PHASE II
LIMITED SUBSURFACE INVESTIGATION

Sears Store #1069 and
Sears Auto Center #6119
2200 148th Avenue Northeast
Redmond, Washington

Prepared For:

Ms. Patricia Feeley
Sears Holding Management Corporation
3333 Hoffman Estates, Illinois 60179

Prepared By:

The Vertex Companies, Inc.
810 3rd Avenue Suite 307
Seattle, Washington 98104

VERTEX Project No. 46676

October 24, 2017

VERTEX

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October 24, 2017

Sears Holding Management Corporation
3333 Beverly Road, B5-335A
Hoffman Estates, Illinois 60179

RE: Phase II Limited Subsurface Investigation
Sears Store #1069 and Sears Auto Center #6119
2200 148th Ave NE
Redmond, Washington
VERTEX Project No. 46676

Dear Ms. Feeley:

The Vertex Companies, Inc. (VERTEX) is pleased to submit this Draft Phase II Limited Subsurface Investigation (LSI) report for the above referenced property (the site).

On behalf of Sears Holding Management Corporation, Terracon completed a Phase II Environmental Site Assessment (ESA). The results of this investigation are summarized in the Terracon report titled Phase II ESA Report, dated April 13, 2015. The report states that petroleum hydrocarbon contamination was identified near the hydraulic elevators in the Sears department store and petroleum hydrocarbon contamination and volatile organic compounds were identified around the Sears Auto Center building.

The purpose of our investigation was to further delineate the contamination identified by Terracon. Our investigation was performed in general accordance with VERTEX proposal P.2255.17, dated September 1, 2017. The following report describes the procedures of the Phase II LSI and summarizes the sampling results.

Please do not hesitate to contact us at your convenience should you have any questions or comments regarding this report or our recommendations. It has been a pleasure working with you on this project.

Sincerely,

-The Vertex Companies, Inc.

Madelyn Steenis FOV
Staff Geologist

Ross Stainsby, LHG
Division Manager

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PHASE II LIMITED SUBSURFACE INVESTIGATION
2200 148th Avenue Northeast
Redmond, WA 98052
VERTEX Project Number 46676

1.0 INTRODUCTION

1.1 General Site Information

The property is an irregular shaped approximately 65,000 square foot parcel in Redmond, Washington. The property location is shown on **Figure 1**. Three structures are located on the property: 1) operational two-story Sears Department Store to the north, 2) operational one-and-a-half story Sears Auto Center to the south, and 3) one story retail mall to the south-east. The layout of the property is shown on **Figure 2.**

1.2 Background

In February 2015, Terracon completed a Phase II Environmental Site Assessment (ESA) at this property. The results of this investigation are summarized in the Terracon report titled Phase II ESA Report, dated April 13, 2015. The ESA included the completion of eleven direct-push soil borings. Soil samples were collected from each of the eleven borings for chemical analysis. Groundwater samples were collected for chemical analysis from temporary wells in eight of the boring locations. Terracon inferred the groundwater flow direction at the Auto Center is to the southwest.

The ESA report states that contamination was present in two locations 1) adjacent to the Sears department store and 2) adjacent to the Sears Auto Center building. The following summarizes the concentrations that exceed the Washington State Department of Ecology (Model Toxics Control Act) Method A Cleanup levels:

Sears department store – lube oil-range petroleum hydrocarbon contamination was identified at 860 micrograms per liter (µg/l) in groundwater near the hydraulic elevators which exceeds the MTCA Method A cleanup level.

Sears Auto Center Building – Benzene was identified in soil beneath the Auto Center Building at 0.0683 mg/kg. Gasoline, diesel, and oil-range petroleum hydrocarbon contamination and volatile organic compounds (VOCs - including benzene, 1,2-dichloroethane, xylenes) were identified in several groundwater monitoring wells around the Auto Center Building.

1.3 Purpose

The purpose of this Phase II Limited Site Investigation (LSI) was to further delineate the areas of contamination identified in the Terracon Phase II ESA report.

2.0 FIELD ACTIVITIES

2.1 Utility Locate/Geophysical Survey

Prior to drilling, Washington Call Before You Dig was contacted for public utility location services at the property. In addition, C-N-I Locates (CNI) of Bonney Lake, Washington was contracted to provide private utility location services for the property.

On September 22, 2017, VERTEX oversaw a ground-penetrating radar (GPR) survey conducted by CNI, which utilized GPR and electromagnetic (EM) equipment to identify and delineate subsurface utilities and to clear proposed boring locations of underground utilities.

2.2 Advancement of Soil Borings and Installation of Groundwater Monitoring Wells

On September 26 and 27, 2017, VERTEX oversaw the advancement of ten soil borings ranging in depth from 16.5 to 26 feet below ground surface (bgs). The borings were advanced by Holt Services, Inc. (Holt) of Edgewood, Washington using direct-push drilling techniques.

Soil boring V-101 was advanced to the west of the Sears Retail Store building (**Figure 3**), and soil borings V-102 through V-110 were advanced around and downgradient of the Auto Center building (**Figure 4**). Groundwater was encountered in borings V-102, V-104, V-105 and V-106 at approximately 20, 15.5, 16.5 and 16 feet bgs, respectively. Groundwater was not encountered in V-101, V-103, V-107, V-108, V-109, and V-110, the total depth of each boring was 26, 20, 17.5, 20, 24, and 17.5 respectively. Note that in Western Washington, groundwater levels in the early fall are typically at a seasonal low.

V-102 was extended to approximately 25 bgs, groundwater was encountered at 20 feet bgs. Due to the dense soil conditions, the larger diameter drive-point used to install well screens could not be driven beyond 12 feet bgs for groundwater monitoring well installation. Consequently, a temporary well screen was installed in V-102 to allow the collection of a groundwater sample. This groundwater sample collection procedure is similar to that used by Terracon in the Phase II ESA.

Following drilling, all soil borings (including V-102) were decommissioned by Holt by backfilling the borings with hydrated bentonite chips capped with ready-mix concrete. The ground surface at each boring location was repaired with an asphalt patch.

Three soil borings [104(MW), V-105(MW) and V-106(MW)] were completed as permanent groundwater monitoring wells. Wells were constructed of pre-packed 5-foot lengths of 2-inch diameter machine slotted poly vinyl chloride (PVC) screen, followed by PVC riser pipe to grade. Each well was finished with a clean, uniform-grade silica sand pack, bentonite seal, and was finished at the ground surface with flush-mounted 6-inch diameter monuments and cement surface seals at grade. Soil boring logs and monitoring well completion reports are included in **Appendix A**.

2.3 Soil Screening and Sampling

Soil sample cores were collected from the soil borings using acetate sleeves in continuous five-foot intervals beginning at grade. Soil samples were screened in the field utilizing a photoionization detector (PID) equipped with a 10.6 electron volt (eV) lamp for the presence of total volatile organic compounds (VOCs). The PID was calibrated with 100 parts per million (ppm) isobutylene. PID readings are not considered actual volatile organic vapor concentrations in the soil samples but are useful indicators of relative volatile organic vapor concentrations between locations.

