



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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Electronic Copy

February 27, 2017

Norm Payton
Washington State Department of Transportation
PO Box 47358
Olympia, WA 98504-7358

Re: Determination of No Further Action at the following site:

- **Site Name:** Washington State Department of Transportation Maintenance Facility
- **Site Address:** Milepost 1.43, State Route 505, Toledo, Washington
- **Facility/Site No.:** 27866869
- **Cleanup Site No.:** 8567

Mr. Payton:

On October 28, 2016, the Department of Ecology's (Ecology) contractor, GeoEngineers, Inc., (GeoEngineers) completed additional site investigation activities at the property located at Milepost 1.43, State Route 505 in Toledo, Washington (Site). The results of this work is summarized in the attached "Soil and Groundwater Characterization Summary", dated January 23, 2017. As a result of these recent investigation activities, Ecology has determined that **no further remedial action** is necessary to clean up residual contamination, associated with the historical release of petroleum hydrocarbons reported at the Site. Further information regarding this determination, including a Site history and summary of the recent investigation activities performed at the Site, is presented below.

Background and Results of Recent Investigation Activities

On September 24, 1992, the Department of Ecology (Ecology) was notified of a suspected release of petroleum product from an underground storage tank (UST) system located at the Site. As a result, the Site was added to Ecology's Confirmed or Suspected Contaminated Sites List (CSCL) as an active Leaking Underground Storage Tank (LUST) Site and has been awaiting further characterization and potential cleanup before a determination of No Further Action (NFA) could be granted.

Recently, Ecology received funding to provide additional site characterization to assist a limited number of LUST sites towards closure through the Model Remedies Grant Program (the Grant Program).

The intent of these proposed activities was to further characterize previously identified petroleum impacts at LUST sites still awaiting receipt of a NFA determination from Ecology. As a result, the Washington State Department of Transportation's (WSDOT) maintenance facility in Toledo, Washington was selected to receive a portion of this funding.

To perform the proposed characterization activities funded by the Grant Program, Ecology retained GeoEngineers of Redmond, Washington. GeoEngineers subsequently coordinated and directed the advancement of four soil borings at the Site on October 28, 2016. Four soil and four groundwater samples were collected in the vicinity of the former UST cavity to evaluate for the presence of residual hydrocarbons beneath this area of the Site. Laboratory analyses of these samples detected concentrations of petroleum hydrocarbons or associated constituents above their associated MTCA Method A cleanup levels (CULs) at a single location, only (DOT-3). A more detailed summary of these activities is provided in the attached Site Summary Report.

Determination

Ecology has evaluated the results of the further characterization activities completed in October of 2016 and has concluded that **no further remedial action** is necessary to clean up residual petroleum hydrocarbon contamination at the Site. That conclusion is based on the following analysis:

- Decommissioning and removal of the original, on-Site USTs has removed the source of petroleum hydrocarbons and related constituents beneath the Site;
- Only a single soil sample location (DOT-3-10.5) revealed detections of petroleum hydrocarbons (290 milligrams per kilogram [mg/kg]) above the associated MTCA Method A CUL of 100 mg/kg during the October 28, 2016 sampling event;
- Concentrations of petroleum hydrocarbons and related constituents were not detected in the groundwater samples, collected at the Site on October 28, 2016, above their respective MTCA Method A CULs; and
- Potential vapor pathways were assessed, concluding that no further evaluation was necessary given the relatively low concentrations of hydrocarbon constituents, limited mass of residual petroleum in soil, and extended timeframe since the release occurred.

As a result of this information, Ecology is issuing an NFA determination for the Site using Model Remedy Option Number 4, as identified in Ecology's "Model Remedies for Sites with Petroleum Contaminated Soils" (Publication No. 15-09-043, September 2015). Under this option, it has been determined that the historic removal of contaminated soil has achieved cleanup levels for Total Petroleum Hydrocarbons (TPH) beneath the Site, which establishes a Method B Direct-Contact Cleanup Level of 1,500 mg/kg for this hydrocarbon mixture.

Additionally, an environmental covenant will not be necessary to ensure the continued protection of human health and the environment associated with the historical release of petroleum hydrocarbons reported from the Site UST system.

³ This determination is based on the information contained in the Site Summary Report and associated analytical reports and documentation. Additional documents related to the reported historical release of petroleum hydrocarbons from the Site UST system are kept in the Central Files of the Southwest Regional Office of Ecology (SWRO) for review by appointment only. You can make an appointment by calling the SWRO resource contact at (360) 407-6989.

Limitations

1. This determination does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. This determination does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.


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 opinion. *See* RCW 70.105D.030(1)(i).

Mr Norm Payton
February 27, 2017
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Contact Information

If you have any questions regarding this letter or if you would like additional information regarding the cleanup of contaminated sites, please contact me at (360) 407-0276 or Jeremy.Hughes@ecy.wa.gov . Thank you for your cooperation.

Sincerely,


Jeremy Hughes, LG
LUST Backlog Coordinator
Toxics Cleanup Program, Southwest Regional Office

Enclosures (1)

1. GeoEngineers, Inc. *Soil and Groundwater Characterization Summary*. January 23, 2017.

By Certified Mail: [91 7199 9991 7037 0278 3904]

cc: Nicholas M. Acklam, Ecology
Mark Gordon, Ecology
Ecology Site File

Mr Norm Payton
February 27, 2017
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Enclosure A

GeoEngineers, Inc. *Soil and Groundwater Characterization
Summary*. January 23, 2017.



8410 154th Avenue NE
Redmond, Washington 98052
425.861.6000

January 23, 2017

Washington State Department of Ecology
Toxics Cleanup Program – Southwest Regional Office
PO Box 47775
Olympia, Washington 98504-7775

Attention: Jeremy Hughes

Subject: Soil and Groundwater Characterization Summary
WSDOT Toledo Maintenance Facility
Toledo, Washington
File No. 0504-117-00

INTRODUCTION

This letter report summarizes the results of recent subsurface investigation activities completed at the Washington State Department of Transportation (WSDOT) Toledo Maintenance Facility (Ecology FSID 27866869) located at 385 Toledo-Vader Road in Toledo, Washington (the Site; Figure 1). The purpose of the investigation was to assess the current nature and extent of residual petroleum hydrocarbons in soil and groundwater beneath the Site associated with historic releases from the former underground storage tank (UST) system. Subsurface investigation activities were performed on October 28, 2016. A figure illustrating soil and groundwater sampling locations is presented as Figure 2.

SCOPE OF SERVICES

This project was implemented under GeoEngineers' prime contract with Ecology (Contract No. C1100145, Work Assignment No. C11145C5). Our services were executed in general accordance with the proposal, dated September 8, 2016.

The scope of services for the subsurface investigation was as follows:

1. Coordinated field activities with the property owner(s) prior to site entry.
2. GeoEngineers subcontracted a Washington State-licensed drilling company to complete four soil borings, as shown in Figure 2. Prior to commencing field work, the driller submitted a Notice of Intent to advance site characterization borings to Ecology.

3. Coordinated underground utility locating using the State underground utility notification system (WA One-call), and a private utility locator to assess for potential underground utilities at the site prior to commencing field work. Per state regulations, the boring locations were marked prior to initiating the final WA One-Call request.
4. Prepared a Site-Specific Health and Safety Plan (HSP) in accordance with Washington Administrative Code (WAC) 296-24. A copy of the HSP was signed by GeoEngineers, Ecology, and subcontractor representatives present on site, and was kept on-site for the duration of the associated field activities.
5. Conducted field characterization activities, including monitoring the advancement of four direct-push borings (DOT-1 to DOT-4; Figure 2) at the site.
6. Obtained continuous-core soil and grab groundwater samples from each boring location for potential chemical analysis. All soil and groundwater samples were stored in an ice-filled cooler for transport to an Ecology-accredited analytical laboratory using standard chain-of-custody (COC) protocol. Samples were submitted on hold pending Ecology review of the COC and field-screening information.
7. Analyzed selected soil and groundwater samples, based on directives from Ecology staff, for the following chemicals of potential concern (COPCs):
 - NWTPH-Gx and NWTPH-Dx for gasoline and diesel range organics and heavy oils;
 - Volatile organic compounds (VOCs), including benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8260B; and
 - Total and dissolved lead by EPA Method 6010b or 6020.
8. Temporarily stored investigation-derived waste (IDW) generated during boring advancement and sampling in a secure, on-site location using appropriately-labeled containers. A Washington State-licensed transporter was obtained to profile and transport the IDW to an appropriate landfill for subsequent disposal.
9. Uploaded the analytical data (in the form of an electronic data deliverable (EDD) received from the analytical laboratory) to Ecology's Environmental Information Management (EIM) system database.
10. Evaluated the data with respect to the Model Toxics Control Act (MTCA) Method A cleanup levels (CULs).
11. Prepared this report describing site characterization efforts, which includes a summary table of select analytical results, a site plan depicting boring locations, and associated field logs.

SUBSURFACE INVESTIGATION FINDINGS

Subsurface Explorations

Four soil borings were advanced at the site using direct-push exploration equipment to a maximum depth of 12.5 feet below ground surface (bgs) on October 28, 2016. The approximate exploration locations are depicted on Figure 2.

The subsurface investigation activities were monitored by a representative of GeoEngineers, who visually classified and performed field screening tests on soil samples collected from the soil borings for evidence of petroleum hydrocarbons using a photo-ionization detector (PID). Subsurface conditions and field screening results are shown on the subsurface exploration logs presented in Appendix A.

Soil and groundwater samples were also collected from each location and submitted to a State-certified analytical laboratory for chemical analysis using the methods previously described. Soil sample selection was based on in-field observations and screening methods. Following soil and grab-groundwater sample collection, the borings were subsequently decommissioned in accordance with Ecology regulations.

Subsurface Conditions

Fill material was encountered beneath the grass cover at each boring location, consisting of silty sands with gravel or silty gravel to a depth of approximately 4.5 to 8 feet below ground surface (bgs). Below this fill and surface cover, native material, predominantly comprised of sandy silt was encountered. Groundwater was encountered at each boring location within the fill material at approximately 2.5-feet bgs.

Field screening of soil from borings DOT-3 and DOT-4 indicated evidence of petroleum hydrocarbons and VOCs within a narrow lense of silty sand from approximately 10 to 10.5 feet bgs. The remaining soil and groundwater samples from borings DOT-1 through DOT-4 did not indicate the presence of significant concentrations of petroleum hydrocarbons or VOCs. Appendix A provides a description of the field screening methods employed during the recent subsurface characterization activities.

Investigation-Derived Waste

Investigation-derived waste (soil, groundwater and decontamination water), generated during the subsurface investigation, was placed into two 55-gallon drums, appropriately-labeled, and transported off-site for permitted disposal.

CHEMICAL ANALYTICAL RESULTS

Soil and groundwater samples were submitted to OnSite Environmental, Inc., located in Redmond, Washington for chemical analysis. The chemical analytical data for the soil and groundwater samples are summarized in Table 1. Copies of the analytical laboratory reports are presented in Appendix B.

Soil Analytical Results

VOCs including BTEX were not detected above their respective practical quantitation limits (PQLs) in the soil samples collected from borings DOT-1 through DOT-4.

Diesel-range petroleum hydrocarbons, lead, and volatile organic compounds including tert-, sec-, and n-butylbenzene and naphthalene were not detected above their respective MTCA Method A CULs for Unrestricted Land Use in the soil samples collected from borings DOT-1 through DOT-4.

Gasoline-range petroleum hydrocarbons were detected above the associated MTCA Method A CUL of 100 milligrams per kilogram [mg/kg] in the soil sample collected from boring DOT-3 (290 mg/kg) at 10.5 feet bgs.

Groundwater Analytical Results

Gasoline-, diesel-, heavy oil-range petroleum hydrocarbons, and associated VOCs were not detected above their respective PQLs in the groundwater samples collected from borings DOT-1 through DOT-4.

Total lead was detected above the associated MTCA Method A CUL of 15 micrograms per liter (ug/L) in the groundwater samples collected from borings DOT-1 (2,600 ug/L), DOT-2 (570 ug/L), DOT-3 (150 ug/L), and DOT-4 (84 ug/L). Dissolved-phase lead, however, was not detected above the associated MTCA Method A CUL at these same locations (borings DOT-1 through DOT-4) during the October 2016 investigation activity.

SUMMARY

Soil and groundwater assessment activities were conducted at the Site on October 28, 2016. Four borings (DOT-1 through DOT-4) were advanced to depths ranging from 10.5 to 12.5 feet bgs. Observed native material generally consisted of primarily sandy silty with lesser amounts of gravel. Groundwater was encountered in each boring at approximately 2.5 feet bgs.

One soil and one grab groundwater sample from each boring was submitted for chemical analysis of the following:

- NWTPH-Gx and NWTPH-Dx for gasoline and diesel range organics and heavy oils;
- VOCs by EPA Method 8260B; and
- Total and dissolved lead by EPA Method 6010b or 6020.

Only a single location (DOT-3) exhibited concentrations of COPCs in soil in excess of their respective MTCA Method A CULs for Unrestricted Land Use. Gasoline-range petroleum hydrocarbons were detected above the associated MTCA Method A CUL for Unrestricted Land Use of 100 mg/kg in the soil sample collected from boring DOT-3 at 10.5 feet bgs (290 mg/kg).

Total lead was detected above the associated MTCA Method A CUL of 15 micrograms per liter (ug/L) in the groundwater samples collected from borings DOT-1 (2,600 ug/L), DOT-2 (570 ug/L), DOT-3 (150 ug/L), and DOT-4 (84 ug/L). Dissolved-phase lead, however, was not detected above the associated MTCA Method A CUL at these same locations (borings DOT-1 through DOT-4). All remaining analytes in soil and groundwater did not exceed their respective MTCA Method A CULs.

LIMITATIONS

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

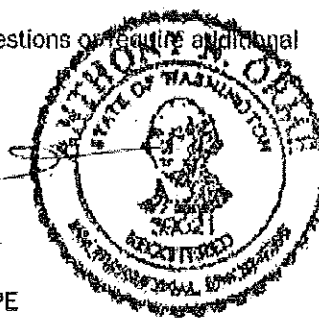
Please refer to Appendix C titled "Report Limitations and Guidelines for Use" for additional information pertaining to use of this report.

Please feel free to contact either of the undersigned should you have any questions or require additional information.

Sincerely,
GeoEngineers, Inc.

Sydney Bronson
Sydney Bronson, EIT
Environmental Engineer
sbronson@geoengineers.com
425.861.6086

Tony Orme, PE
Associate
torme@geoengineers.com
425.861.6076



SJB:THO:tf

Attachments:

Table 1. Soil and Groundwater Field Screening and Chemical Analytical Data

Figure 1. Vicinity Map

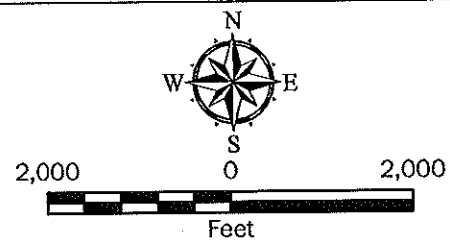
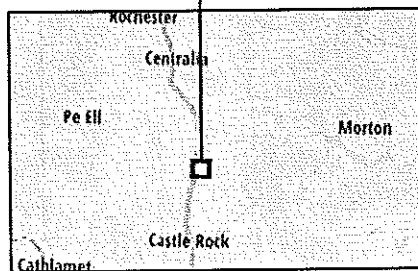
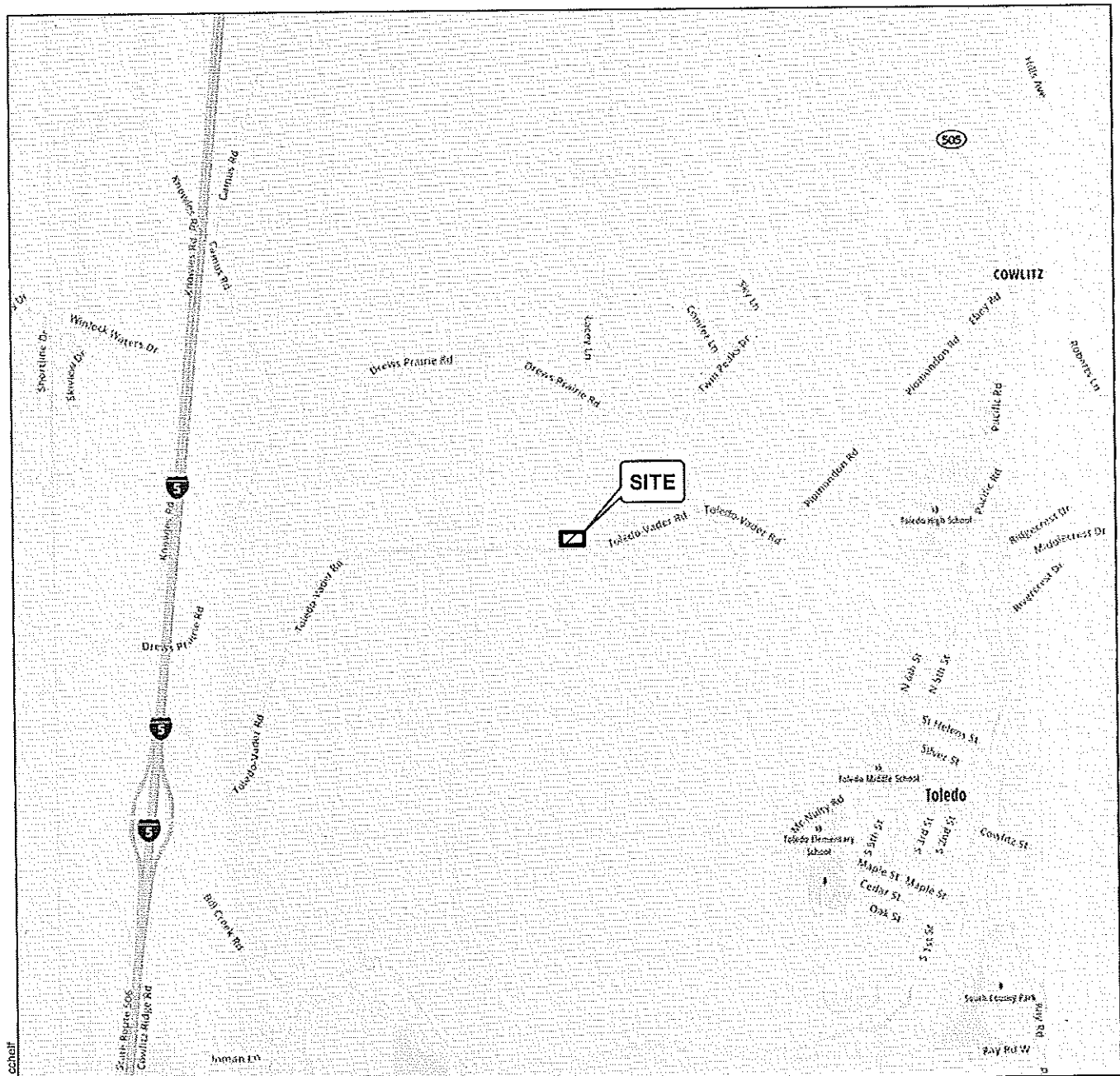
Figure 2. Site Plan

