subsurface conditions in this study is based on field observations and chemical analytical data from widely spaced sampling locations. It is always possible that contamination exists in areas that were not explored, sampled or analyzed.

Information Provided by Others

GeoEngineers has relied upon certain data or information provided or compiled by others in the performance of our services. Although we use sources that we reasonably believe to be trustworthy, GeoEngineers cannot warrant or guarantee the accuracy or completeness of information provided or compiled by others.

Subsurface Conditions Can Change

This environmental report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time, by man-made events such as construction on or adjacent to the subject property, by new releases of hazardous substances, new information or technology that become available subsequent to the report date, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Please contact GeoEngineers before applying this report for its intended purpose so that GeoEngineers may evaluate whether changed conditions affect the continued applicability of the report.

Soil and Groundwater End Use

The cleanup levels referenced in this report are site- and situation-specific. The cleanup levels may not be applicable for other properties or for other on-site uses of the affected soil and/or groundwater. Note that hazardous substances may be present in some of the on-site soil and/or groundwater at detectable concentrations that are less than the referenced cleanup levels. GeoEngineers should be contacted prior to the export of soil or groundwater from the subject property or reuse of the affected soil or groundwater on-site to evaluate the potential for associated environmental liabilities. GeoEngineers will not assume responsibility for potential environmental liability arising out of the transfer of soil and/or groundwater from the subject property to another location, or the reuse of such soil and/or groundwater on-site in any instances that we did not recommend, know of, or control.

Most Environmental Findings Are Professional Opinions

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from widely spaced sampling locations at the subject property. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted and/or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an informed opinion about subsurface conditions throughout the property. Actual subsurface conditions may differ significantly from those

indicated in this report. Our report, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.

Do Not Redraw the Exploration Logs

Environmental scientists prepare final exploration logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions by others, the logs included in an environmental report should never be redrawn for inclusion in other design documents. Only photographic or electronic reproduction that preserves the entire original exploration log is acceptable, but separating logs from the report can create increase the risk of potential misinterpretation.

Biological Pollutants

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants, and no conclusions or inferences should be drawn regarding Biological Pollutants as they may relate to this Project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria and viruses, and/or any of their byproducts.

A Client that desires these specialized services is advised to obtain them from a consultant who offers services in this specialized field.