Soil samples were selected for laboratory analysis were based on the proposed scope of work, field observations, and field screening results. The physical characteristics of the soil samples and the PID field screening results are reported on the boring logs included in **Appendix A**.

VERTEX collected one or two soil samples from each soil boring from the interval(s) exhibiting the highest VOC concentrations or the most evidence of impacts during field screening. All soil samples were collected in laboratory-supplied pre-cleaned containers, stored on ice, and transferred under chain-of custody to Onsite Environmental (Onsite) of Redmond, Washington for the one or more of the following laboratory analyses:

- Full-scan VOCs by EPA Method 8260 – (selected samples),

- Benzene, ethylbenzene, toluene and xylenes by EPA Method 8260,
- Gasoline range petroleum hydrocarbons by NWTPH-Gx, and
- Diesel and motor oil range petroleum hydrocarbons by NWTPH-Dx.

2.4 Groundwater Sampling

The following describes the sample activities for the temporary well and the permanent wells.

Temporary Well - After the construction of the temporary monitoring well V-102(TMW), the well was gauged using a water level indicator probe. The depth to water prior to groundwater sampling was 14.18 feet bgs. Following gauging, the temporary well was purged using a peristaltic pump and dedicated polyethylene tubing. A minimum of three well volumes of groundwater were purged from each well prior to sampling. After purging, a representative grab sample of groundwater was collected.

Permanent Wells - Following construction of the permanent monitoring wells, the wells were developed and then allowed to equilibrate to surrounding aquifer conditions for at least three days prior to sampling on October 2, 2017. The monitoring wells were gauged using a water level indicator probe. Groundwater was not present in groundwater monitoring well V-104(MW).

Following gauging, groundwater samples were collected from the monitoring wells in general accordance with United States Environmental Protection Agency (USEPA) low-flow sampling procedure. Wells were purged using dedicated polyethylene tubing and a peristaltic pump. Drawdown of the groundwater in the well and water quality parameters, including temperature, pH, conductivity, dissolved oxygen (D.O.), oxygen reduction potential (ORP), and turbidity, were recorded every 3 to 5 minutes until readings were stable within allowable levels over three consecutive readings. Following stabilization, a representative grab sample of groundwater was collected from each monitoring well.

All groundwater samples were collected in laboratory-supplied pre-cleaned containers, stored on ice, and transferred under chain-of-custody to On-Site for the following laboratory analyses:

- Full-scan VOCs by EPA Method 8260,

- Gasoline range petroleum hydrocarbons by NWTPH-Gx, and
- Diesel and motor oil range petroleum hydrocarbons by NWTPH-Dx.

2.5 Site Geology and Hydrogeology

Based on visual classification of soils collected during this subsurface investigation, strata underlying the asphalt paving at the property generally consisted of very dense, tan and gray silty sand with varying amounts of silt and gray clay. Refusal of the drilling equipment was encountered at borings V-101 at 26 feet bgs, V-102 at 25 feet bgs, V-104 at 16.5 feet bgs, V-107 at 17.5 feet bgs, V-109 at 24 feet bgs and V-110 at 17.5 feet bgs.

At the time of drilling, groundwater when encountered, was at a depth of approximately 15.5 to 20 feet bgs near the Auto Center Building. During groundwater sampling, groundwater was not present in V-104 and was approximately 14 feet bgs in V-105 and V-106. The depth to groundwater data is presented in **Table 1**. The average depth to water during the Terracon investigation at the Department Store Building and Auto Center building were 20 and 15.5 feet bgs, respectively. Our investigation was completed during typical seasonal low groundwater elevation.

Based on local and regional surface topography and the locations of surface water bodies, groundwater flow at the property is assumed to be in a south-westerly direction. Actual local groundwater flow direction can be influenced by factors such as underground structures, seasonal fluctuations, soil and bedrock geology, and production wells, none of which were considered during this study. A groundwater elevation survey to calculate groundwater flow direction was not performed as part of this investigation.

3.0 LABORATORY ANALYTICAL RESULTS

3.1 Applicable Regulatory Standards

Soil and groundwater analytical results were compared to the MTCA Method A cleanup levels for soil and groundwater (Washington Administrative Code [WAC] 173-340-900, Tables 740-1 [soil] and 720-1 [groundwater]).

3.2 Soil Analytical Results

Soil analytical results are presented on **Table 2**, and a copy of the laboratory analytical report is included in **Appendix B**. A summary of soil sample analytical result at each boring location are shown on **Figures 3** and **4**. The following summarizes the soil sample analytical results above MTCA Method A cleanup levels:

- Benzene and gasoline-range petroleum hydrocarbons were detected at 0.1 and 32 mg/kg, respectively in soil sample V-108(13) [soil sample collected at 13' bgs from soil boring V-108] .
- Xylenes and gasoline-range petroleum hydrocarbons were detected at 14 and 120 mg/kg, respectively in soil sample V-106(22.5).

All other soil sample analytical results were either below MTCA Method A cleanup levels or below the method practical quantitation limit.

3.3 Groundwater Analytical Results

Groundwater analytical results is presented on **Table 3**, and a copy of the laboratory analytical report is included in **Appendix B**. Groundwater analytical result are shown on **Figure 5**. The following summarizes the groundwater sample analytical results above MTCA Method A cleanup levels:

- 1,2-dichloroethane was detected at 14 µg/l in the groundwater sampled from V-102(TMW).

- Benzene, toluene, ethylbenzene, and total xylenes were detected in groundwater sample collected from V-106(MW).
- Diesel and oil-range petroleum hydrocarbons were detected in groundwater samples collected from V-105(MW) and V-106(MW).

All other groundwater sample analytical results were either below MTCA Method A cleanup levels or below the method practical quantitation limit.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of this Phase II LSI, VERTEX concludes the following:

Sears Department Store – The oil-range petroleum hydrocarbons identified in groundwater by Terracon appears to occur seasonally or may have dissapated. Groundwater was not present at the time of our investigation. Soil concentrations for all analytes were below method detection limits.

Sears Auto Center Building – The soil and groundwater analytical results from this investigation and the Terracon investigation confirm that there is a petroleum hydrocarbon and VOC release to site soil and groundwater.

1,2-dichloroethane detected in groundwater in this investigation and the Terracon at concentrations as high as 465 µg/l in groundwater which exceeds the MTCA Method A cleanup level of 5 µg/l. Since the density of 1,2-dichloroethane is greater than water, the concentrations in groundwater may increase with depth.

The Terracon investigation identified petroleum in soil and groundwater beneath and adjacent to the Auto Center building at concentrations above MTCA Method A cleanup levels. LSI results indicate that the petroleum hydrocarbons in groundwater were present in V-106(MW) and extend to V-105(MW), what is a hydraulically down-gradient well based on the inferred groundwater flow direction.

Groundwater elevations and occurrence at this site is seasonally variable. Shallow groundwater, where it is encountered, occurs in more permeable sand lenses within lower permeability soil.

Based on the results of the Phase II to ESA and this LSI, MTCA requires that Sears notify the Washington Department of Ecology that a release has occurred.