Appendix A. Field Procedures and Boring Logs

Appendix B. Laboratory Analytical Report

Appendix C. Report Limitations and Guidelines for Use

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



Vicinity Map

Toledo - SWRO Tanks Model Remedies
Toledo, Washington

GEOENGINEERS

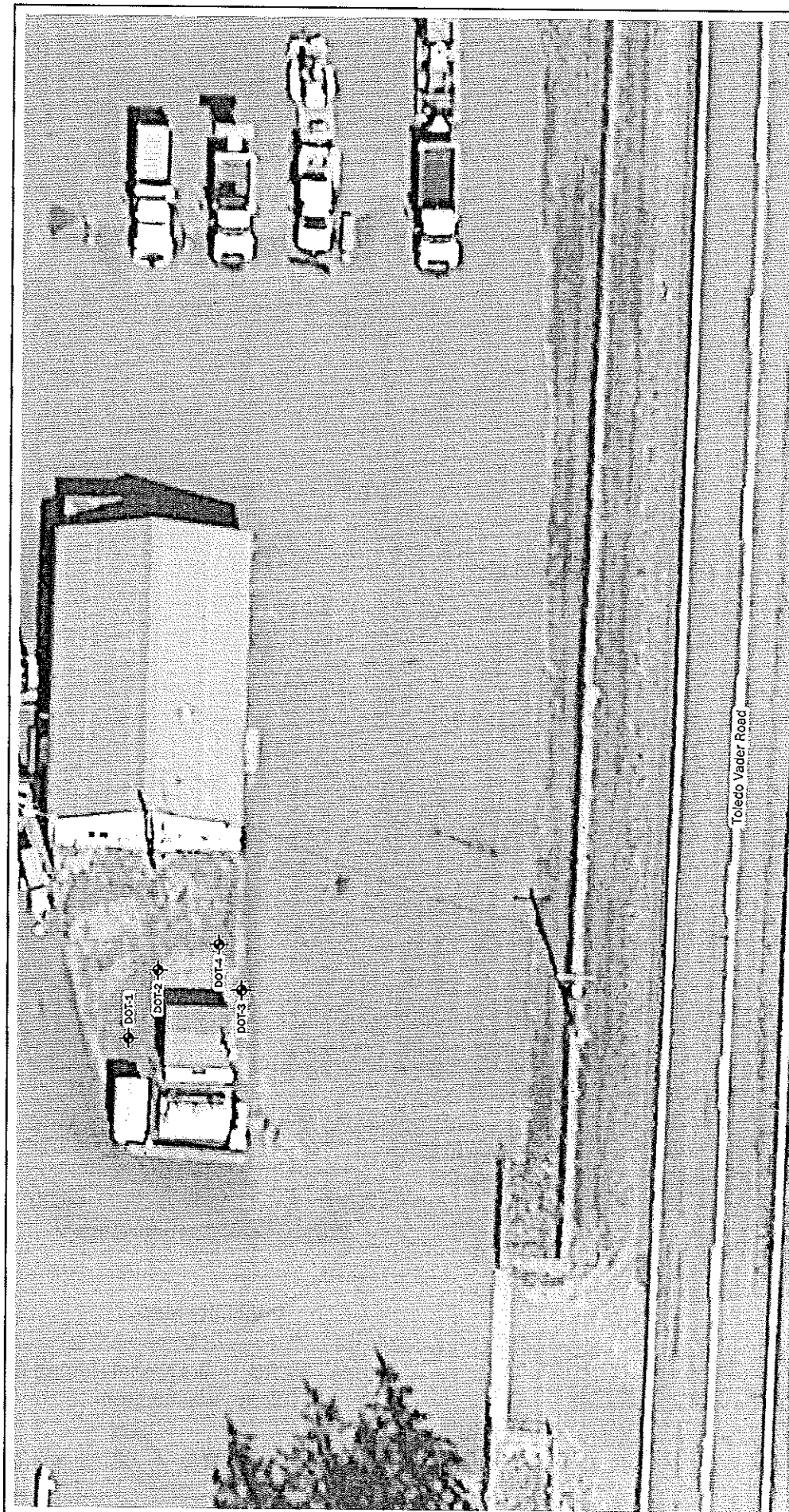
Figure 1

Notes:

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

Data Source: Mapbox Open Street Map, 2016

Projection: NAD 1983 UTM Zone 10N



Notes:

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

Legend

DOT-1 ♦ Boring Completed by GeoEngineers, October 2016



Data Source:
Aerial from Google Earth Pro dated 7/16/2014.

Site Plan

Toledo - SWRO Tanks Model Remedies
Toledo, Washington



Figure 2

APPENDIX A
Field Procedures and Boring Logs

APPENDIX A

FIELD PROCEDURES AND BORING LOGS

Underground Utility Locate

Prior to drilling activities, an underground utility locate was conducted in the area of the proposed boring locations to identify any subsurface utilities and/or potential underground physical hazards. An underground utility check consisting of contacting the Washington State "One Call" service to notify them of the planned drilling activities and subcontract a private utility locating service (Applied Professional Service [APS]) to clear each proposed boring location.

Soil Sampling

A truck-mounted direct-push drilling rig operated by Standard Environmental Probe was used to complete the field investigation. Drilling activities were completed in general accordance with Washington Administrative Code (WAC) 173-760 by a Washington state licensed drilling company. Continuous soil cores were obtained from the direct-push borings using 1.5-inch diameter, 5-foot long stainless steel sampler rods driven using a pneumatic hammer. Soil samples were collected in clean, plastic 2.5-inch diameter disposable liners. The liners were placed inside the sampling rod and then hydraulically driven or pushed into the soil at the selected sampling depth.

A representative from our staff classified the soil encountered in each of the borings. Soil in the explorations was visually classified in general accordance with ASTM International (ASTM) D 2488-94. The boring logs are presented in Appendix A, Figures A-2 through A-4.

The sampling equipment was decontaminated before each sampling attempt with a Liqui-Nox® solution wash and a distilled water rinse. Soil samples were obtained for field screening and possible chemical analysis. Soil samples obtained during the exploration activities were collected from the sampler with a stainless steel knife 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.

Soil samples collected for potential chemical analysis 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.

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/or 3) or photoionization detector (PID). The results of headspace and sheen screening are included in the boring logs for soil samples tested by chemical analysis.

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

Groundwater Sampling

Depth to Groundwater

The depths to the groundwater table relative to ground surface were measured using an electric water level indicator. The electric indicator was cleaned with a Liqui-Nox® solution wash and a distilled water rinse prior to use in each well.

Groundwater Sampling

Groundwater samples were obtained as grab samples using low-flow sampling techniques from the direct-push boring. A slotted stainless steel screen was positioned within the boring. Water samples were collected using disposable tubing and peristaltic pump. The water samples were transferred to laboratory-prepared sample containers and kept cool during transport to the testing laboratory. The sample containers were filled completely to eliminate headspace in the container. Chain-of-custody procedures were followed in transporting the water samples to the testing laboratory.

Investigative Waste Disposal

Drill cuttings and decontamination/purge water generated during drilling activities were placed in sealed and labeled 35- and/or 55-gallon drums at a secure location on the subject property pending permitted disposal.

SOIL CLASSIFICATION CHART

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

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

A "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
	TS	Topsoil/ Forest Duff/Sod

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
DS	Direct shear
HA	Hydrometer analysis
MC	Moisture content
MD	Moisture content and dry density
OC	Organic content
PM	Permeability or hydraulic conductivity
PI	Plasticity index
PP	Pocket penetrometer
PPM	Parts per million
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
NT	Not Tested

KEY TO EXPLORATION LOGS

GEOENGINEERS

FIGURE A-1

Standard: D:\c\1\197 Path:p:\0504\17\GINT\0504\1700.GPJ DBTTemplateLibTemplate:GEOENGINEERS OF STD_US.GDT/GEI8 ENVIRONMENTAL_STANDARD_NO_GW

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

GEOENGINEERS

Figure A- 2
Sheet 1 of 1

Start Drilled 10/28/2016	End 10/28/2016	Total Depth (ft) 11.5	Logged By SJB Checked By TNO	Driller Standard Environmental Probe	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum 294 NAVD88		Hammer Data Pneumatic 140 (lbs) / 30 (in) Drop	Drilling Equipment Geoprobe 5410		
Latitude Longitude 46.449418 -122.866465		System Datum Geographic WGS84	Groundwater Date Measured Depth to Water (ft) Elevation (ft) See Remarks		
Notes: Air-knife to 5 feet below ground surface					

Elevation (feet)	FIELD DATA					MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing				
230						SM			
5						SM-ML			
42									
10									

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

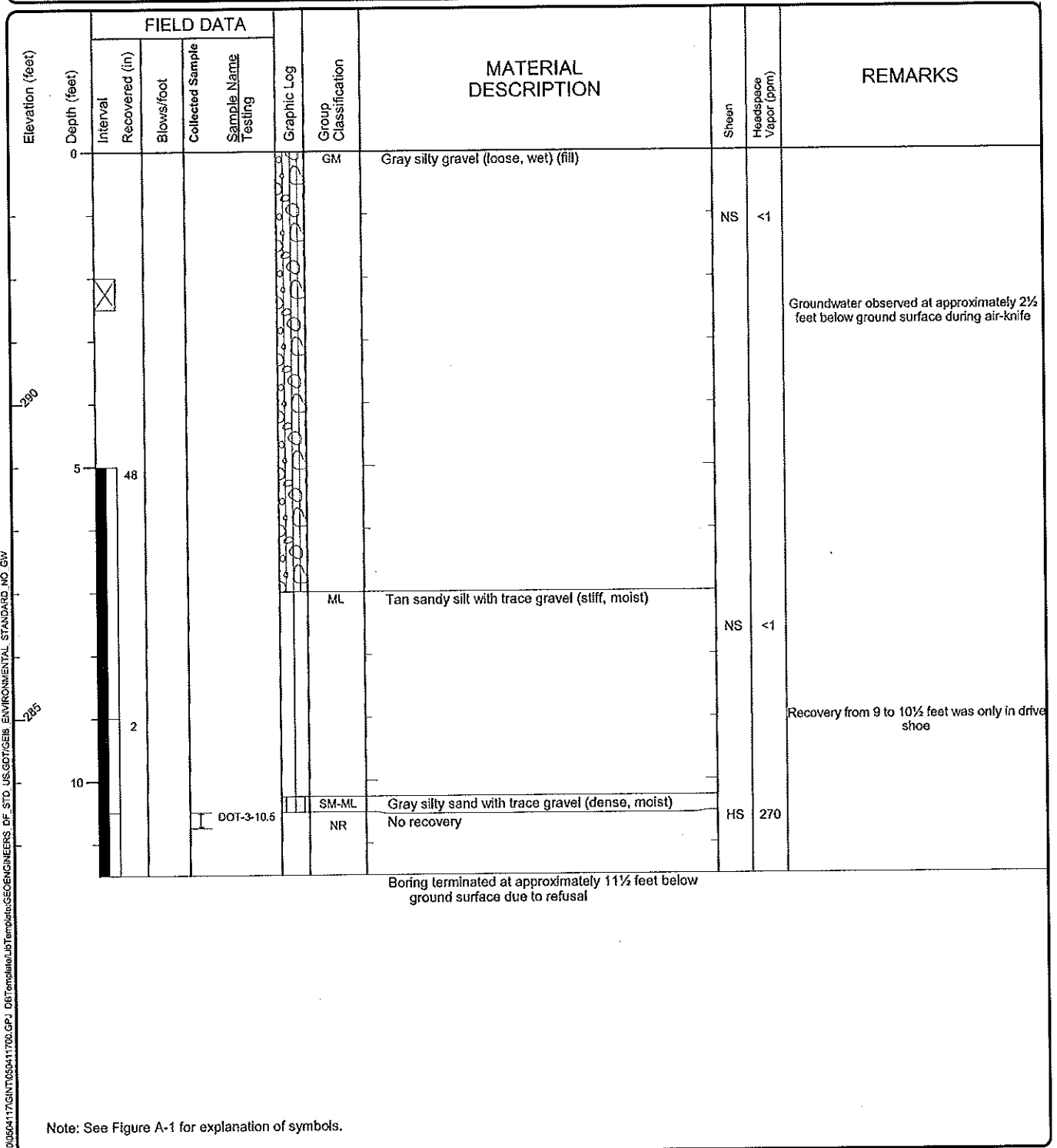
Log of Direct-Push Boring DOT-2



Project: Toledo-SWRO tanks Model Remedies
 Project Location: Toledo, Washington
 Project Number: 0504-117-00

Figure A-3
 Sheet 1 of 1

Start Drilled 10/28/2016	End 10/28/2016	Total Depth (ft) 11.5	Logged By Checked By SJB TNO	Driller Standard Environmental Probe	Drilling Method Direct-Push
Surface Elevation (ft) Vertical Datum 294 NAVD88			Hammer Data Pneumatic 140 (lbs) / 30 (in) Drop	Drilling Equipment Geoprobe 5410	
Latitude Longitude 46.449369 -122.866479			System Datum Geographic WGS84	Groundwater Date Measured	Depth to Water (ft) Elevation (ft) See Remarks
Notes: Air-knife to 5 feet below ground surface					



Log of Direct-Push Boring DOT-3



Project: Toledo-SWRO tanks Model Remedies
 Project Location: Toledo, Washington
 Project Number: 0504-117-00

Figure A-4
 Sheet 1 of 1

APPENDIX B
Laboratory Analytical Report



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

November 8, 2016

Sydney Bronson
GeoEngineers, Inc.
8410 154th Avenue NE
Redmond, WA 98052

Re: Analytical Data for Project 00504-117-00
Laboratory Reference No. 1610-330

Dear Sydney:

Enclosed are the analytical results and associated quality control data for samples submitted on October 29, 2016.

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 horizontal line.

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: November 8, 2016
Samples Submitted: October 29, 2016
Laboratory Reference: 1610-330
Project: 00504-117-00

Case Narrative

Samples were collected on October 28, 2016 and received by the laboratory on October 29, 2016. 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 (soil) 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: November 8, 2016
Samples Submitted: October 29, 2016
Laboratory Reference: 1610-330
Project: 00504-117-00

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
DOT-1-102816	10-330-01	Water	10-28-16	10-29-16	
DOT-2-102816	10-330-02	Water	10-28-16	10-29-16	
DOT-3-102816	10-330-03	Water	10-28-16	10-29-16	
DOT-4-102816	10-330-04	Water	10-28-16	10-29-16	
DOT-1-10.5	10-330-06	Soil	10-28-16	10-29-16	
DOT-2-11.5	10-330-08	Soil	10-28-16	10-29-16	
DOT-3-10.5	10-330-09	Soil	10-28-16	10-29-16	
DOT-4-10.5	10-330-10	Soil	10-28-16	10-29-16	



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 Laboratory Reference: 1610-330
 Project: 00504-117-00

NWTPH-Gx

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-1-102816					
Laboratory ID:	10-330-01					
Gasoline	ND	100	NWTPH-Gx	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	82	61-118				
Client ID:	DOT-2-102816					
Laboratory ID:	10-330-02					
Gasoline	ND	100	NWTPH-Gx	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	81	61-118				
Client ID:	DOT-3-102816					
Laboratory ID:	10-330-03					
Gasoline	ND	100	NWTPH-Gx	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	61-118				
Client ID:	DOT-4-102816					
Laboratory ID:	10-330-04					
Gasoline	ND	100	NWTPH-Gx	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	87	61-118				



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 Project: 00504-117-00

NWTPH-Gx

Matrix: Soil
 Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-1-10.5					
Laboratory ID:	10-330-06					
Gasoline	ND	12	NWTPH-Gx	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	108	63-124				
Client ID:	DOT-2-11.5					
Laboratory ID:	10-330-08					
Gasoline	ND	8.6	NWTPH-Gx	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	110	63-124				
Client ID:	DOT-3-10.5					
Laboratory ID:	10-330-09					
Gasoline	290	56	NWTPH-Gx	11-1-16	11-1-16	O
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	99	63-124				
Client ID:	DOT-4-10.5					
Laboratory ID:	10-330-10					
Gasoline	ND	13	NWTPH-Gx	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	111	63-124				



Date of Report: November 8, 2016
 Samples Submitted: October 29, 2016
 Laboratory Reference: 1610-330
 Project: 00504-117-00

NWTPH-Dx

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-1-102816					
Laboratory ID:	10-330-01					
Diesel Range Organics	ND	0.27	NWTPH-Dx	11-4-16	11-4-16	
Lube Oil Range Organics	ND	0.43	NWTPH-Dx	11-4-16	11-4-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	94	50-150				

Client ID:	DOT-2-102816					
Laboratory ID:	10-330-02					
Diesel Range Organics	ND	0.29	NWTPH-Dx	11-4-16	11-4-16	
Lube Oil Range Organics	ND	0.46	NWTPH-Dx	11-4-16	11-4-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	99	50-150				

Client ID:	DOT-3-102816					
Laboratory ID:	10-330-03					
Diesel Range Organics	ND	0.31	NWTPH-Dx	11-4-16	11-4-16	
Lube Oil Range Organics	ND	0.50	NWTPH-Dx	11-4-16	11-4-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	94	50-150				

Client ID:	DOT-4-102816					
Laboratory ID:	10-330-04					
Diesel Range Organics	ND	0.31	NWTPH-Dx	11-4-16	11-4-16	
Lube Oil Range Organics	ND	0.50	NWTPH-Dx	11-4-16	11-4-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	93	50-150				



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 Project: 00504-117-00

NWTPH-Dx

Matrix: Soil
 Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-1-10.5					
Laboratory ID:	10-330-06					
Diesel Range Organics	ND	37	NWTPH-Dx	11-2-16	11-2-16	
Lube Oil Range Organics	ND	75	NWTPH-Dx	11-2-16	11-2-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	86	50-150				
Client ID:	DOT-2-11.5					
Laboratory ID:	10-330-08					
Diesel Range Organics	ND	34	NWTPH-Dx	11-2-16	11-2-16	
Lube Oil Range Organics	ND	67	NWTPH-Dx	11-2-16	11-2-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	90	50-150				
Client ID:	DOT-3-10.5					
Laboratory ID:	10-330-09					
Diesel Fuel #2	440	38	NWTPH-Dx	11-2-16	11-2-16	
Lube Oil Range Organics	ND	76	NWTPH-Dx	11-2-16	11-2-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	97	50-150				
Client ID:	DOT-4-10.5					
Laboratory ID:	10-330-10					
Diesel Fuel #2	120	35	NWTPH-Dx	11-2-16	11-2-16	
Lube Oil Range Organics	ND	71	NWTPH-Dx	11-2-16	11-2-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	105	50-150				



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 Laboratory Reference: 1610-330
 Project: 00504-117-00

VOLATILES EPA 8260C
 page 1 of 2

Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-1-102816					
Laboratory ID:	10-330-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chloromethane	ND	1.0	EPA 8260C	11-1-16	11-1-16	
Vinyl Chloride	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromomethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chloroethane	ND	1.0	EPA 8260C	11-1-16	11-1-16	
Trichlorofluoromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Acetone	ND	9.2	EPA 8260C	11-1-16	11-1-16	
Iodomethane	ND	1.3	EPA 8260C	11-1-16	11-1-16	
Carbon Disulfide	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Methylene Chloride	ND	1.0	EPA 8260C	11-1-16	11-1-16	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Vinyl Acetate	ND	1.0	EPA 8260C	11-1-16	11-1-16	
2,2-Dichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Butanone	ND	5.0	EPA 8260C	11-1-16	11-1-16	
Bromochloromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chloroform	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Carbon Tetrachloride	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloropropene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Benzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Trichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Dibromomethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromodichloromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Chloroethyl Vinyl Ether	ND	1.9	EPA 8260C	11-1-16	11-1-16	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	11-1-16	11-1-16	
Toluene	ND	1.0	EPA 8260C	11-1-16	11-1-16	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-1-16	11-1-16	



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Date of Report: November 8, 2016
 Samples Submitted: October 29, 2016
 Laboratory Reference: 1610-330
 Project: 00504-117-00

VOLATILES EPA 8260C
 page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-1-102816					
Laboratory ID:	10-330-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Tetrachloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,3-Dichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Hexanone	ND	2.9	EPA 8260C	11-1-16	11-1-16	
Dibromochloromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromoethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Ethylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
m,p-Xylene	ND	0.40	EPA 8260C	11-1-16	11-1-16	
o-Xylene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Styrene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromoform	ND	1.0	EPA 8260C	11-1-16	11-1-16	
Isopropylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
n-Propylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Chlorotoluene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
4-Chlorotoluene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
tert-Butylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
sec-Butylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
p-Isopropyltoluene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
n-Butylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Hexachlorobutadiene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Naphthalene	ND	1.0	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	108	77-129				
Toluene-d8	101	80-127				
4-Bromofluorobenzene	96	80-125				



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 Laboratory Reference: 1610-330
 Project: 00504-117-00

VOLATILES EPA 8260C
 page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-2-102816					
Laboratory ID:	10-330-02					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chloromethane	ND	1.0	EPA 8260C	11-1-16	11-1-16	
Vinyl Chloride	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromomethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chloroethane	ND	1.0	EPA 8260C	11-1-16	11-1-16	
Trichlorofluoromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Acetone	ND	9.2	EPA 8260C	11-1-16	11-1-16	
Iodomethane	ND	1.3	EPA 8260C	11-1-16	11-1-16	
Carbon Disulfide	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Methylene Chloride	ND	1.0	EPA 8260C	11-1-16	11-1-16	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Vinyl Acetate	ND	1.0	EPA 8260C	11-1-16	11-1-16	
2,2-Dichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Butanone	ND	5.0	EPA 8260C	11-1-16	11-1-16	
Bromochloromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chloroform	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Carbon Tetrachloride	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloropropene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Benzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Trichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Dibromomethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromodichloromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Chloroethyl Vinyl Ether	ND	1.9	EPA 8260C	11-1-16	11-1-16	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	11-1-16	11-1-16	
Toluene	ND	1.0	EPA 8260C	11-1-16	11-1-16	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-1-16	11-1-16	



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VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID: DOT-2-102816						
Laboratory ID: 10-330-02						
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Tetrachloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,3-Dichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Hexanone	ND	2.9	EPA 8260C	11-1-16	11-1-16	
Dibromochloromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromoethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Ethylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
m,p-Xylene	ND	0.40	EPA 8260C	11-1-16	11-1-16	
o-Xylene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Styrene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromoform	ND	1.0	EPA 8260C	11-1-16	11-1-16	
Isopropylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
n-Propylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Chlorotoluene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
4-Chlorotoluene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
tert-Butylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
sec-Butylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
p-Isopropyltoluene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
n-Butylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Hexachlorobutadiene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Naphthalene	ND	1.0	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	106	77-129				
Toluene-d8	103	80-127				
4-Bromofluorobenzene	98	80-125				



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: November 8, 2016
 Samples Submitted: October 29, 2016
 Laboratory Reference: 1610-330
 Project: 00504-117-00

VOLATILES EPA 8260C
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-3-102816					
Laboratory ID:	10-330-03					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chloromethane	ND	1.0	EPA 8260C	11-1-16	11-1-16	
Vinyl Chloride	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromomethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chloroethane	ND	1.0	EPA 8260C	11-1-16	11-1-16	
Trichlorofluoromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Acetone	ND	9.2	EPA 8260C	11-1-16	11-1-16	
Iodomethane	ND	1.3	EPA 8260C	11-1-16	11-1-16	
Carbon Disulfide	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Methylene Chloride	ND	1.0	EPA 8260C	11-1-16	11-1-16	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Vinyl Acetate	ND	1.0	EPA 8260C	11-1-16	11-1-16	
2,2-Dichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Butanone	ND	5.0	EPA 8260C	11-1-16	11-1-16	
Bromochloromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chloroform	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Carbon Tetrachloride	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloropropene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Benzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Trichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Dibromomethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromodichloromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Chloroethyl Vinyl Ether	ND	1.9	EPA 8260C	11-1-16	11-1-16	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	11-1-16	11-1-16	
Toluene	ND	1.0	EPA 8260C	11-1-16	11-1-16	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-1-16	11-1-16	



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Date of Report: November 8, 2016
 Samples Submitted: October 29, 2016
 Laboratory Reference: 1610-330
 Project: 00504-117-00

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-3-102816					
Laboratory ID:	10-330-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Tetrachloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,3-Dichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Hexanone	ND	2.9	EPA 8260C	11-1-16	11-1-16	
Dibromochloromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromoethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Ethylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
m,p-Xylene	ND	0.40	EPA 8260C	11-1-16	11-1-16	
o-Xylene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Styrene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromoform	ND	1.0	EPA 8260C	11-1-16	11-1-16	
Isopropylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
n-Propylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Chlorotoluene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
4-Chlorotoluene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
tert-Butylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
sec-Butylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
p-Isopropyltoluene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
n-Butylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Hexachlorobutadiene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Naphthalene	ND	1.0	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	108	77-129				
Toluene-d8	102	80-127				
4-Bromofluorobenzene	96	80-125				



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Date of Report: November 8, 2016
 Samples Submitted: October 29, 2016
 Laboratory Reference: 1610-330
 Project: 00504-117-00

VOLATILES EPA 8260C
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Matrix: Water
 Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-4-102816					
Laboratory ID:	10-330-04					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chloromethane	ND	1.0	EPA 8260C	11-1-16	11-1-16	
Vinyl Chloride	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromomethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chloroethane	ND	1.0	EPA 8260C	11-1-16	11-1-16	
Trichlorofluoromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Acetone	ND	9.2	EPA 8260C	11-1-16	11-1-16	
Iodomethane	ND	1.3	EPA 8260C	11-1-16	11-1-16	
Carbon Disulfide	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Methylene Chloride	ND	1.0	EPA 8260C	11-1-16	11-1-16	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Vinyl Acetate	ND	1.0	EPA 8260C	11-1-16	11-1-16	
2,2-Dichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Butanone	ND	5.0	EPA 8260C	11-1-16	11-1-16	
Bromochloromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chloroform	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Carbon Tetrachloride	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloropropene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Benzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Trichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Dibromomethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromodichloromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Chloroethyl Vinyl Ether	ND	1.9	EPA 8260C	11-1-16	11-1-16	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	11-1-16	11-1-16	
Toluene	ND	1.0	EPA 8260C	11-1-16	11-1-16	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-1-16	11-1-16	



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Date of Report: November 8, 2016
 Samples Submitted: October 29, 2016
 Laboratory Reference: 1610-330
 Project: 00504-117-00

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-4-102816					
Laboratory ID:	10-330-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Tetrachloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,3-Dichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Hexanone	ND	2.9	EPA 8260C	11-1-16	11-1-16	
Dibromochloromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromoethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Ethylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
m,p-Xylene	ND	0.40	EPA 8260C	11-1-16	11-1-16	
o-Xylene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Styrene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromoform	ND	1.0	EPA 8260C	11-1-16	11-1-16	
Isopropylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
n-Propylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Chlorotoluene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
4-Chlorotoluene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
tert-Butylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
sec-Butylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
p-Isopropyltoluene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
n-Butylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Hexachlorobutadiene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Naphthalene	ND	1.0	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	101	77-129				
Toluene-d8	100	80-127				
4-Bromofluorobenzene	95	80-125				



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Date of Report: November 8, 2016
 Samples Submitted: October 29, 2016
 Laboratory Reference: 1610-330
 Project: 00504-117-00

VOLATILES EPA 8260C
 page 1 of 2

Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-1-10.5					
Laboratory ID:	10-330-06					
Dichlorodifluoromethane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Chloromethane	ND	0.0078	EPA 8260C	11-1-16	11-1-16	
Vinyl Chloride	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Bromomethane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Chloroethane	ND	0.0078	EPA 8260C	11-1-16	11-1-16	
Trichlorofluoromethane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Acetone	ND	0.016	EPA 8260C	11-1-16	11-1-16	
Iodomethane	ND	0.0078	EPA 8260C	11-1-16	11-1-16	
Carbon Disulfide	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Methylene Chloride	ND	0.0078	EPA 8260C	11-1-16	11-1-16	
(trans) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Methyl t-Butyl Ether	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Vinyl Acetate	ND	0.0078	EPA 8260C	11-1-16	11-1-16	
2,2-Dichloropropane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
(cis) 1,2-Dichloroethene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
2-Butanone	ND	0.0078	EPA 8260C	11-1-16	11-1-16	
Bromochloromethane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Chloroform	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,1,1-Trichloroethane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Carbon Tetrachloride	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloropropene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Benzene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloroethane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Trichloroethene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloropropane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Dibromomethane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Bromodichloromethane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
2-Chloroethyl Vinyl Ether	ND	0.0078	EPA 8260C	11-1-16	11-1-16	
(cis) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Methyl Isobutyl Ketone	ND	0.0078	EPA 8260C	11-1-16	11-1-16	
Toluene	ND	0.0078	EPA 8260C	11-1-16	11-1-16	
(trans) 1,3-Dichloropropene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	



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Date of Report: November 8, 2016
 Samples Submitted: October 29, 2016
 Laboratory Reference: 1610-330
 Project: 00504-117-00

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-1-10.5					
Laboratory ID:	10-330-06					
1,1,2-Trichloroethane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Tetrachloroethene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,3-Dichloropropane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
2-Hexanone	ND	0.0078	EPA 8260C	11-1-16	11-1-16	
Dibromochloromethane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromoethane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Chlorobenzene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,1,1,2-Tetrachloroethane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Ethylbenzene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
m,p-Xylene	ND	0.0031	EPA 8260C	11-1-16	11-1-16	
o-Xylene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Styrene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Bromoform	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Isopropylbenzene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Bromobenzene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,1,2,2-Tetrachloroethane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichloropropane	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
n-Propylbenzene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
2-Chlorotoluene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
4-Chlorotoluene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,3,5-Trimethylbenzene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
tert-Butylbenzene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trimethylbenzene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
sec-Butylbenzene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,3-Dichlorobenzene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
p-Isopropyltoluene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,4-Dichlorobenzene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,2-Dichlorobenzene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
n-Butylbenzene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromo-3-chloropropane	ND	0.0078	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trichlorobenzene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Hexachlorobutadiene	ND	0.0078	EPA 8260C	11-1-16	11-1-16	
Naphthalene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichlorobenzene	ND	0.0016	EPA 8260C	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	104	73-134				
Toluene-d8	104	81-124				
4-Bromofluorobenzene	105	80-131				



Date of Report: November 8, 2016
 Samples Submitted: October 29, 2016
 Laboratory Reference: 1610-330
 Project: 00504-117-00

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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-2-11.5					
Laboratory ID:	10-330-08					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Chloromethane	ND	0.0070	EPA 8260C	11-1-16	11-1-16	
Vinyl Chloride	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Bromomethane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Chloroethane	ND	0.0070	EPA 8260C	11-1-16	11-1-16	
Trichlorofluoromethane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Acetone	ND	0.014	EPA 8260C	11-1-16	11-1-16	
Iodomethane	ND	0.0070	EPA 8260C	11-1-16	11-1-16	
Carbon Disulfide	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Methylene Chloride	ND	0.0070	EPA 8260C	11-1-16	11-1-16	
(trans) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Methyl t-Butyl Ether	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Vinyl Acetate	ND	0.0070	EPA 8260C	11-1-16	11-1-16	
2,2-Dichloropropane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
(cis) 1,2-Dichloroethene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
2-Butanone	ND	0.0070	EPA 8260C	11-1-16	11-1-16	
Bromochloromethane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Chloroform	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,1,1-Trichloroethane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Carbon Tetrachloride	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloropropene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Benzene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloroethane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Trichloroethene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloropropane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Dibromomethane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Bromodichloromethane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
2-Chloroethyl Vinyl Ether	ND	0.0070	EPA 8260C	11-1-16	11-1-16	
(cis) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Methyl Isobutyl Ketone	ND	0.0070	EPA 8260C	11-1-16	11-1-16	
Toluene	ND	0.0070	EPA 8260C	11-1-16	11-1-16	
(trans) 1,3-Dichloropropene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	



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

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Date of Report: November 8, 2016
 Samples Submitted: October 29, 2016
 Laboratory Reference: 1610-330
 Project: 00504-117-00

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-2-11.5					
Laboratory ID:	10-330-08					
1,1,2-Trichloroethane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Tetrachloroethene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,3-Dichloropropane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
2-Hexanone	ND	0.0070	EPA 8260C	11-1-16	11-1-16	
Dibromochloromethane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromoethane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Chlorobenzene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,1,1,2-Tetrachloroethane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Ethylbenzene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
m,p-Xylene	ND	0.0028	EPA 8260C	11-1-16	11-1-16	
o-Xylene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Styrene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Bromoform	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Isopropylbenzene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Bromobenzene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,1,2,2-Tetrachloroethane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichloropropane	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
n-Propylbenzene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
2-Chlorotoluene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
4-Chlorotoluene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,3,5-Trimethylbenzene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
tert-Butylbenzene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trimethylbenzene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
sec-Butylbenzene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,3-Dichlorobenzene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
p-Isopropyltoluene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,4-Dichlorobenzene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,2-Dichlorobenzene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
n-Butylbenzene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromo-3-chloropropane	ND	0.0070	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trichlorobenzene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Hexachlorobutadiene	ND	0.0070	EPA 8260C	11-1-16	11-1-16	
Naphthalene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichlorobenzene	ND	0.0014	EPA 8260C	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	104	73-134				
Toluene-d8	104	81-124				
4-Bromofluorobenzene	103	80-131				



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

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Date of Report: November 8, 2016
 Samples Submitted: October 29, 2016
 Laboratory Reference: 1610-330
 Project: 00504-117-00