5.0 QUALIFICATIONS

5.1 Limitations and Exceptions

Our professional services have been performed, our findings obtained, and our recommendations prepared in accordance with customary principles and practices in the fields of environmental science and engineering. VERTEX is not responsible for the independent conclusions, opinions or recommendations made by others based on the field exploration and laboratory test data presented in this report.

It must be recognized that environmental investigations are inherently limited in the sense that conclusions are drawn and recommendations developed from information obtained from limited research and site investigation. All subsurface conditions at the site were not field investigated as part of this study and may differ from the conditions implied by the LSI. Additionally, the passage of time may result in a change in the environmental characteristics at this site and surrounding properties. VERTEX does not warrant that there are no toxic or hazardous materials or contamination on the site, nor does VERTEX accept any liability if such are found at some future time, or could have been found if additional studies, beyond the scope of this LSI, were conducted. VERTEX does not warrant against future operations or conditions, nor does VERTEX warrant against operations or conditions present of a type or at a location not investigated.

5.2 Special Terms and Conditions

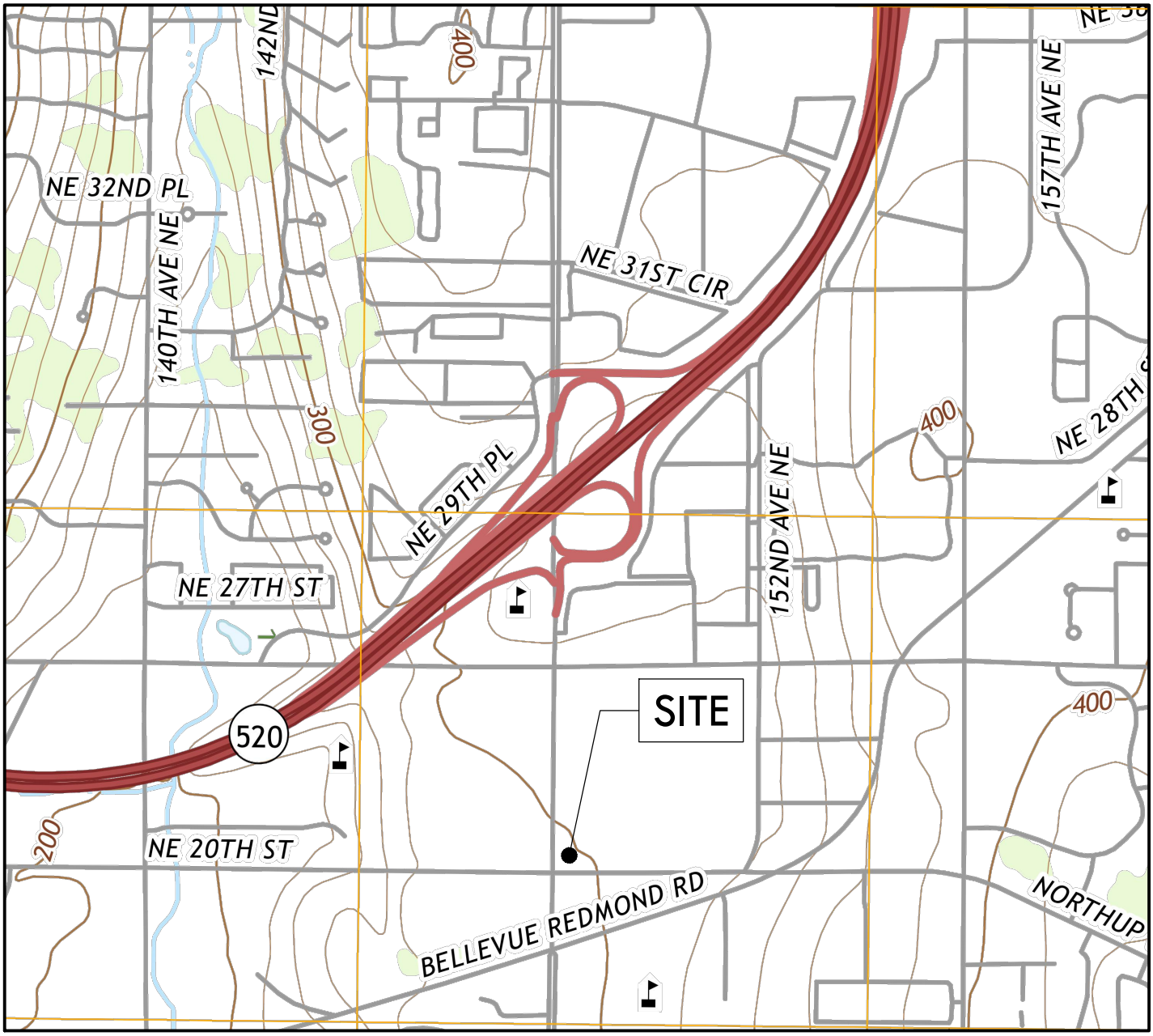
The findings of this LSI are limited and based on the completeness and accuracy of the data and conditions of the site as of the date of the onsite investigation.

5.3 User Reliance

This report is for the exclusive use of Sears Holding Management Corporation and any and all holders of a note or notes secured by a mortgage, deed of trust, or deed to secure debt encumbering the Site; and their respective affiliates, designates, successors and assignees, rating agencies,

prospective bond holders, and bond holders. No other party shall have the right to rely on any service provided by VERTEX without prior written consent. Use of this report by any other party shall be at such party's sole risk.

FIGURES



N

0' 1000' 2000' 3000'

SCALE: 1" = 1000'

SOURCE: UNITED STATES GEOLOGICAL SURVEY MAP, KIRKLAND QUADRANGLE, WASHINGTON-KING CO. 7.5 MINUTE SERIES (2017)