VOLATILES EPA 8260C
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-3-10.5					
Laboratory ID:	10-330-09					
Dichlorodifluoromethane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Chloromethane	ND	0.50	EPA 8260C	11-1-16	11-1-16	
Vinyl Chloride	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Bromomethane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Chloroethane	ND	0.50	EPA 8260C	11-1-16	11-1-16	
Trichlorofluoromethane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Acetone	ND	1.0	EPA 8260C	11-1-16	11-1-16	
Iodomethane	ND	0.50	EPA 8260C	11-1-16	11-1-16	
Carbon Disulfide	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Methylene Chloride	ND	0.50	EPA 8260C	11-1-16	11-1-16	
(trans) 1,2-Dichloroethene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Methyl t-Butyl Ether	ND	0.10	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Vinyl Acetate	ND	0.50	EPA 8260C	11-1-16	11-1-16	
2,2-Dichloropropane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
(cis) 1,2-Dichloroethene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
2-Butanone	ND	0.50	EPA 8260C	11-1-16	11-1-16	
Bromochloromethane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Chloroform	ND	0.10	EPA 8260C	11-1-16	11-1-16	
1,1,1-Trichloroethane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Carbon Tetrachloride	ND	0.10	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloropropene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Benzene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloroethane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Trichloroethene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloropropane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Dibromomethane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Bromodichloromethane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
2-Chloroethyl Vinyl Ether	ND	0.50	EPA 8260C	11-1-16	11-1-16	
(cis) 1,3-Dichloropropene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Methyl Isobutyl Ketone	ND	0.50	EPA 8260C	11-1-16	11-1-16	
Toluene	ND	0.50	EPA 8260C	11-1-16	11-1-16	
(trans) 1,3-Dichloropropene	ND	0.10	EPA 8260C	11-1-16	11-1-16	



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Date of Report: November 8, 2016
 Samples Submitted: October 29, 2016
 Laboratory Reference: 1610-330
 Project: 00504-117-00

VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-3-10.5					
Laboratory ID:	10-330-09					
1,1,2-Trichloroethane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Tetrachloroethene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
1,3-Dichloropropane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
2-Hexanone	ND	0.50	EPA 8260C	11-1-16	11-1-16	
Dibromochloromethane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromoethane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Chlorobenzene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
1,1,1,2-Tetrachloroethane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Ethylbenzene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
m,p-Xylene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
o-Xylene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Styrene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Bromoform	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Isopropylbenzene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Bromobenzene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
1,1,2,2-Tetrachloroethane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichloropropane	ND	0.10	EPA 8260C	11-1-16	11-1-16	
n-Propylbenzene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
2-Chlorotoluene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
4-Chlorotoluene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
1,3,5-Trimethylbenzene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
tert-Butylbenzene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trimethylbenzene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
sec-Butylbenzene	0.23	0.10	EPA 8260C	11-1-16	11-1-16	
1,3-Dichlorobenzene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
p-Isopropyltoluene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
1,4-Dichlorobenzene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
1,2-Dichlorobenzene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
n-Butylbenzene	0.20	0.10	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromo-3-chloropropane	ND	0.50	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trichlorobenzene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Hexachlorobutadiene	ND	0.50	EPA 8260C	11-1-16	11-1-16	
Naphthalene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichlorobenzene	ND	0.10	EPA 8260C	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	96	73-134				
Toluene-d8	107	81-124				
4-Bromofluorobenzene	112	80-131				



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Date of Report: November 8, 2016
 Samples Submitted: October 29, 2016
 Laboratory Reference: 1610-330
 Project: 00504-117-00

VOLATILES EPA 8260C
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Matrix: Soil
 Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-4-10.5					
Laboratory ID:	10-330-10					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Chloromethane	ND	0.0065	EPA 8260C	11-1-16	11-1-16	
Vinyl Chloride	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Bromomethane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Chloroethane	ND	0.0065	EPA 8260C	11-1-16	11-1-16	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Acetone	0.045	0.013	EPA 8260C	11-1-16	11-1-16	
Iodomethane	ND	0.0065	EPA 8260C	11-1-16	11-1-16	
Carbon Disulfide	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Methylene Chloride	ND	0.0065	EPA 8260C	11-1-16	11-1-16	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Methyl t-Butyl Ether	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Vinyl Acetate	ND	0.0065	EPA 8260C	11-1-16	11-1-16	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
(cis) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
2-Butanone	ND	0.0065	EPA 8260C	11-1-16	11-1-16	
Bromochloromethane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Chloroform	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Benzene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Trichloroethene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Dibromomethane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Bromodichloromethane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
2-Chloroethyl Vinyl Ether	ND	0.0065	EPA 8260C	11-1-16	11-1-16	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Methyl Isobutyl Ketone	ND	0.0065	EPA 8260C	11-1-16	11-1-16	
Toluene	ND	0.0065	EPA 8260C	11-1-16	11-1-16	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	



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 Laboratory Reference: 1610-330
 Project: 00504-117-00

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	DOT-4-10.5					
Laboratory ID:	10-330-10					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Tetrachloroethene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
2-Hexanone	ND	0.0065	EPA 8260C	11-1-16	11-1-16	
Dibromochloromethane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Chlorobenzene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Ethylbenzene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
m,p-Xylene	ND	0.0026	EPA 8260C	11-1-16	11-1-16	
o-Xylene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Styrene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Bromoform	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Isopropylbenzene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Bromobenzene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
n-Propylbenzene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
2-Chlorotoluene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
4-Chlorotoluene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
1,3,5-Trimethylbenzene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
tert-Butylbenzene	0.016	0.0013	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trimethylbenzene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
sec-Butylbenzene	0.033	0.0013	EPA 8260C	11-1-16	11-1-16	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
p-Isopropyltoluene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
n-Butylbenzene	0.013	0.0013	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromo-3-chloropropane	ND	0.0065	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Hexachlorobutadiene	ND	0.0065	EPA 8260C	11-1-16	11-1-16	
Naphthalene	0.0068	0.0013	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	106	73-134				
Toluene-d8	105	81-124				
4-Bromofluorobenzene	115	80-131				



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

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Date of Report: November 8, 2016
 Samples Submitted: October 29, 2016
 Laboratory Reference: 1610-330
 Project: 00504-117-00

TOTAL LEAD
EPA 200.8

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-330-01					
Client ID:	DOT-1-102816					
Lead	2600	11	200.8	10-31-16	1-1-16	
Lab ID:	10-330-02					
Client ID:	DOT-2-102816					
Lead	570	11	200.8	10-31-16	1-1-16	
Lab ID:	10-330-03					
Client ID:	DOT-3-102816					
Lead	150	1.1	200.8	10-31-16	10-31-16	
Lab ID:	10-330-04					
Client ID:	DOT-4-102816					
Lead	84	1.1	200.8	10-31-16	10-31-16	



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Laboratory Reference: 1610-330
Project: 00504-117-00

**TOTAL LEAD
EPA 6010C**

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-330-06					
Client ID:	DOT-1-10.5					
Lead	8.9	7.5	6010C	11-7-16	11-7-16	
Lab ID:	10-330-08					
Client ID:	DOT-2-11.5					
Lead	ND	6.7	6010C	11-7-16	11-7-16	
Lab ID:	10-330-09					
Client ID:	DOT-3-10.5					
Lead	ND	7.6	6010C	11-7-16	11-7-16	
Lab ID:	10-330-10					
Client ID:	DOT-4-10.5					
Lead	15	7.0	6010C	11-7-16	11-7-16	



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DISSOLVED LEAD
EPA 200.8

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-330-01					
Client ID:	DOT-1-102816					
Lead	6.6	1.0	200.8		10-31-16	
Lab ID:	10-330-02					
Client ID:	DOT-2-102816					
Lead	1.5	1.0	200.8		10-31-16	
Lab ID:	10-330-03					
Client ID:	DOT-3-102816					
Lead	2.3	1.0	200.8		10-31-16	
Lab ID:	10-330-04					
Client ID:	DOT-4-102816					
Lead	4.8	1.0	200.8		10-31-16	



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**NWTPH-Gx
 QUALITY CONTROL**

Matrix: Water
 Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1101W1					
Gasoline	ND	100	NWTPH-Gx	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Fluorobenzene	83	61-118				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-339-01							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	NA	30
Surrogate:								
Fluorobenzene				84	79	61-118		



Date of Report: November 8, 2016
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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:	MB1101S1					
Gasoline	ND	5.0	NWTPH-Gx	11-1-16	11-1-16	
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:	10-340-06							
	ORIG	DUP						
Gasoline	ND	ND	NA	NA	NA	NA	30	
Surrogate:								
Fluorobenzene				95	96	63-124		



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**NWTPH-Dx
QUALITY CONTROL**

Matrix: Water
 Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1104W1					
Diesel Range Organics	ND	0.25	NWTPH-Dx	11-4-16	11-4-16	
Lube Oil Range Organics	ND	0.40	NWTPH-Dx	11-4-16	11-4-16	
Surrogate:	Percent Recovery	Control Limits				
<i>o</i> -Terphenyl	80	50-150				

Analyte	Result	Spike Level	Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE								
Laboratory ID:	10-292-01							
	ORIG	DUP						
Diesel Range	ND	ND	NA	NA	NA	NA	NA	NA
Lube Oil Range	ND	ND	NA	NA	NA	NA	NA	NA
Surrogate:								
<i>o</i> -Terphenyl				86	93	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:	MB1102S1					
Diesel Range Organics	ND	25	NWTPH-Dx	11-2-16	11-2-16	
Lube Oil Range Organics	ND	50	NWTPH-Dx	11-2-16	11-2-16	
Surrogate:	Percent Recovery	Control Limits				
o-Terphenyl	123	50-150				

Analyte	Result		Spike Level		Source Result	Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE										
Laboratory ID:	10-292-06									
	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						114	108	50-150		



Date of Report: November 8, 2016
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VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
 page 1 of 2

Matrix: Water

Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1101W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chloromethane	ND	1.0	EPA 8260C	11-1-16	11-1-16	
Vinyl Chloride	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromomethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chloroethane	ND	1.0	EPA 8260C	11-1-16	11-1-16	
Trichlorofluoromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Acetone	ND	9.2	EPA 8260C	11-1-16	11-1-16	
Iodomethane	ND	1.3	EPA 8260C	11-1-16	11-1-16	
Carbon Disulfide	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Methylene Chloride	ND	1.0	EPA 8260C	11-1-16	11-1-16	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Vinyl Acetate	ND	1.0	EPA 8260C	11-1-16	11-1-16	
2,2-Dichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Butanone	ND	5.0	EPA 8260C	11-1-16	11-1-16	
Bromochloromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chloroform	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Carbon Tetrachloride	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloropropene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Benzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Trichloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Dibromomethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromodichloromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Chloroethyl Vinyl Ether	ND	1.9	EPA 8260C	11-1-16	11-1-16	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Methyl Isobutyl Ketone	ND	2.0	EPA 8260C	11-1-16	11-1-16	
Toluene	ND	1.0	EPA 8260C	11-1-16	11-1-16	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	11-1-16	11-1-16	



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 Laboratory Reference: 1610-330
 Project: 00504-117-00

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB1101W1						
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Tetrachloroethene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,3-Dichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Hexanone	ND	2.9	EPA 8260C	11-1-16	11-1-16	
Dibromochloromethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromoethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Chlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Ethylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
m,p-Xylene	ND	0.40	EPA 8260C	11-1-16	11-1-16	
o-Xylene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Styrene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromoform	ND	1.0	EPA 8260C	11-1-16	11-1-16	
Isopropylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Bromobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	11-1-16	11-1-16	
n-Propylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
2-Chlorotoluene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
4-Chlorotoluene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
tert-Butylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
sec-Butylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
p-Isopropyltoluene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
n-Butylbenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromo-3-chloropropane	ND	1.3	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Hexachlorobutadiene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Naphthalene	ND	1.0	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	11-1-16	11-1-16	
Surrogate:	Percent Recovery	Control Limits				
Dibromofluoromethane	105	77-129				
Toluene-d8	100	80-127				
4-Bromofluorobenzene	97	80-125				



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Date of Report: November 8, 2016
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 Laboratory Reference: 1610-330
 Project: 00504-117-00

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
 Units: ug/L

Analyte	Result		Spike Level		Percent Recovery	Recovery Limits	RPD	Limit	Flags
SPIKE BLANKS									
Laboratory ID:	SB1101W1								
	SB	SBD	SB	SBD	SB	SBD			
1,1-Dichloroethene	9.90	10.5	10.0	10.0	99	105	63-127	6	17
Benzene	10.3	10.5	10.0	10.0	103	105	76-121	2	12
Trichloroethene	9.16	8.88	10.0	10.0	92	89	64-114	3	15
Toluene	10.3	10.1	10.0	10.0	103	101	82-115	2	13
Chlorobenzene	9.76	9.74	10.0	10.0	98	97	80-115	0	14
Surrogate:									
Dibromofluoromethane					99	105	77-129		
Toluene-d8					101	101	80-127		
4-Bromofluorobenzene					93	97	80-125		



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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
<hr/>						
Laboratory ID:	MB1101S2					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Chloromethane	ND	0.0050	EPA 8260C	11-1-16	11-1-16	
Vinyl Chloride	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Bromomethane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Chloroethane	ND	0.0050	EPA 8260C	11-1-16	11-1-16	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Acetone	ND	0.010	EPA 8260C	11-1-16	11-1-16	
Iodomethane	ND	0.0050	EPA 8260C	11-1-16	11-1-16	
Carbon Disulfide	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Methylene Chloride	ND	0.0050	EPA 8260C	11-1-16	11-1-16	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Vinyl Acetate	ND	0.0050	EPA 8260C	11-1-16	11-1-16	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
2-Butanone	ND	0.0050	EPA 8260C	11-1-16	11-1-16	
Bromochloromethane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Chloroform	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Benzene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Trichloroethene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Dibromomethane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Bromodichloromethane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	11-1-16	11-1-16	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	11-1-16	11-1-16	
Toluene	ND	0.0050	EPA 8260C	11-1-16	11-1-16	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	



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VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID: MB1101S2						
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Tetrachloroethene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
2-Hexanone	ND	0.0050	EPA 8260C	11-1-16	11-1-16	
Dibromochloromethane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Chlorobenzene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Ethylbenzene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
m,p-Xylene	ND	0.0020	EPA 8260C	11-1-16	11-1-16	
o-Xylene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Styrene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Bromoform	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Isopropylbenzene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Bromobenzene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
n-Propylbenzene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
2-Chlorotoluene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
4-Chlorotoluene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
tert-Butylbenzene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
sec-Butylbenzene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
n-Butylbenzene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	11-1-16	11-1-16	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	11-1-16	11-1-16	
Naphthalene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	11-1-16	11-1-16	
<i>Surrogate:</i>	<i>Percent Recovery</i>	<i>Control Limits</i>				
Dibromofluoromethane	110	73-134				
Toluene-d8	111	81-124				
4-Bromofluorobenzene	107	80-131				



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

Date of Report: November 8, 2016
 Samples Submitted: October 29, 2016
 Laboratory Reference: 1610-330
 Project: 00504-117-00

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

Matrix: Soil
 Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery	Recovery Limits	RPD	Limit	Flags
SPIKE BLANKS									
Laboratory ID:	SB1101S2								
	SB	SBD	SB	SBD	SB	SBD			
1,1-Dichloroethene	0.0479	0.0508	0.0500	0.0500	96	102	66-127	6	15
Benzene	0.0479	0.0511	0.0500	0.0500	96	102	76-122	6	15
Trichloroethene	0.0465	0.0476	0.0500	0.0500	93	95	78-120	2	15
Toluene	0.0506	0.0507	0.0500	0.0500	101	101	83-120	0	15
Chlorobenzene	0.0485	0.0503	0.0500	0.0500	97	101	81-120	4	15
Surrogate:									
Dibromofluoromethane					97	102	73-134		
Toluene-d8					99	102	81-124		
4-Bromofluorobenzene					97	100	80-131		



Date of Report: November 8, 2016
Samples Submitted: October 29, 2016
Laboratory Reference: 1610-330
Project: 00504-117-00

TOTAL LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Extracted: 10-31-16
Date Analyzed: 10-31-16

Matrix: Water
Units: ug/L (ppb)

Lab ID: MB1031WM1

Analyte	Method	Result	PQL
Lead	200.8	ND	1.1



Date of Report: November 8, 2016
Samples Submitted: October 29, 2016
Laboratory Reference: 1610-330
Project: 00504-117-00

**TOTAL LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL**

Date Extracted: 10-31-16
Date Analyzed: 10-31-16

Matrix: Water
Units: ug/L (ppb)

Lab ID: 10-269-04

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	ND	ND	NA	1.1	



Date of Report: November 8, 2016
Samples Submitted: October 29, 2016
Laboratory Reference: 1610-330
Project: 00504-117-00

TOTAL LEAD
EPA 200.8
MS/MSD QUALITY CONTROL

Date Extracted: 10-31-16

Date Analyzed: 10-31-16

Matrix: Water

Units: ug/L (ppb)

Lab ID: 10-269-04

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	222	214	96	221	100	3	



Date of Report: November 8, 2016
Samples Submitted: October 29, 2016
Laboratory Reference: 1610-330
Project: 00504-117-00

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

Date Extracted: 11-7-16

Date Analyzed: 11-7-16

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: MB1107SM2

Analyte	Method	Result	PQL
Lead	6010C	ND	5.0



Date of Report: November 8, 2016
Samples Submitted: October 29, 2016
Laboratory Reference: 1610-330
Project: 00504-117-00

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

Date Extracted: 11-7-16

Date Analyzed: 11-7-16

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 11-058-03

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	6.65	ND	NA	5.0	



Date of Report: November 8, 2016
Samples Submitted: October 29, 2016
Laboratory Reference: 1610-330
Project: 00504-117-00

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

Date Extracted: 11-7-16

Date Analyzed: 11-7-16

Matrix: Soil

Units: mg/kg (ppm)

Lab ID: 11-058-03

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	250	236	92	242	94	3	



Date of Report: November 8, 2016
Samples Submitted: October 29, 2016
Laboratory Reference: 1610-330
Project: 00504-117-00