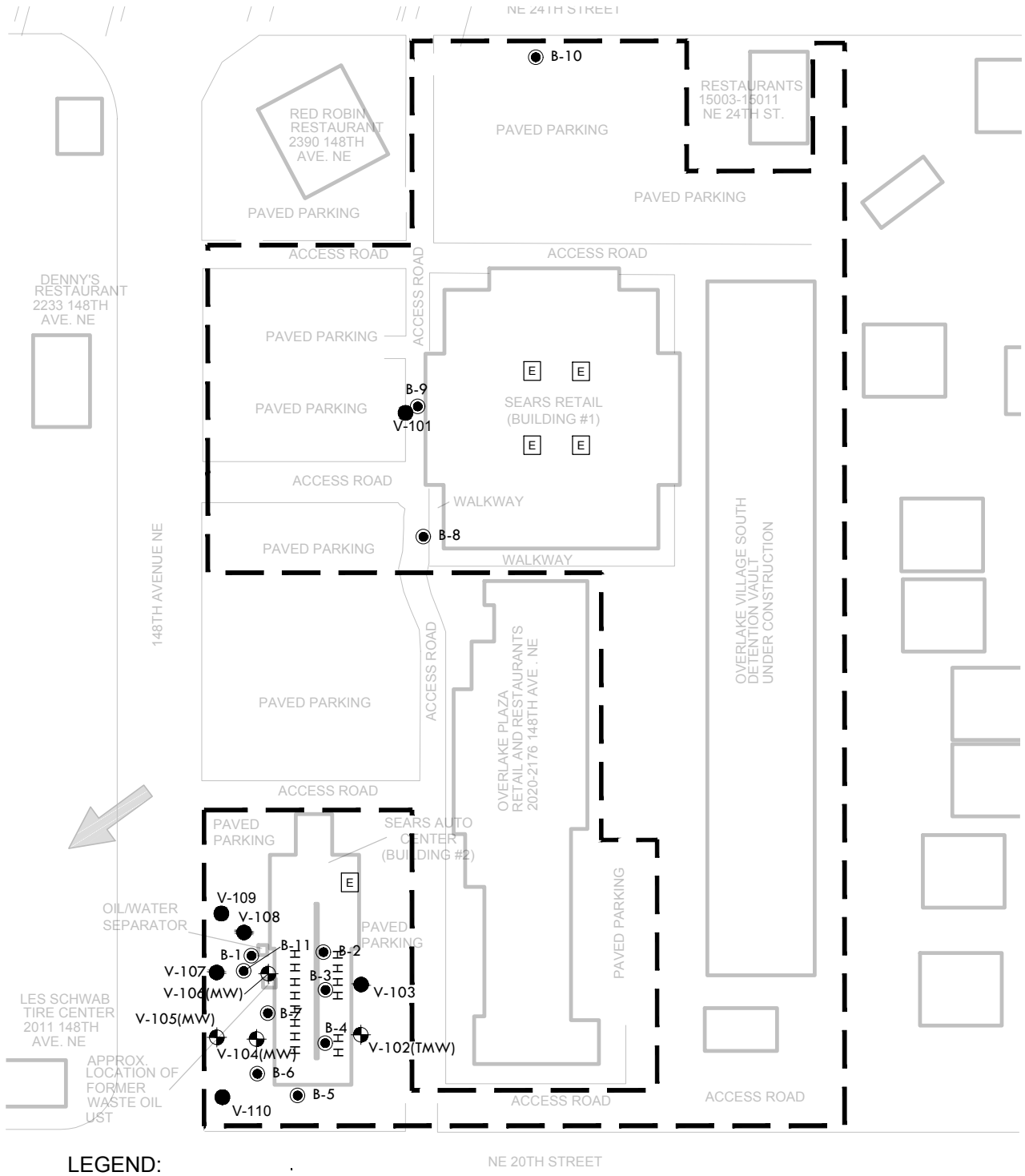
VICINITY MAP

SEARS STORE AND AUTO CENTER #1069
2200 148TH AVENUE NE
REDMOND, KING COUNTY, WASHINGTON

File No.:	46676
Date:	OCTOBER 2017
Drawn:	LPV
Checked:	JWD
Env. Proj. No.:	46676

FIGURE 1

VERTEX®



LEGEND:

- APPROXIMATE TAX PARCEL BOUNDARY
- INFERRED GROUNDWATER FLOW DIRECTION
- E — ELEVATOR
- HYDRAULIC HOISTS
- B-2 — TERRACON BORING LOCATION
- V-101 — VERTEX BORING LOCATIONS
- V-105 — VERTEX GROUNDWATER MONITOR WELL LOCATIONS

0 150 300 450

SCALE: 1" = 150'-0"
(WHEN PRINTED AT 8x11)

SITE PLAN BASED ON DIAGRAM COMPLETED BY TERRACON, DATED MARCH 2015

SITE MAP

SEARS STORE AND AUTO CENTER #1069
2200 148TH AVENUE NE
REDMOND, KING COUNTY, WASHINGTON

File No.:	46676
Date:	OCTOBER 2017
Drawn:	LPV
Checked:	JWD
Job No.:	46676

FIGURE 2

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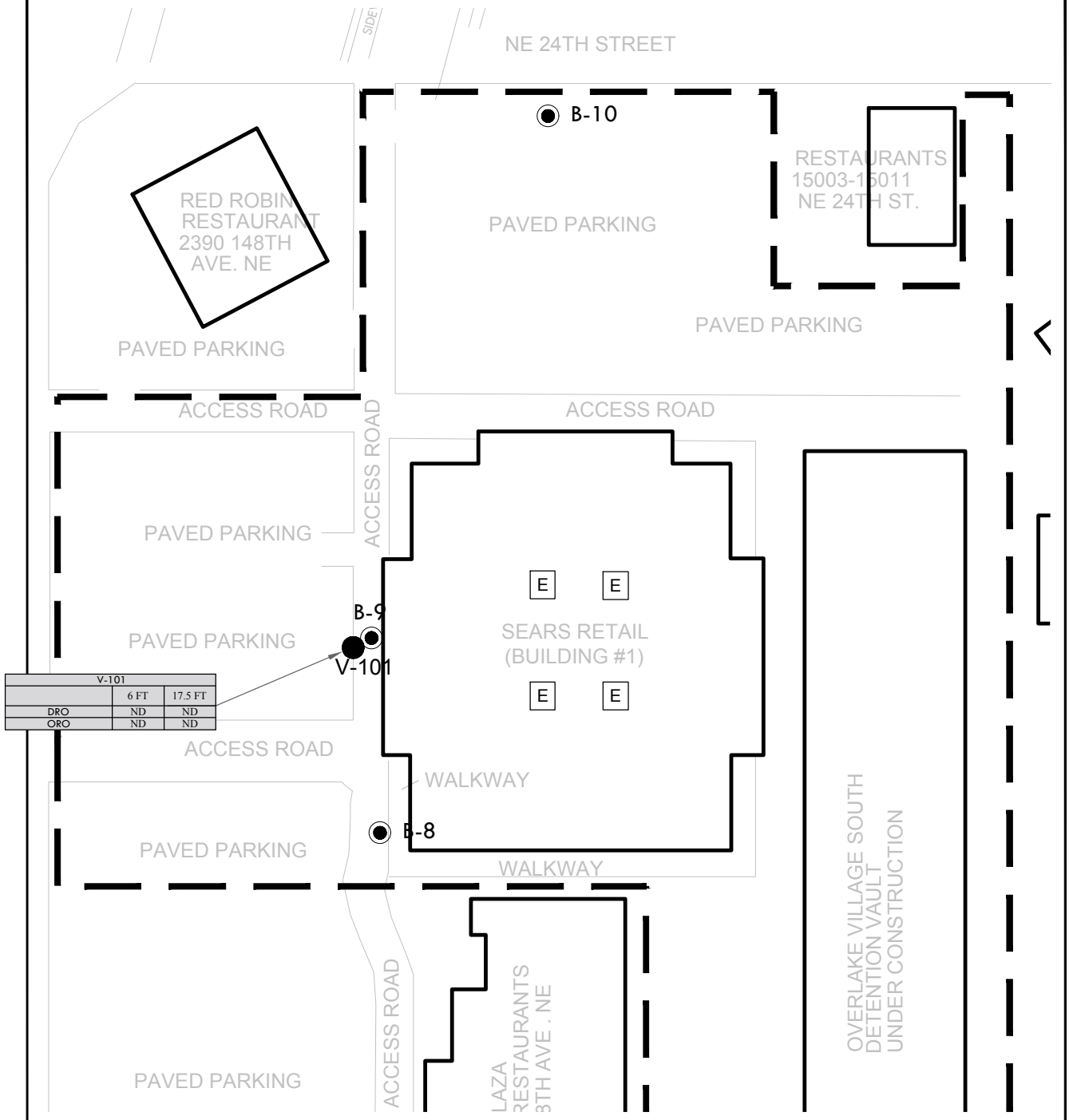