DISSOLVED LEAD
EPA 200.8
METHOD BLANK QUALITY CONTROL

Date Analyzed: 10-31-16
Matrix: Water
Units: ug/L (ppb)
Lab ID: MB1028F1

Analyte	Method	Result	PQL
Lead	200.8	ND	1.0



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Date of Report: November 8, 2016
Samples Submitted: October 29, 2016
Laboratory Reference: 1610-330
Project: 00504-117-00

**DISSOLVED LEAD
EPA 200.8
DUPLICATE QUALITY CONTROL**

Date Analyzed: 10-31-16

Matrix: Water
Units: ug/L (ppb)

Lab ID: 10-322-04

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Lead	ND	ND	NA	1.0	



Date of Report: November 8, 2016
Samples Submitted: October 29, 2016
Laboratory Reference: 1610-330
Project: 00504-117-00

**DISSOLVED LEAD
EPA 200.8
MS/MSD QUALITY CONTROL**

Date Analyzed: 10-31-16

Matrix: Water

Units: ug/L (ppb)

Lab ID: 10-322-04

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Lead	200	189	94	191	96	1	



Date of Report: November 8, 2016
Samples Submitted: October 29, 2016
Laboratory Reference: 1610-330
Project: 00504-117-00

% MOISTURE

Date Analyzed: 11-1-16

Client ID	Lab ID	% Moisture
DOT-1-10.5	10-330-06	33
DOT-2-11.5	10-330-08	26
DOT-3-10.5	10-330-09	34
DOT-4-10.5	10-330-10	29



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Data Qualifiers and Abbreviations

- A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.
- B - The analyte indicated was also found in the blank sample.
- C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.
- E - The value reported exceeds the quantitation range and is an estimate.
- F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.
- H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.
- I - Compound recovery is outside of the control limits.
- J - The value reported was below the practical quantitation limit. The value is an estimate.
- K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.
- L - The RPD is outside of the control limits.
- M - Hydrocarbons in the gasoline range are impacting the diesel range result.
- M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.
- N - Hydrocarbons in the lube oil range are impacting the diesel range result.
- N1 - Hydrocarbons in diesel range are impacting lube oil range results.
- O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.
- P - The RPD of the detected concentrations between the two columns is greater than 40.
- Q - Surrogate recovery is outside of the control limits.
- S - Surrogate recovery data is not available due to the necessary dilution of the sample.
- T - The sample chromatogram is not similar to a typical _____.
- U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.
- U1 - The practical quantitation limit is elevated due to interferences present in the sample.
- V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.
- W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.
- X - Sample extract treated with a mercury cleanup procedure.
- X1 - Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.
- Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.
- Z -
- ND - Not Detected at PQL
- PQL - Practical Quantitation Limit
- RPD - Relative Percent Difference



Chain of Custody

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

10-330

Company: **GeoEngineers**

Project Number: **00504-117-00**

Project Name: **WA EGY- Toledo Suro Tanks (Toledo)**

Project Manager: **Sydney Branson**

Sampled by: **Sydney Branson**

Turnaround Request
(in working days)

(Check One)

☐ Same Day ☐ 1 Day

☐ 2 Days ☐ 3 Days

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

☐ (other) _____

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	Laboratory Number: 10-330																				
1	DOT-1-102816	10/28/16	1315	Geo	9	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (<input type="checkbox"/> 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 8161A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Hold	TOTAL LEAD	DISSOLVED LEAD	% Moisture
2	DOT-2-102816		1400					X	X	X													X	X	X	
3	DOT-3-102816		1215					X	X	X													X	X	X	
4	DOT-4-102816		1215					X	X	X													X	X	X	
5	DOT-1-6.5		1305					X	X	X													X	X	X	
6	DOT-2-11.5		1350					X	X	X													X	X	X	
7	DOT-2-11.5		1355					X	X	X													X	X	X	
8	DOT-2-11.5		1015					X	X	X													X	X	X	
9	DOT-3-10.5		1200					X	X	X													X	X	X	
10	DOT-4-10.5							X	X	X													X	X	X	

Signature: *[Signature]*

Company: **GeoEngineers**

Date: **10/29/16**

Time: **1135**

Comments/Special Instructions

Sydney Branson or Jeremy Hughes to contact w/ request for analysis.

* FIELD FILTERED

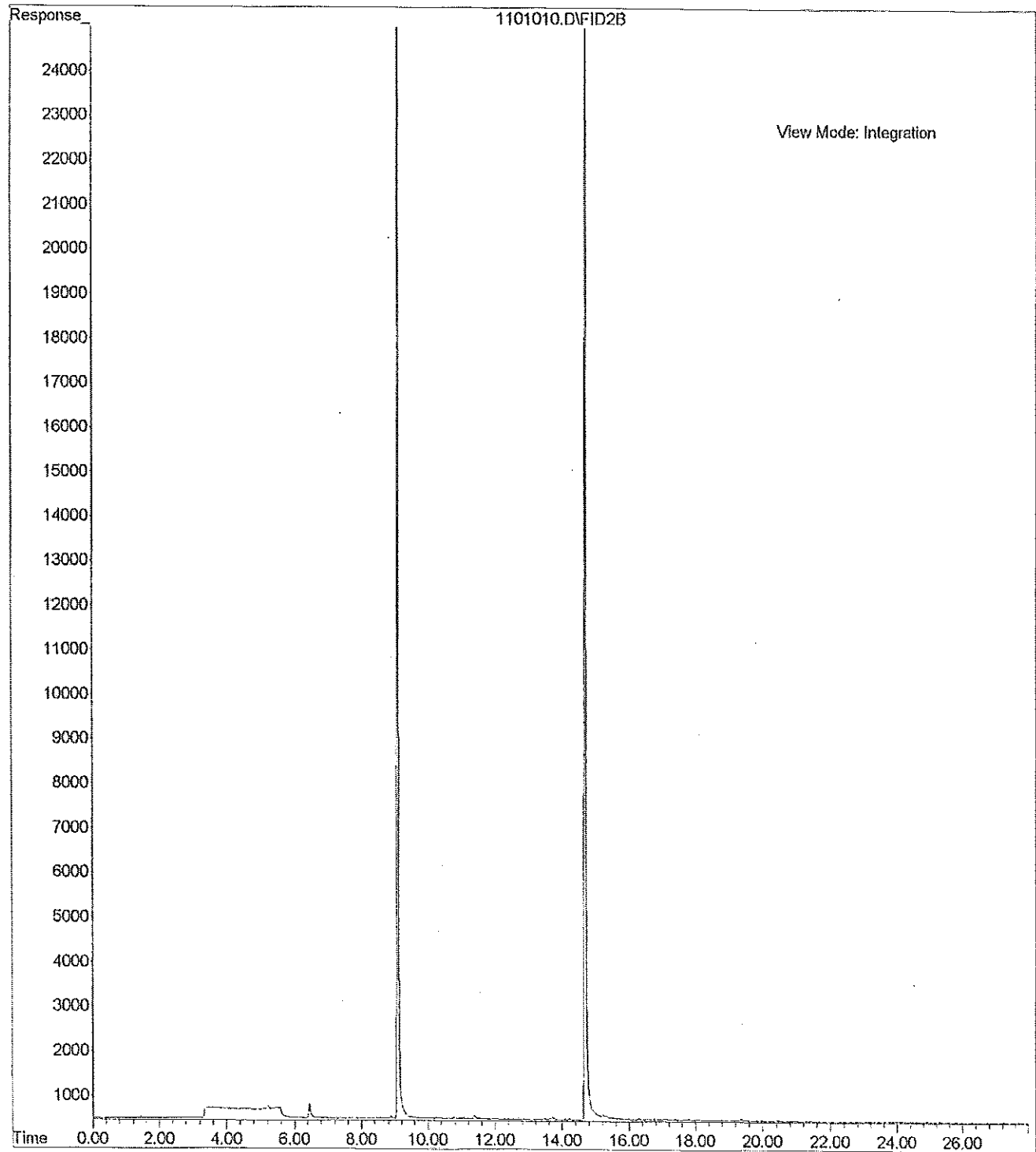
** - ACU/SG Pending Initial data.

- EDD Requested.

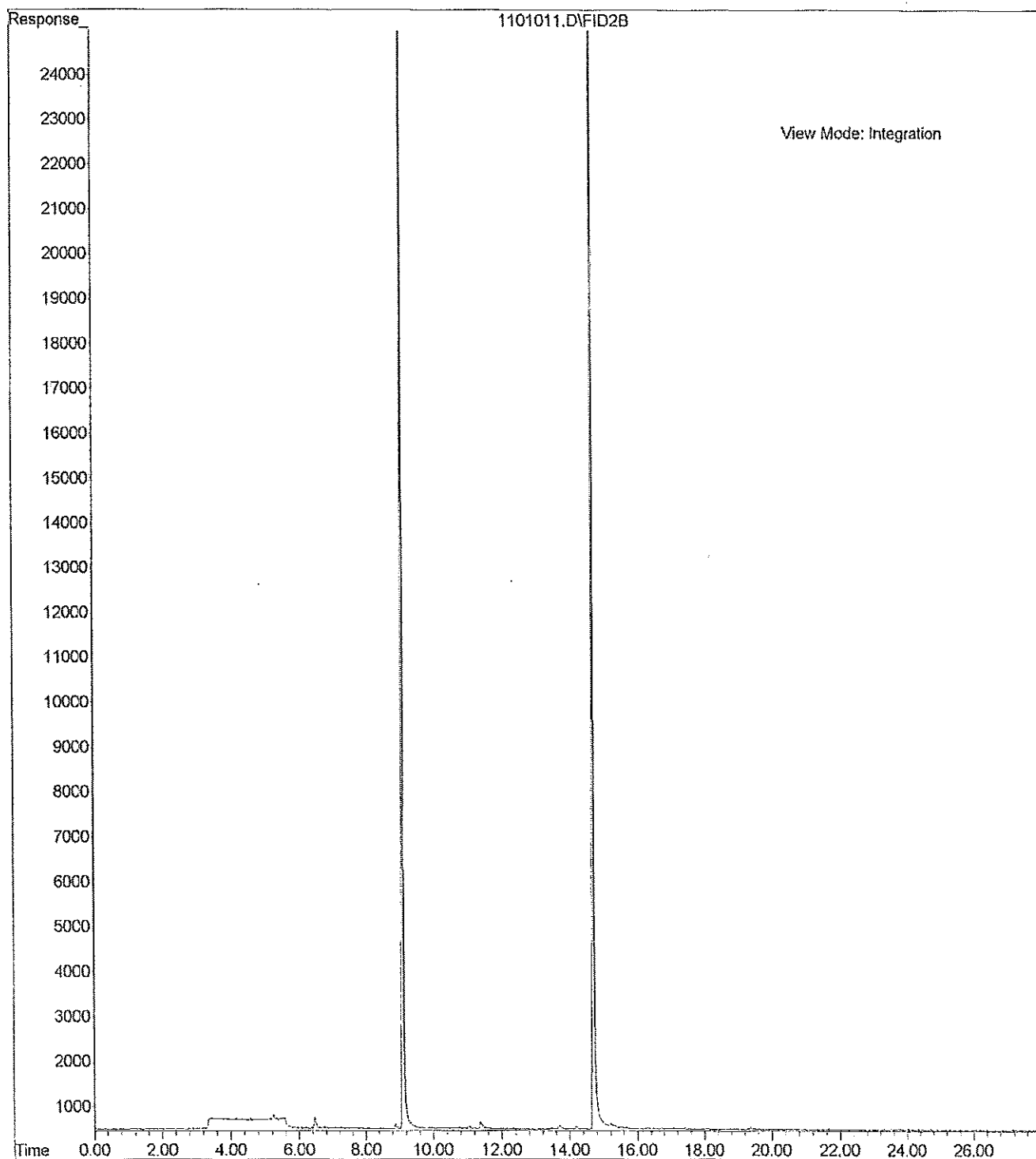
Data Package: Standard ☐ Level III ☐ Level IV ☐

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

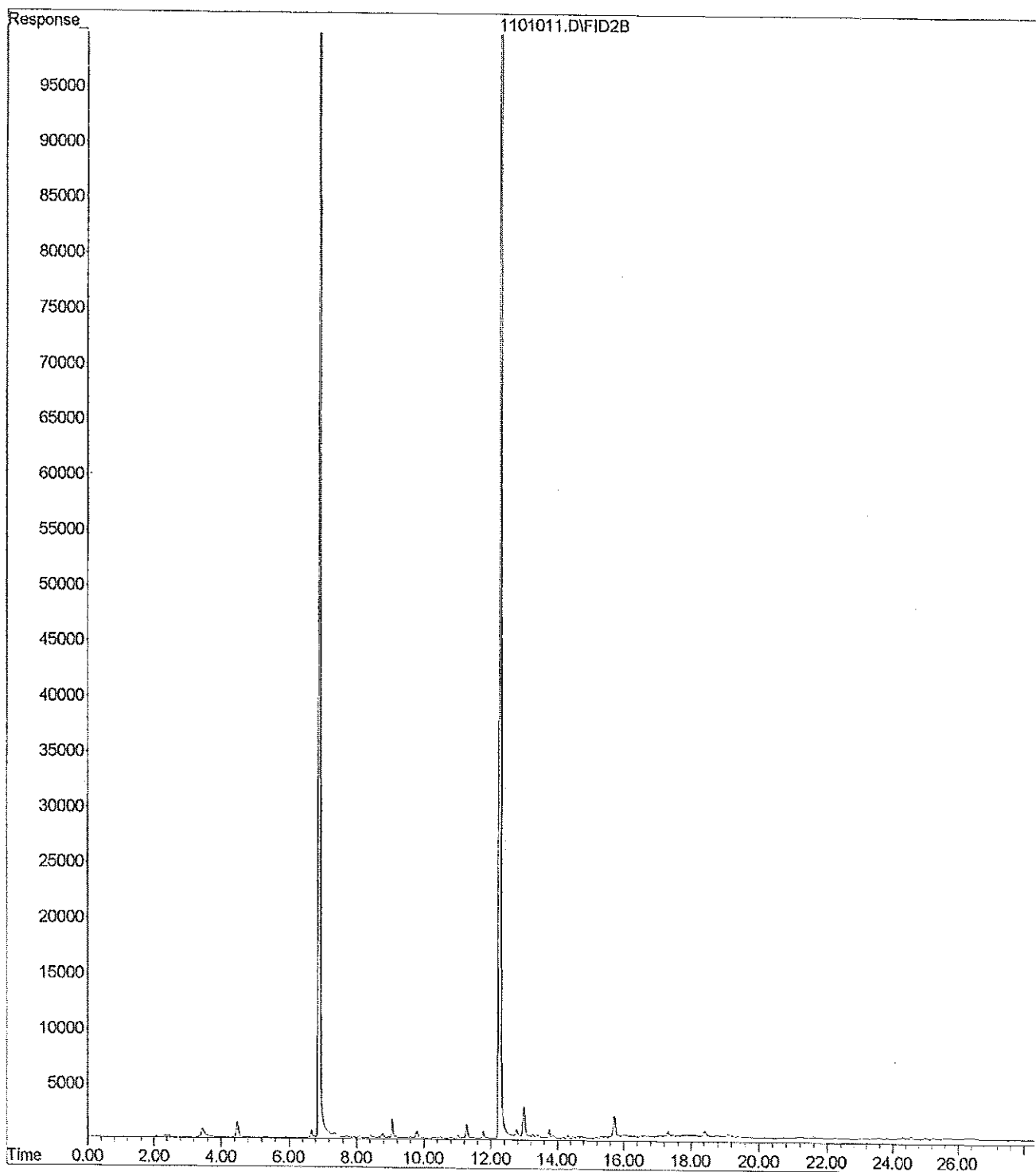
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Operator :
Acquired : 1 Nov 2016 12:31 using AcqMethod 160630BG.M
Instrument : Hope
Sample Name: 10-330-01f
Misc Info :
Vial Number: 10



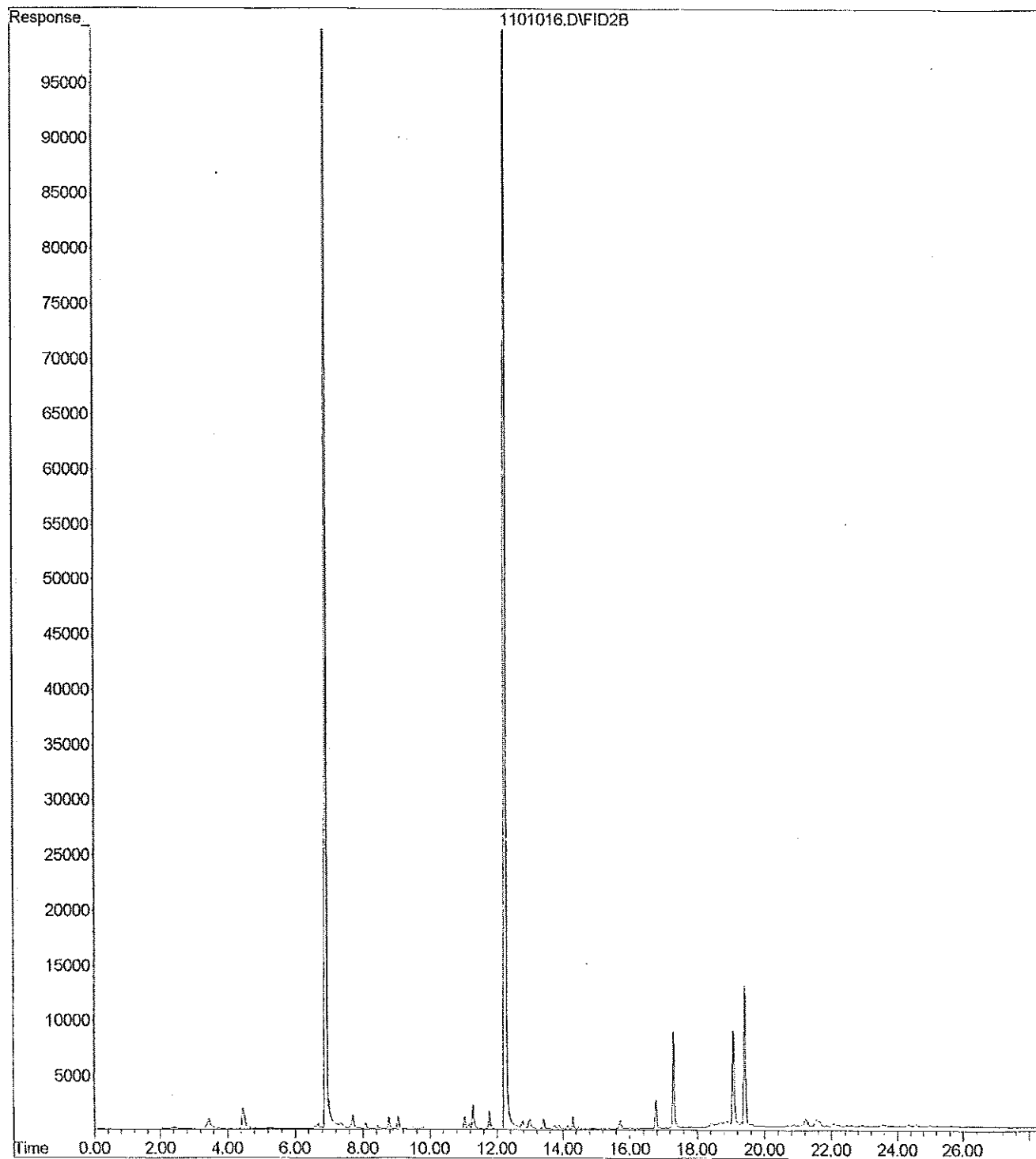
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Instrument : Hope
Sample Name: 10-330-02f
Misc Info :
Vial Number: 11



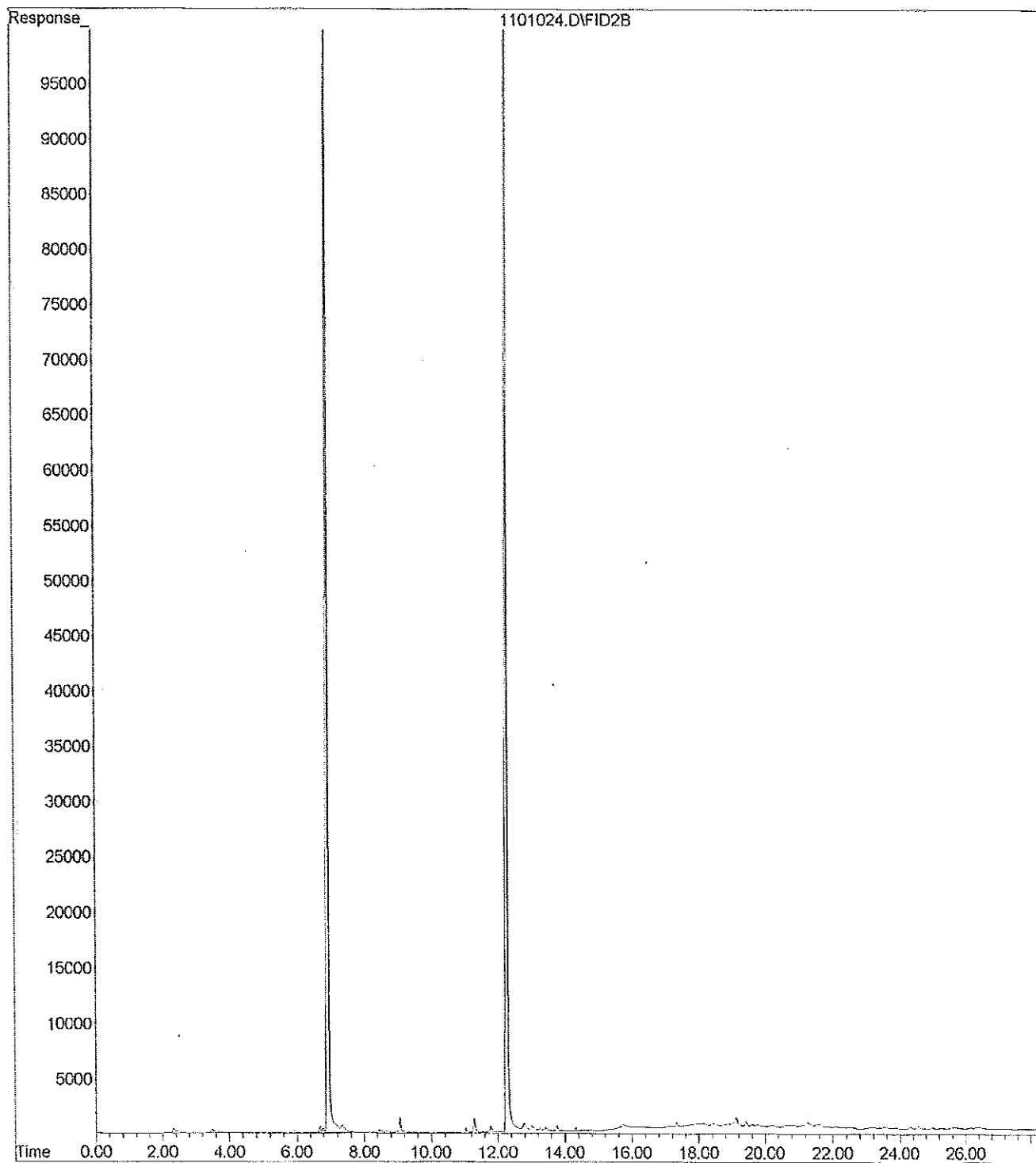
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Acquired : 1 Nov 2016 14:05 using AcqMethod 160825BM.M
Instrument : Daryl
Sample Name: 10-330-03f
Misc Info :
Vial Number: 11



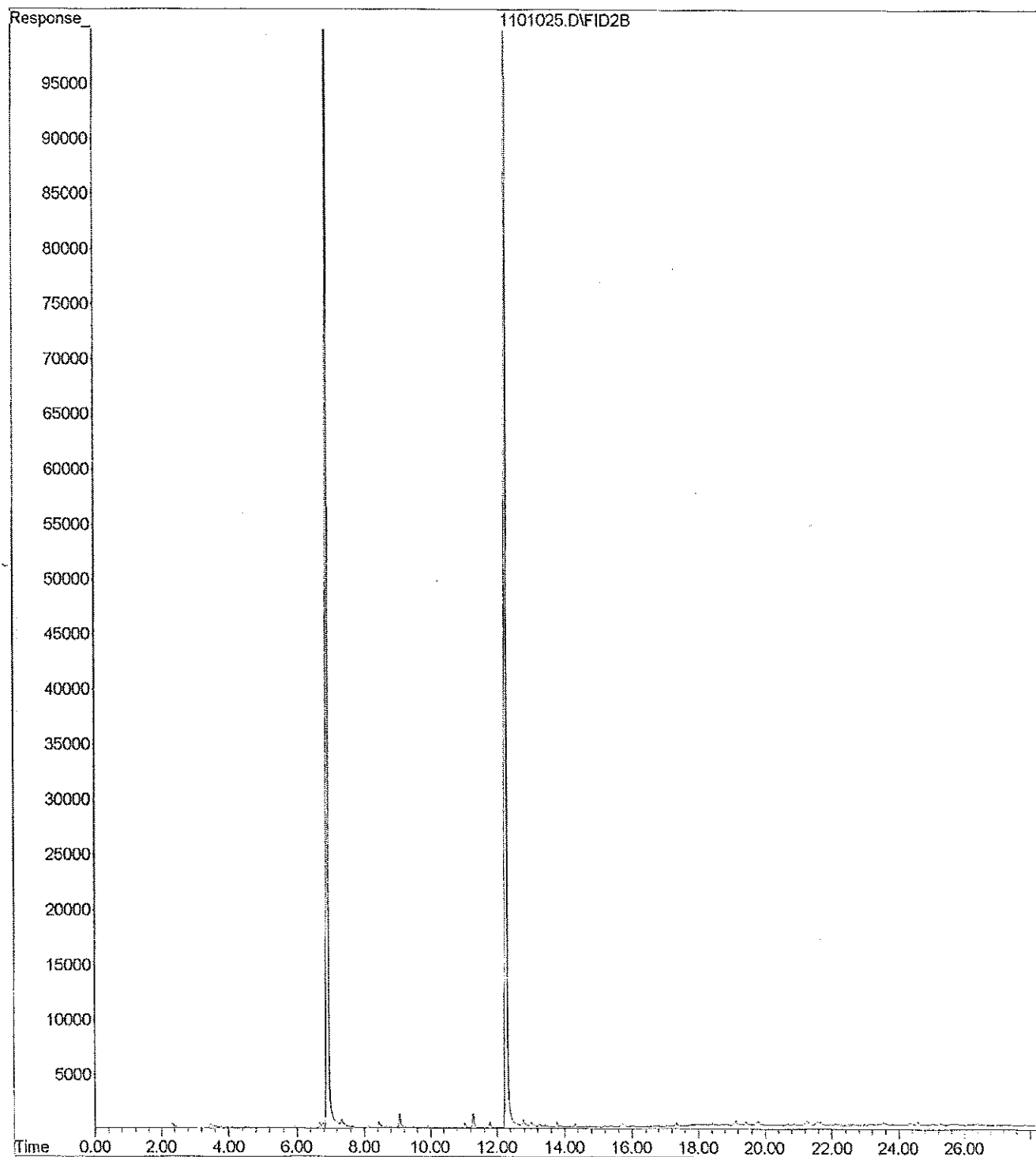
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Instrument : Daryl
Sample Name: 10-330-04f
Misc Info :
Vial Number: 16



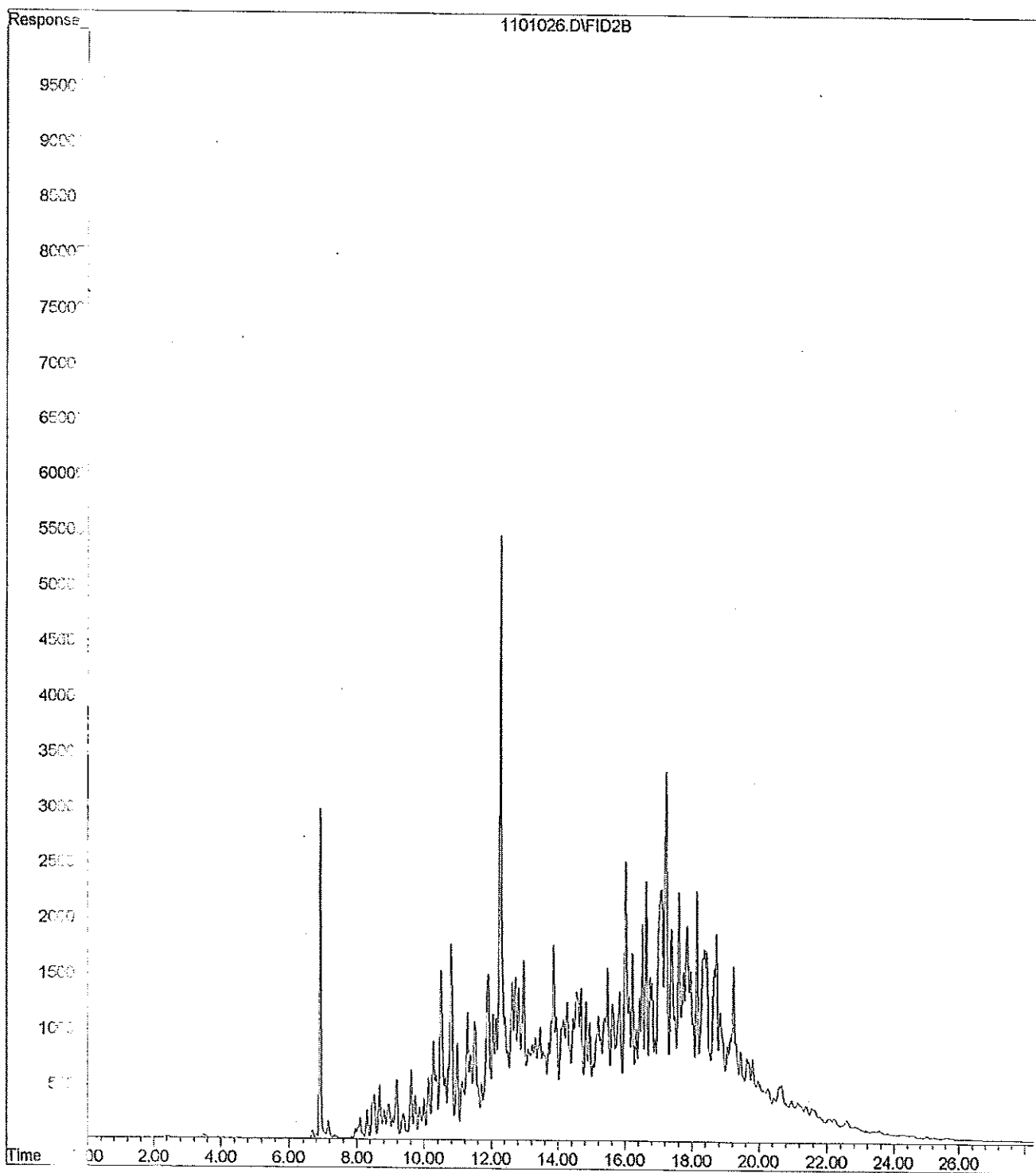
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Instrument : Daryl
Sample Name: 10-330-06s
Misc Info :
Vial Number: 24



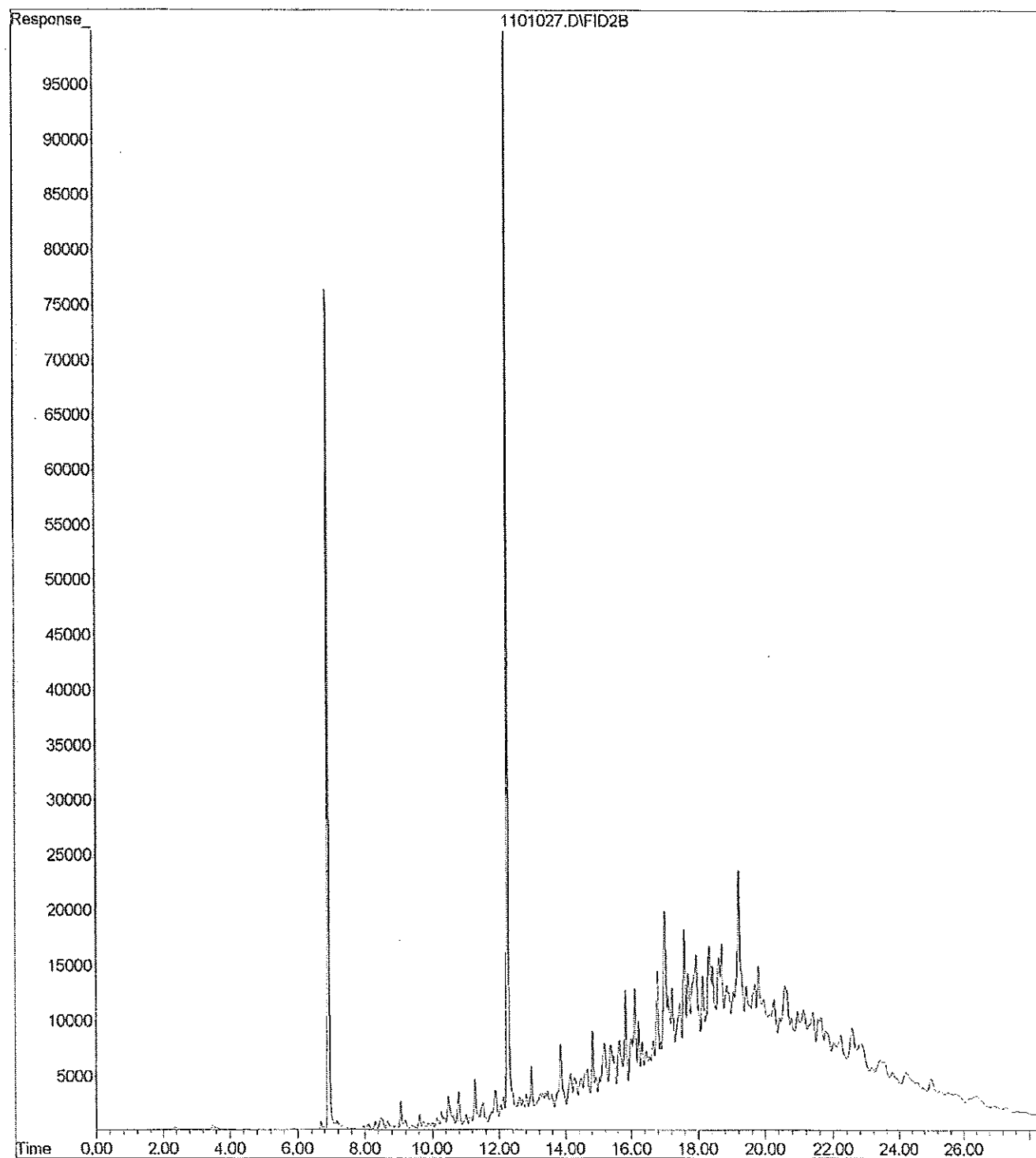
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Operator :
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Instrument : Daryl
Sample Name: 10-330-08s
Misc Info :
Vial Number: 25