LEGEND:

- APPROXIMATE TAX PARCEL BOUNDARY
- INFERRED GROUNDWATER FLOW DIRECTION
- E — ELEVATOR
- HYDRAULIC HOISTS
- B-2 — TERRACON BORING LOCATION
- V-101 — VERTEX BORING LOCATIONS
- V-105 — VERTEX GROUNDWATER MONITOR WELL LOCATIONS

0 100 200 300

SCALE: 1" = 100'-0"
(WHEN PRINTED AT 8x11)

SITE PLAN BASED ON DIAGRAM COMPLETED BY TERRACON, DATED MARCH 2015

SITE SOIL SAMPLE RESULT DIAGRAM

SEARS STORE AND AUTO CENTER #1069
2200 148TH AVENUE NE
REDMOND, KING COUNTY, WASHINGTON

File No.:	46676
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FIGURE 3

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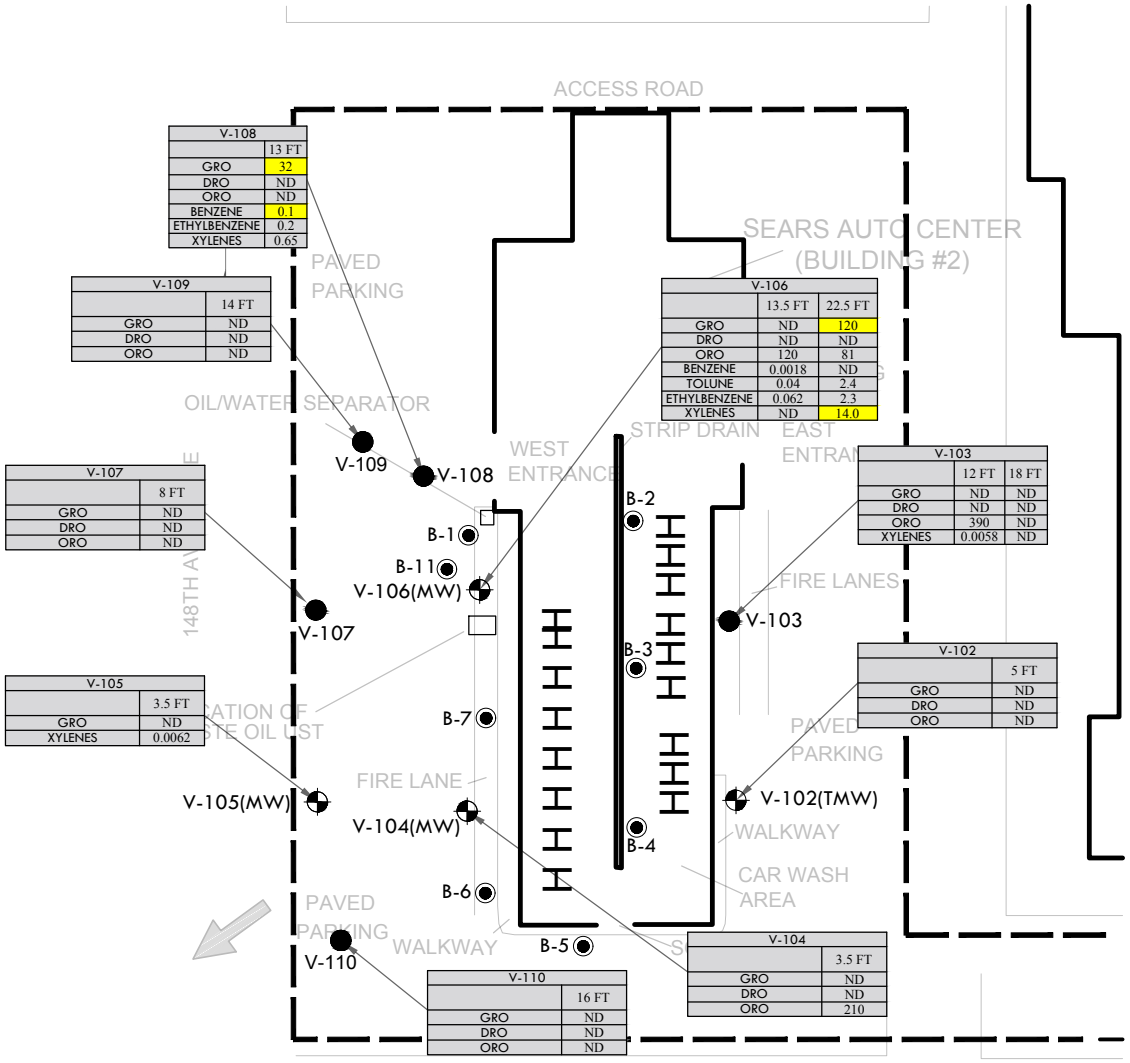

LEGEND:

APPROXIMATE TAX PARCEL BOUNDARY

INFERRED GROUNDWATER FLOW DIRECTION

E — ELEVATOR

HYDRAULIC HOISTS

B-2 — TERRACON BORING LOCATION

V-101 — VERTEX BORING LOCATIONS

V-105 — VERTEX GROUNDWATER MONITOR WELL LOCATIONS

0 75 150 225

SCALE: 1" = 75'-0"
(WHEN PRINTED AT 8x11)