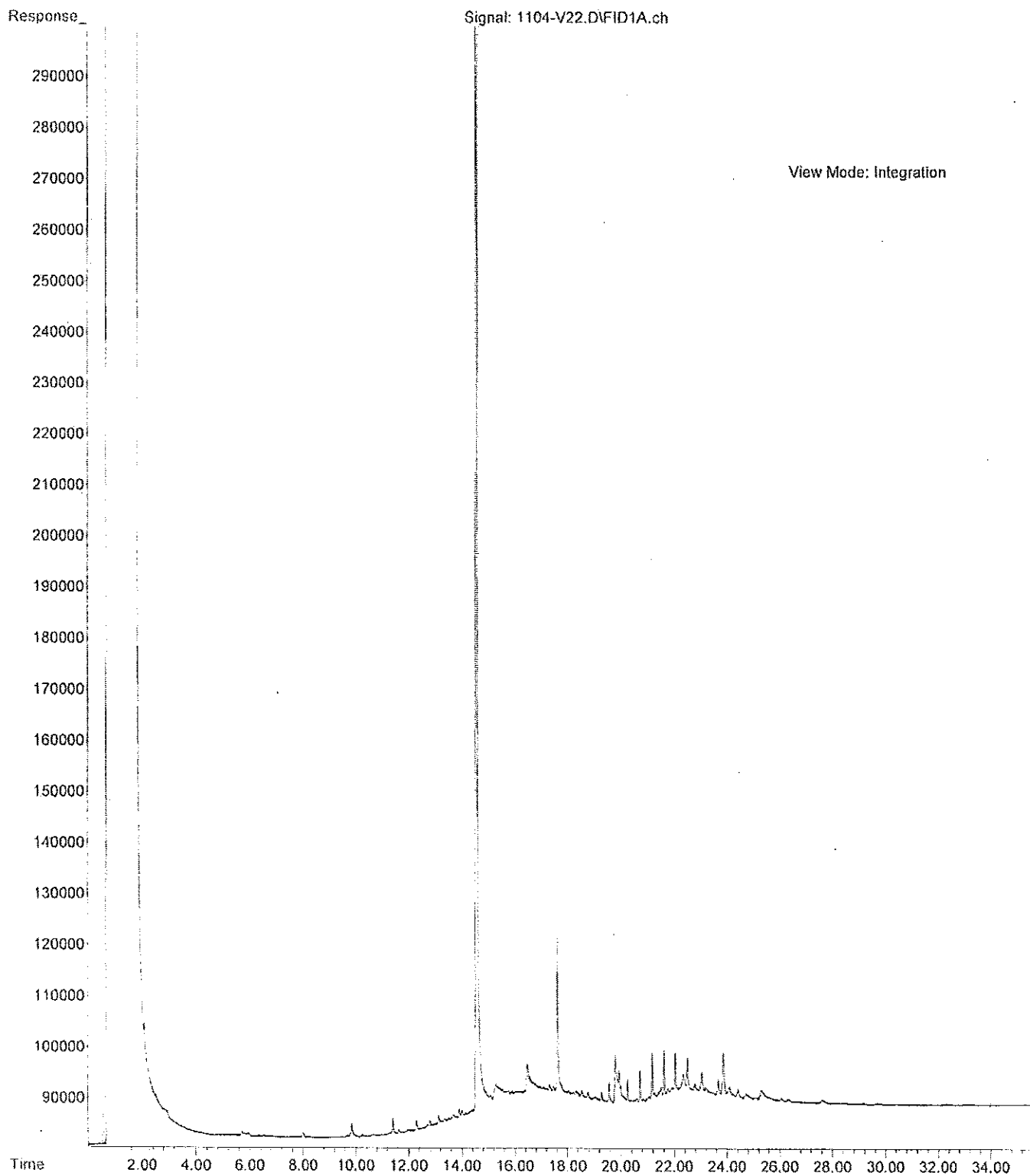
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Operator :
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Instrument : Daryl
Sample Name: 10-330-09s 1:250
Misc Info :
Vial Number: 26



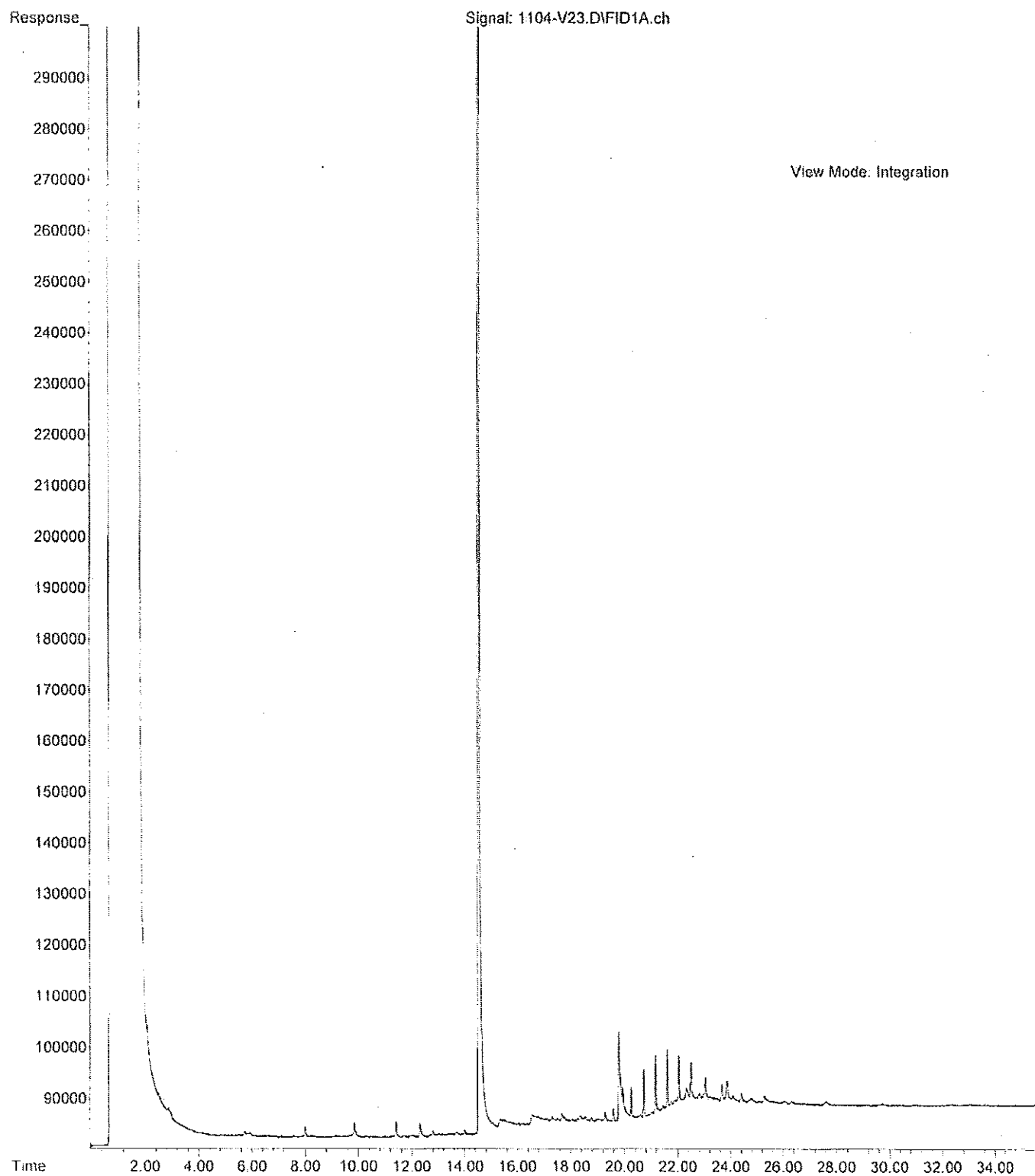
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Operator :
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Instrument : Daryl
Sample Name: 10-330-10s 1:100
Misc Info :
Vial Number: 27



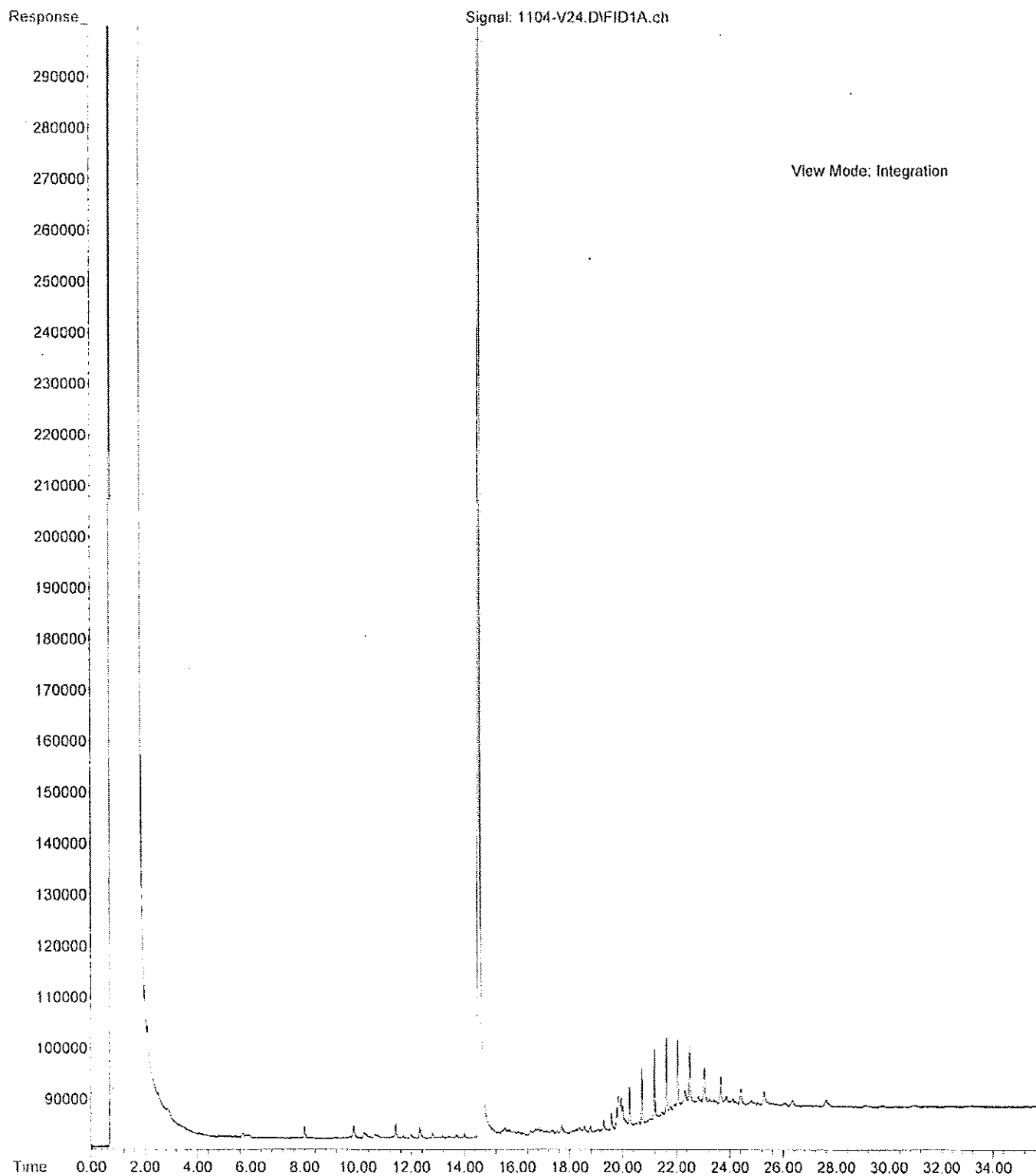
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Operator :
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Instrument : Vigo
Sample Name: 10-330-01
Misc Info :
Vial Number: 22



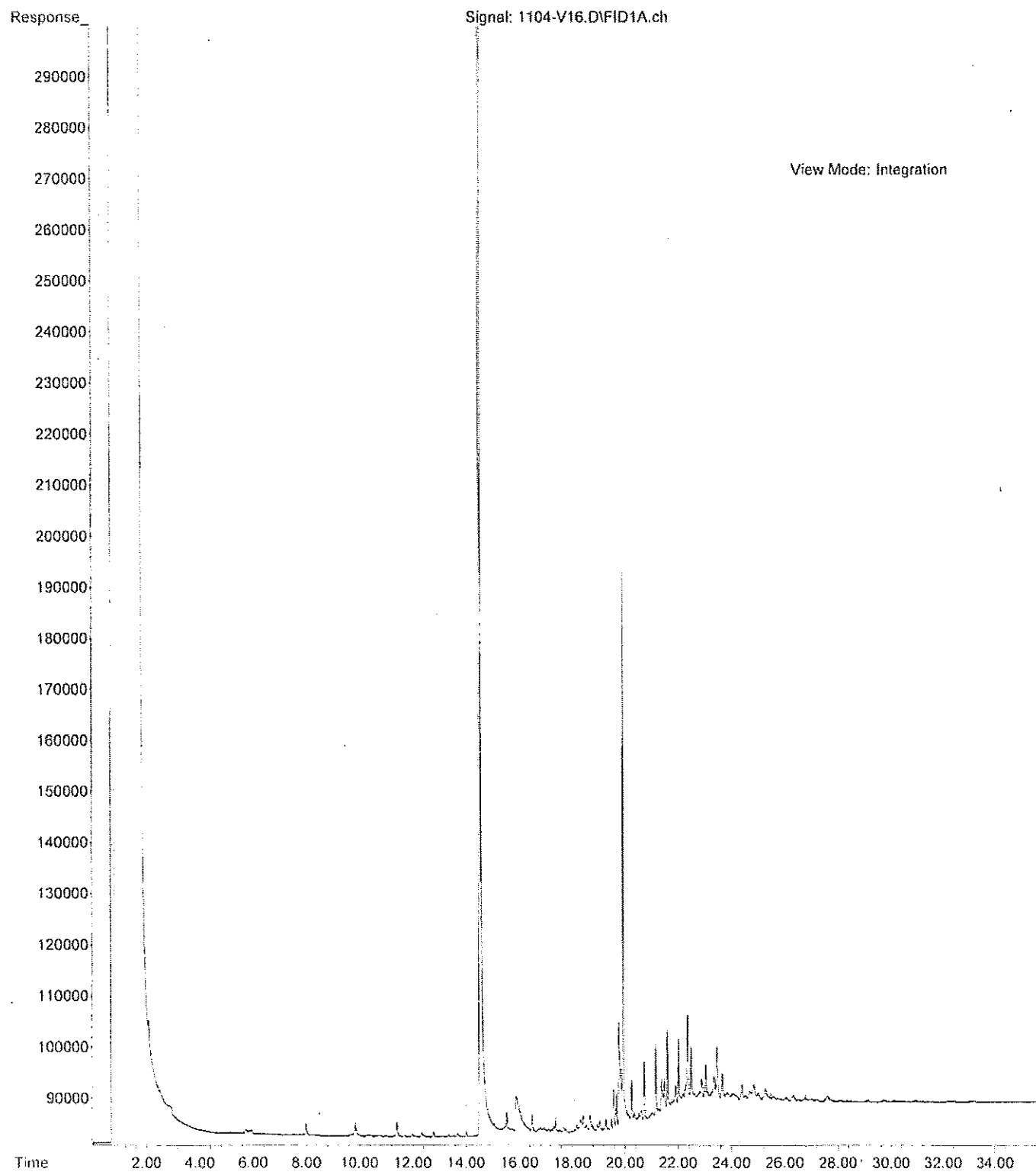
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Operator :
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Instrument : Vigo
Sample Name: 10-330-02
Misc Info :
Vial Number: 23



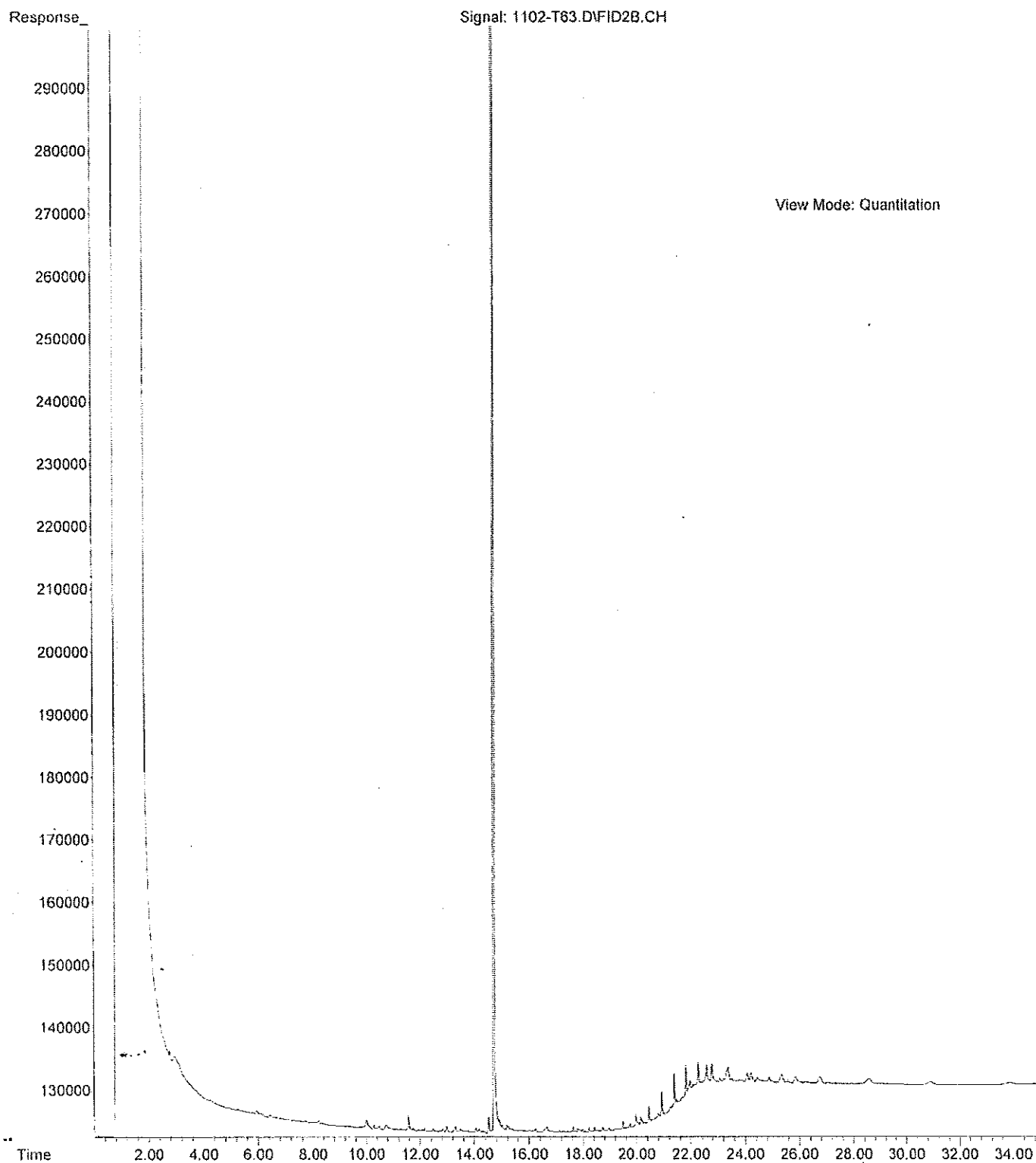
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Instrument : Vigo
Sample Name: 10-330-03
Misc Info :
Vial Number: 24



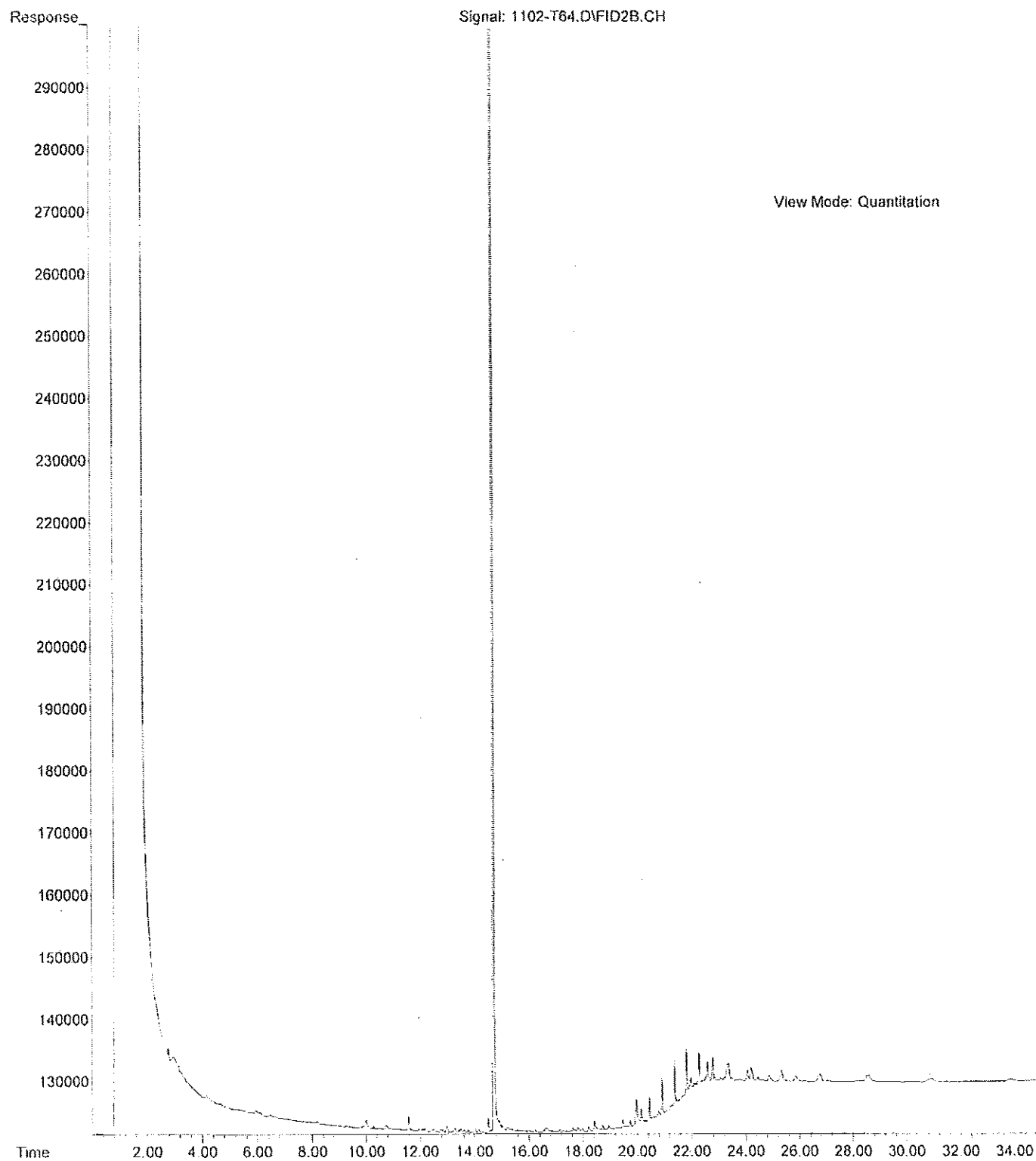
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Operator :
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Instrument : Vigo
Sample Name: 10-330-04
Misc Info :
Vial Number: 16



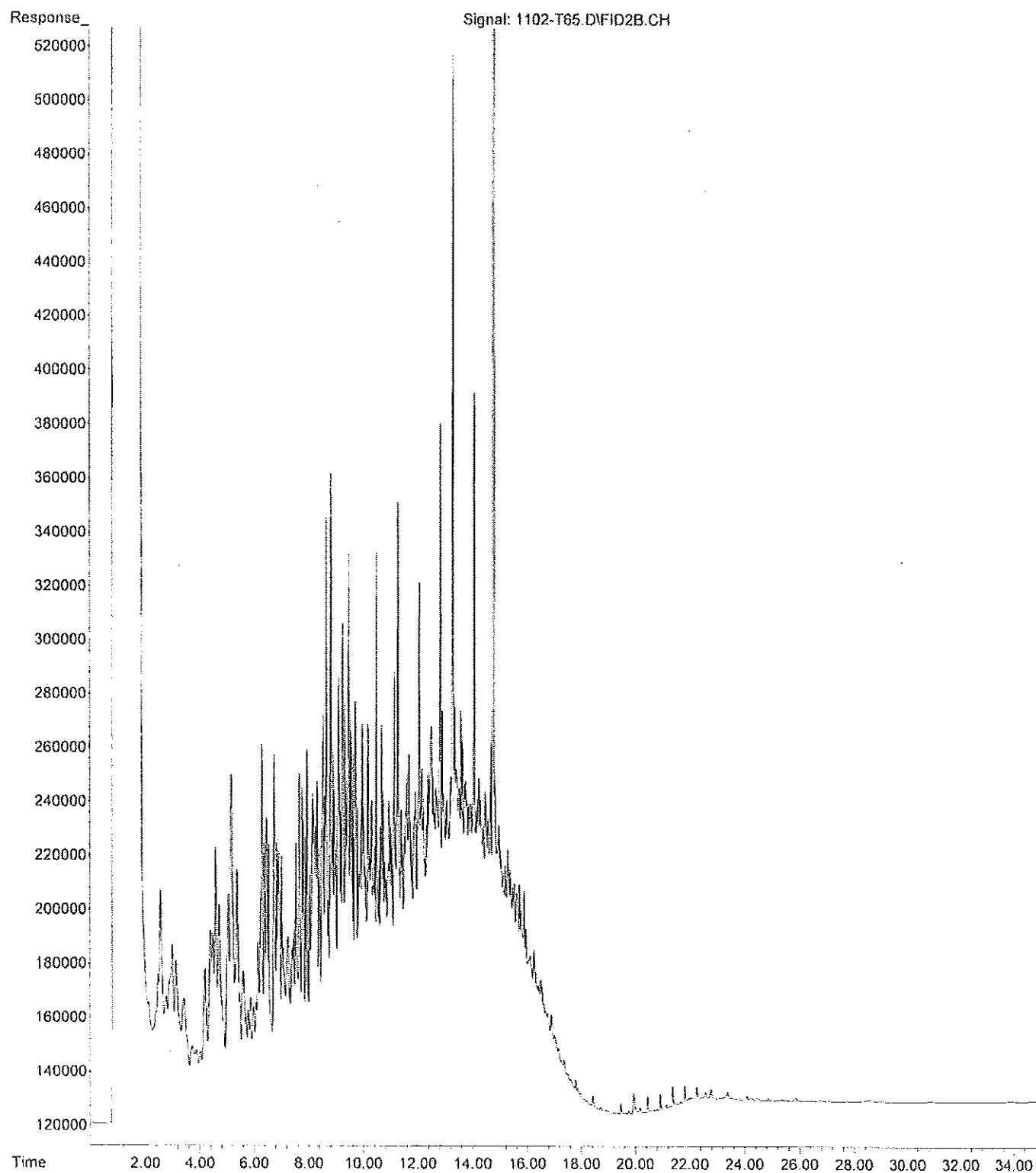
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Instrument : Teri
Sample Name: 10-330-06
Misc Info :
Vial Number: 63



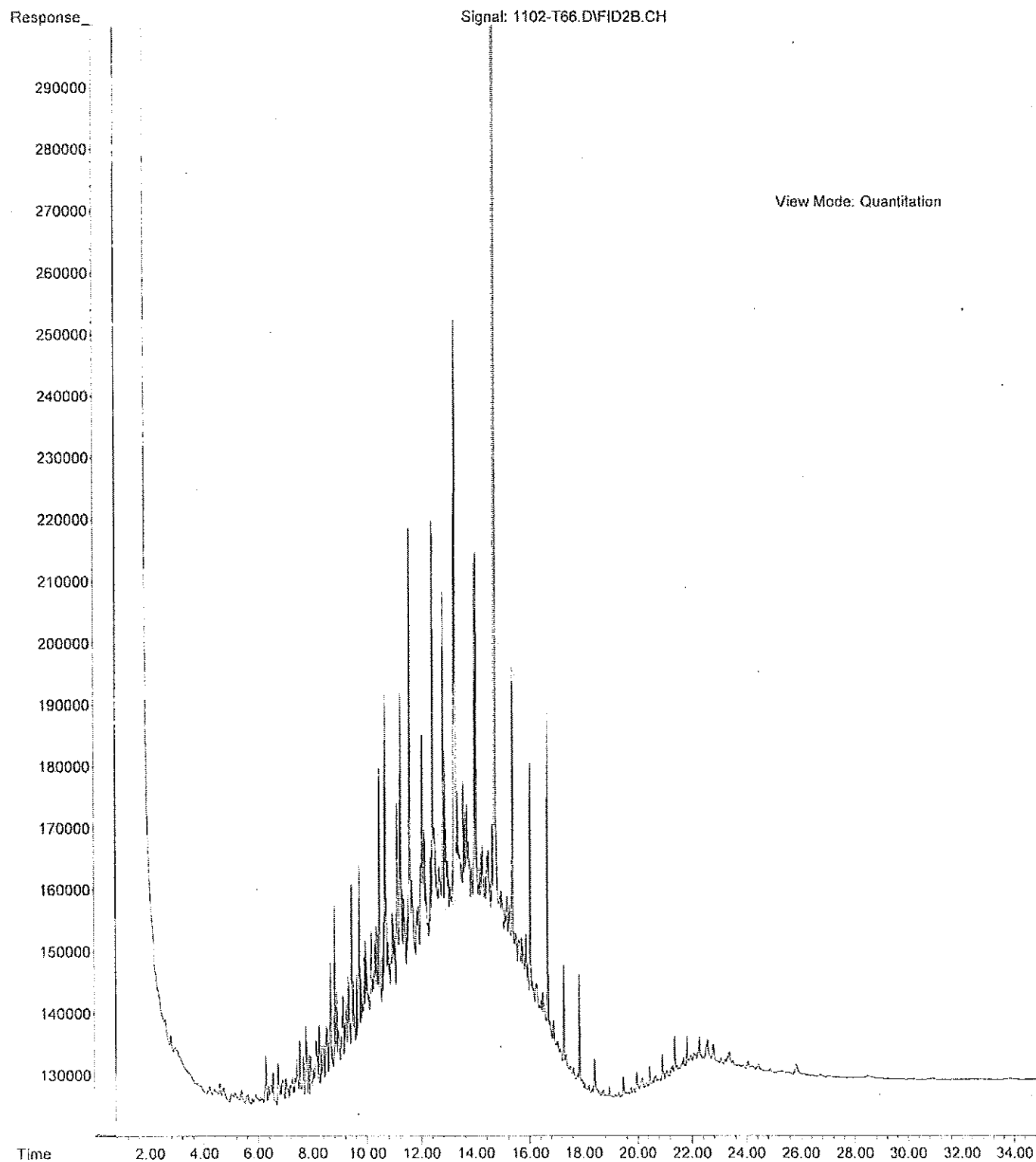
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Operator : ZT
Acquired : 02 Nov 2016 19:26 using AcqMethod T160812F.M
Instrument : Teri
Sample Name: 10-330-08
Misc Info :
Vial Number: 64



File :X:\DIESELS\TERI\DATA\T161102.SEC\1102-T65.D
Operator : ZT
Acquired : 02 Nov 2016 20:09 using AcqMethod T160812F.M
Instrument : Teri
Sample Name: 10-330-09
Misc Info :
Vial Number: 65



File :X:\DIESELS\TERI\DATA\T161102.SEC\1102-T66.D
Operator : ZT
Acquired : 02 Nov 2016 20:51 using AcqMethod T160812F.M
Instrument : Teri
Sample Name: 10-330-10
Misc Info :
Vial Number: 66



APPENDIX C

Report Limitations and Guidelines for Use

APPENDIX C

REPORT LIMITATIONS AND GUIDELINES FOR USE¹

This appendix provides information to help you manage your risks with respect to the use of this report.

Read These Provisions Closely

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

Environmental Services Are Performed for Specific Purposes, Persons and Projects

This report has been prepared for the exclusive use of the Washington State Department of Ecology, their authorized agents and regulatory agencies. This report is not intended for use by others, and the information contained herein is not applicable to other sites.

GeoEngineers structures our services to meet the specific needs of our clients. For example, an environmental site assessment or remedial action study conducted for a property owner may not fulfill the needs of a prospective purchaser of the same property. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and project site. No one except the Washington State Department of Ecology should rely on this plan without first conferring with GeoEngineers. This report should not be applied for any purpose or project except the one originally contemplated.

This Environmental Report Is Based on a Unique Set of Project-Specific Factors

GeoEngineers considered a number of unique, project-specific factors when establishing the scope of services for this project and report. Unless GeoEngineers specifically indicates otherwise, do not rely on this report if it was:

- not prepared for you,
- not prepared for your project,
- not prepared for the specific site explored, or
- completed before important project changes were made.

If important changes are made after the date of this remedial action plan, GeoEngineers should be given the opportunity to review our interpretations and recommendations and provide written modifications or confirmation, as appropriate.

¹ Developed based on material provided by ASFE, Professional Firms Practicing in the Geosciences; www.asfe.org.

Reliance Conditions for Third Parties

No third party may rely on the product of our services unless GeoEngineers agrees in advance, and in writing to such reliance. 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.

Environmental Regulations Are Always Evolving

Some substances may be present in the site vicinity in quantities or under conditions that may have led, or may lead, to contamination of the subject site, but are not included in current local, state or federal regulatory definitions of hazardous substances or do not otherwise present current potential liability. GeoEngineers cannot be responsible if the standards for appropriate inquiry, or regulatory definitions of hazardous substance, change or if more stringent environmental standards are developed in the future.

Subsurface Conditions Can Change

This report is based on conditions that existed at the time our site studies were performed. The findings and conclusions of this report may be affected by the passage of time, by manmade events such as construction on or adjacent to the site, by new releases of hazardous substances, or by natural events such as floods, earthquakes, slope instability or groundwater fluctuations. Always contact GeoEngineers before applying this report to determine if it is still applicable.

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 sites or for other on-Site uses of the affected media (soil and/or groundwater). Note that hazardous substances may be present in some of the 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 Site or reuse of the affected media on Site to evaluate the potential for associated environmental liabilities. We cannot be responsible for potential environmental liability arising out of the transfer of soil and/or groundwater from the subject Site to another location or its reuse on Site in instances that we were not aware of or could not control.

Biological Pollutants

GeoEngineers' Scope of Work specifically excludes the investigation, detection, prevention or assessment of the presence of Biological Pollutants. Accordingly, this report does not include any interpretations, recommendations, findings, or conclusions regarding the detecting, assessing, preventing or abating of Biological Pollutants and no conclusions or inferences should be drawn regarding Biological Pollutants, as they may relate to this project. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts.

If Client desires these specialized services, they should be obtained from a consultant who offers services in this specialized field.

Do Not Redraw the Exploration Logs

Environmental scientists prepare final boring and testing logs based upon their interpretation of field logs and laboratory data. To prevent errors or omissions, the logs included in an environmental report should never be redrawn for inclusion in other design drawings. Only photographic or electronic reproduction is acceptable, but recognize that separating logs from the report can elevate risk.

Geotechnical, Geologic and Environmental Reports Should Not Be Interchanged

The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually relate any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding a specific project.

Most Environmental Findings Are Professional Opinions

Our interpretations of subsurface conditions are based on field observations and chemical analytical data from the sampling locations at the site documented in past reports. Site exploration identifies subsurface conditions only at those points where subsurface tests are conducted or samples are taken. GeoEngineers reviewed field and laboratory data and then applied our professional judgment to render an opinion about subsurface conditions throughout the site. Actual subsurface conditions may differ – sometimes significantly – from those indicated in this report. There is always a potential that areas of contamination exist in portions of the site that were not sampled or tested during this or previous studies. Our remedial action plan, conclusions and interpretations should not be construed as a warranty of the subsurface conditions.