SITE PLAN BASED ON DIAGRAM COMPLETED BY TERRACON, DATED MARCH 2015

AUTO CENTER SOIL SAMPLE RESULTS DIAGRAM

SEARS STORE AND AUTO CENTER #1069
2200 148TH AVENUE NE
REDMOND, KING COUNTY, WASHINGTON

File No.:	46676
Date:	OCTOBER 2017
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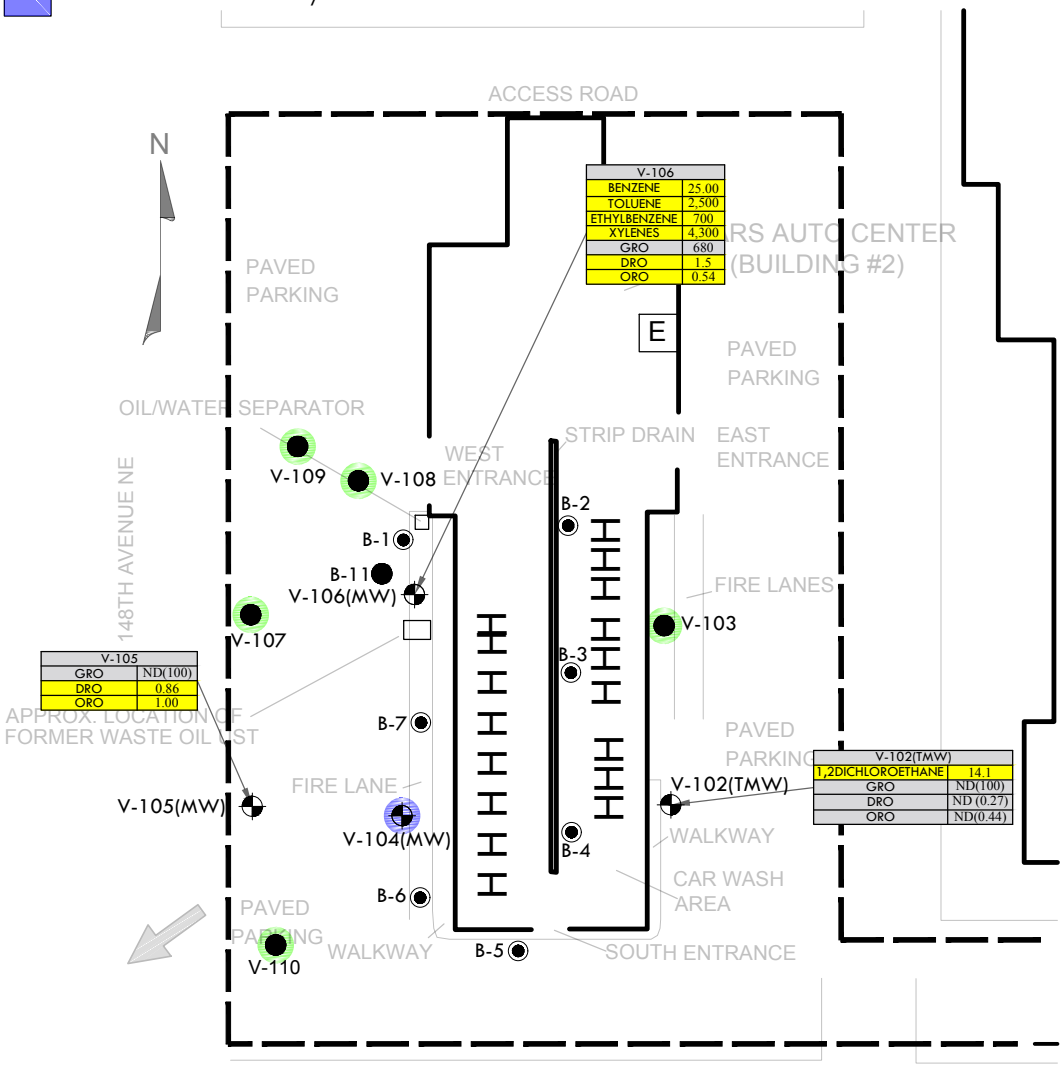
FIGURE 4

VERTEX

GROUNDWATER NOT PRESENT/NO WELL

WELL INSTALLED/NO GROUNDWATER



LEGEND:

APPROXIMATE TAX PARCEL BOUNDARY

INFERRED GROUNDWATER FLOW DIRECTION

E — ELEVATOR

HYDRAULIC HOISTS

B-2 — TERRACON BORING LOCATION

V-101 — VERTEX BORING LOCATIONS

V-105 — VERTEX GROUNDWATER MONITOR WELL LOCATIONS

0 75 150 225

SCALE: 1" = 75'-0"

(WHEN PRINTED AT 8x11)

SITE PLAN BASED ON DIAGRAM COMPLETED BY TERRACON, DATED MARCH 2015

AUTO CENTER GROUNDWATER RESULTS DIAGRAM

SEARS STORE AND AUTO CENTER #1069
2200 148TH AVENUE NE
REDMOND, KING COUNTY, WASHINGTON

File No.:	46676
Date:	OCTOBER 2017
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Job No.:	46676

FIGURE 5

VERTEX

TABLES

Table 1
Depth to Groundwater

Boring/Groundwater Monitoring Well	Depth of Soil Boring (feet)	Depth to Groundwater at Time of Drilling (feet)	Depth to Groundwater Prior to Sample Collection (feet)
V-101	26	Not Present	
V-102(TMW)	25	20	
V-103	20	Not Present	
V-104(MW)	16.5	15.5	Not Present
V-105(MW)	20	16.5	14.18
V-106(MW)	25	16	13.82
V-107	17.5	Not Present	
V-108	20	Not Present	
V-109	24	Not Present	
V-110	17.5	Not Present	

Table 2
Soil Sample Analytical Results

Sample Designation	MCTA Method A Cleanup Level for Unresitricted Land Use	V-101 (6)	V-101(17.5)	V-102(5)	V-103(12)	V-103(18)	V-104(3.5)	V-105(6)	V-106(13.5)	V-106(22.5)	V-107(8)	V-108(13)	V-109(14)	V-110(16)
Laboratory Sample Designation		09-336-01	09-336-02	09-336-03	09-336-04	09-336-05	09-336-06	09-336-07	09-336-08	09-336-09	09-336-10	09-336-11	09-336-12	09-336-13
Sample Date		9/26/2017	9/26/2017	9/26/2017	9/26/2017	9/26/2017	9/26/2017	9/26/2017	9/27/2017	9/27/2017	9/27/2017	9/27/2017	9/27/2017	9/27/2017
Sample Depth (feet)		6	17.5	5	12	18	3.5	6	13.5	22.5	8	13	14	16
Volatile Organic Compounds (mg/kg)														
Benzene	0.03	-	-	ND(0.00098)	ND(0.00083)	ND(0.00093)	ND(0.0010)	ND(0.0011)	0.0018	ND(0.12)	ND(0.020)	**0.1**	ND(0.020)	ND(0.00093)
Toluene	7	-	-	ND(0.0049)	ND(0.0042)	ND(0.0046)	ND(0.0051)	ND(0.0053)	0.0400	2.4	ND(0.042)	ND(0.050)	ND(0.050)	ND(0.0047)
Ethylbenzene	6	-	-	ND(0.00098)	ND(0.00083)	ND(0.00093)	ND(0.0010)	ND(0.0011)	0.0620	2.3	ND(0.042)	0.2	ND(0.050)	ND(0.00093)
Xylenes	9	-	-	ND(0.0020)	0.0058	ND(0.0019)	ND(0.0020)	0.0062	0.2800	**14**	ND(0.042)	0.65	ND(0.050)	ND(0.0019)
Isopropylbenzene	NCL	-	-	ND(0.00098)	ND(0.00083)	ND(0.00093)	ND(0.0010)	ND(0.0011)	0.0025	0.19	-	-	-	ND(0.00093)
n-Propylbenzene	NCL	-	-	ND(0.00098)	ND(0.00083)	ND(0.00093)	ND(0.0010)	ND(0.0011)	0.0100	0.78	-	-	-	ND(0.00093)
1,3,5-Trimethylbenzen	NCL	-	-	ND(0.00098)	ND(0.00083)	ND(0.00093)	ND(0.0010)	ND(0.0011)	0.0200	1.8	-	-	-	ND(0.00093)
1,2,4-Trimethylbenzen	NCL	-	-	ND(0.00098)	ND(0.00083)	ND(0.00093)	ND(0.0010)	ND(0.0011)	0.0770	6	-	-	-	ND(0.00093)
n-Butylbenzene	NCL	-	-	ND(0.00098)	ND(0.00083)	ND(0.00093)	ND(0.0010)	ND(0.0011)	0.0026	0.41	-	-	-	ND(0.00093)
Naphthalene	5	-	-	ND(0.00098)	ND(0.00083)	ND(0.00093)	ND(0.0010)	ND(0.0011)	0.0320	0.77	-	-	-	ND(0.00093)
Petroleum Hydrocarbons (mg/kg)														
Gasoline Range	100/30[2]	-	-	ND(5.2)	ND(5.6)	ND(6.3)	ND(6.0)	-	ND(12)	**120**	ND(4.2)	**32**	ND(5)	ND(5)
Diesel Range	2000	ND(30)	ND(28)	ND(27)	ND(39)	ND(27)	ND(26)	-	ND(28)	ND(52)	ND(27)	ND(28)	ND(28)	ND(28)
Oil Range	2000	ND(60)	ND(55)	ND(54)	390	ND(54)	210	-	120	81	ND(54)	ND(56)	ND(56)	ND(56)

Notes

1. Regulatory criteria are established under the Model Toxics Control Act (MTCA).
2. Cleanup level for gasoline is 100 mg/kg without benzene and the total of ethylbenzene, toluene, and xylenes are less than 1% of the gasoline mixture. 30 mg/kg for all other gasoline mixtures.
3. ND = Not Detected above the laboratory reporting limits shown in parenthesis.
4. Results presented in milligrams per kilogram.
5. Samples collected by The VERTEX Companies, Inc. on September 26 and 27, 2017.
6. NCL = No MCTA Method Cleanup Levels have been established
7. Dash (-) = Samples not analyzed
8. **Bold =** Sample exceeds MTCA Method A cleanup level for unrestricted use.

Table 3
Groundwater Sample Analytical Results

Sample Designation	MCTA Method A Cleanup Level for Ground Water	V-102(TMW)	V-105(MW)	V-106(MW)
Laboratory Sample Designation		09-335-01	10-012-02	10-012-01
Sample Date		9/26/2017	10/2/2017	10/2/2017
Volatile Organic Compounds (µg/l)				
Benzene	5	ND(0.20)	0.240	**25**
1,2-Dichloroethane	5	**14**	ND(0.20)	ND(20)
Toluene	1000	ND(1.0)	ND(1.0)	**2500**
Ethylbenzene	700	ND(0.20)	0.240	**700**
Xylenes	1000	ND(0.40)	1.560	**4300**
Isopropylbenzene	NCL	ND(0.20)	ND(0.20)	ND(20)
n-Propylbenzene	NCL	ND(0.20)	ND(0.20)	29
1,3,5-Trimethylbenzene	NCL	ND(0.20)	ND(0.20)	75
1,2,4-Trimethylbenzene	NCL	ND(0.20)	ND(0.20)	340
n-Butylbenzene	NCL	ND(0.20)	ND(0.20)	ND(20)
Naphthalene	160	ND(1.3)	ND(1.3)	ND(130)
Petroleum Hydrocarbons (µg/l)				
Gasoline Range	800/1000	ND(100)	ND(100)	680
Diesel Range	500	ND(0.27)	**860**	**1500**
Oil Range	500	ND(0.44)	**1000**	**540**

Notes

1. Regulatory criteria are established under the Model Toxics Control Act (MTCA).
2. Cleanup level for gasoline is 800 µg/L with benzene present in ground water. 1000 µg/L with no detectable benzene in ground water.
3. ND = Not Detected above the laboratory reporting limits shown in parenthesis.
4. DRO and ORO results are presented in milligrams per liter and GRO results are presented in micrograms per liter.
5. Samples collected by The VERTEX Companies, Inc. on September 26, 2017 and October 2, 2017.
6. NCL = No MCTA Method Cleanup Levels have been established
7. **Bold =** Sample exceeds MTCA Method A cleanup level for ground water.

APPENDIX A:

Soil Boring/Monitoring Well Construction Logs

SOIL BORING/MONITORING WELL CONSTRUCTION LOG

DESIGNATION	**V-101**		
PROJECT:	**Redmond Sears**	PROJECT NO.:	46676
LOCATION:	**2200 148th Avenue Northeast, Redmond, Washington**	DRILLER:	Holt Services
		INSPECTOR:	
INSTALLATION DATES	9/26/2017	PAGE	1 of 1

SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS			
TYPE	Geoprobe 7800	TYPE	N/A	BARREL TYPE	N/A	**ELEVATION INFORMATION**		DATE:	
SIZE (ID)	2"	MATERIAL	N/A	SIZE (ID)	N/A	**DATUM:**		TIME:	
HAMMER (LB.)	N/A	DIAMETER	N/A	DIAMETER	N/A	**TOC:**		DEPTH (Ft):	
FALL (IN.)	N/A	LENGTH	N/A			**GS:**		ELEVATION (Ft):	

SAMPLE INFORMATION								PID (PPM)
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/El.)	SOIL DESCRIPTION	WELL CONST	Background/ Actual
					ASPHALT			
1					GW	SANDY GRAVEL (GW) - tan, dense, moist		
2								
3								
4								
5								
6	V-101(6)				ML	SILT (ML) - gray, mottled orange, very stiff, moist w/ some sand		17.90
7						- weathered petroleum odor @ 7 feet		
8								
9								
10								
11								
12								
13						- trace gravel @ 12.5 feet		17.10
14								
15					GW	SANDY GRAVEL (GW) - tan, dense, moist		
16								
17	V-101(17.5)				SP	SAND (SP) - gray, dense, moist, w/ trace gravel		
18						- becomes wet @ 18 feet, petroleum odor		18.60
19								
20					GW	SANDY GRAVEL (GW) - tan/gray, very dense, moist		
21								
22								
23								
24								
25						- hit refusal @ 26 feet		
26								
27								
28								
29								

MODIFIER		SAND AND GRAVEL		SILT AND CLAY		LOCATION:				WELL CONSTRUCTION
1 - 10%	**Trace**	**Density**	**Blows (N)**	**Consistency**	**Blows (N)**	**MONITORING WELL CONSTRUCTION DATA**				Screen
10 - 20%	**Little**	**Very loose**	**0 - 4**	**Very soft**	**<2**	DEPTH:		DEPTH/TYPE PACK:		Riser
20 - 35%	**Some**	**Loose**	**4 - 10**	**Soft**	**2 - 4**	DIAMETER (inches):		DEPTH/TYPE SEAL:		Concrete
35 - 50%	**And**	**Medium Dense**	**10 - 30**	**Medium Stiff**	**4 - 8**	MATERIAL:		BACKFILL MATERIAL:		Bentonite
		Dense	**30 - 50**	**Stiff**	**8 - 15**	SLOT SIZE (inches):		SURFACE SEAL:		Native
		Very Dense	**>50**	**Very Stiff**	**15 - 30**	SCREEN INTERVAL:		ROADBOX DESC.:		Sand
				Hard	**>30**	LENGTH OF RISER:				Grout

NOTES:

1. Soil are visually classified in general accordance with the Modified Burmister Soil Classification System.

SOIL BORING/MONITORING WELL CONSTRUCTION LOG

DESIGNATION	**V-102 (TMW)**		
PROJECT:	**Redmond Sears**	PROJECT NO.:	46676
LOCATION:	**2200 148th Avenue Northeast, Redmond, Washington**	DRILLER:	Holt Services
		INSPECTOR:	
INSTALLATION DATES	9/26/2017	PAGE	1 of 1

SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS			
TYPE	Geoprobe 7800	TYPE	N/A	BARREL TYPE	N/A	**ELEVATION INFORMATION**		DATE:	
SIZE (ID)	2"	MATERIAL	N/A	SIZE (ID)	N/A	**DATUM:**		TIME:	
HAMMER (LB.)	N/A	DIAMETER	N/A	DIAMETER	N/A	**TOC:**		DEPTH (Ft):	
FALL (IN.)	N/A	LENGTH	N/A			**GS:**		ELEVATION (Ft):	

SAMPLE INFORMATION								PID (PPM)
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/El.)	SOIL DESCRIPTION	WELL CONST	Background/ Actual
					ASPHALT			
1								
						SAND (SP) - tan, dense, moist, w/ trace gravel and some silt		
2								
3								
					SP			
4						- slight petroleum odor @ 4 feet		13.20
5	V-102(5)							
						SILT (ML) - gray, stiff, moist, w/ trace sand		
6								
					ML			
7								
8								6.30
						CLAY (CL) - gray, stiff, wet		
9					CL			
10						SILT (ML) - gray, stiff, moist		
11								
					ML			
12								4.30
13						SILTY SAND (SM) - gray, dense, moist, w/ trace gravel		
14								
15								
					SM			
16								
17								
18								
19						SAND (SP) - tan, dense, saturated, w/ trace gravel		
						- water @ 20 feet		1.70
20								
21								
22								
					SP			
23								
24								
25								
26								
27								
28								
29								

MODIFIER		SAND AND GRAVEL		SILT AND CLAY		LOCATION:				WELL CONSTRUCTION
1 - 10%	**Trace**	**Density**	**Blows (N)**	**Consistency**	**Blows (N)**	**MONITORING WELL CONSTRUCTION DATA**				Screen
10 - 20%	**Little**	**Very loose**	**0 - 4**	**Very soft**	**<2**	DEPTH:		DEPTH/TYPE PACK:		Riser
20 - 35%	**Some**	**Loose**	**4 - 10**	**Soft**	**2 - 4**	DIAMETER (inches):		DEPTH/TYPE SEAL:		Concrete
35 - 50%	**And**	**Medium Dense**	**10 - 30**	**Medium Stiff**	**4 - 8**	MATERIAL:		BACKFILL MATERIAL:		Bentonite
		Dense	**30 - 50**	**Stiff**	**8 - 15**	SLOT SIZE (inches):		SURFACE SEAL:		Native
		Very Dense	**>50**	**Very Stiff**	**15 - 30**	SCREEN INTERVAL:		ROADBOX DESC.:		Sand
				Hard	**>30**	LENGTH OF RISER:				Grout

NOTES:

1. Soil are visually classified in general accordance with the Modified Burmister Soil Classification System.

SOIL BORING/MONITORING WELL CONSTRUCTION LOG

DESIGNATION	**V-103**		
PROJECT:	**Redmond Sears**	PROJECT NO.:	46676
LOCATION:	**2200 148th Avenue Northeast, Redmond, Washington**	DRILLER:	Holt Services
		INSPECTOR:	
INSTALLATION DATES	9/26/2017	PAGE	1 of 1

SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS			
TYPE	Geoprobe 7800	TYPE	N/A	BARREL TYPE	N/A	**ELEVATION INFORMATION**		DATE:	
SIZE (ID)	2"	MATERIAL	N/A	SIZE (ID)	N/A	**DATUM:**		TIME:	
HAMMER (LB.)	N/A	DIAMETER	N/A	DIAMETER	N/A	**TOC:**		DEPTH (Ft):	
FALL (IN.)	N/A	LENGTH	N/A			**GS:**		ELEVATION (Ft):	

SAMPLE INFORMATION								
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/El.)	SOIL DESCRIPTION	WELL CONST	PID (PPM) Background/ Actual
					ASPHALT			
1								
					SM	SILTY SAND (SM) - tan, dense, mosit		
2								
3								
						- petroleum odor @ 3.5 feet		1.30
4						- trace gravel @ 4 feet		
5								
6								
7					CL	CLAY (CL) - gray, stiff, wet		
8								0.70
9								
10								
11								
12	V-103(12)				SM	SILTY SAND (SM) - gray, dense, mosit		
13					SP	SAND (SP) - gray, dense, mosit		
								3.60
14					SM	SILTY SAND (SM) - gray, dense, mosit		
15								
16								
17								
18	V-103(18)							2.90
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								

MODIFIER		SAND AND GRAVEL		SILT AND CLAY		LOCATION:				WELL CONSTRUCTION
1 - 10%	**Trace**	**Density**	**Blows (N)**	**Consistency**	**Blows (N)**	**MONITORING WELL CONSTRUCTION DATA**				Screen
10 - 20%	**Little**	**Very loose**	**0 - 4**	**Very soft**	**<2**	DEPTH:		DEPTH/TYPE PACK:		Riser
20 - 35%	**Some**	**Loose**	**4 - 10**	**Soft**	**2 - 4**	DIAMETER (inches):		DEPTH/TYPE SEAL:		Concrete
35 - 50%	**And**	**Medium Dense**	**10 - 30**	**Medium Stiff**	**4 - 8**	MATERIAL:		BACKFILL MATERIAL:		Bentonite
		Dense	**30 - 50**	**Stiff**	**8 - 15**	SLOT SIZE (inches):		SURFACE SEAL:		Native
		Very Dense	**>50**	**Very Stiff**	**15 - 30**	SCREEN INTERVAL:		ROADBOX DESC.:		Sand
				Hard	**>30**	LENGTH OF RISER:				Grout

NOTES:

1. Soil are visually classified in general accordance with the Modified Burmister Soil Classification System.

SOIL BORING/MONITORING WELL CONSTRUCTION LOG

DESIGNATION	**V-104(MW)**		
PROJECT:	**Redmond Sears**	PROJECT NO.:	46676
LOCATION:	**2200 148th Avenue Northeast, Redmond, Washington**	DRILLER:	Holt Services
		INSPECTOR:	
INSTALLATION DATES	9/26/2017	PAGE	1 of 1

SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS			
TYPE	Geoprobe7800	TYPE	N/A	BARREL TYPE	5' Continuous Tube	**ELEVATION INFORMATION**		DATE:	
SIZE (ID)	2"	MATERIAL	N/A	SIZE (ID)	5'	**DATUM:**		TIME:	
HAMMER (LB.)	N/A	DIAMETER	2"	DIAMETER	2"	**TOC:**		DEPTH (Ft):	
FALL (IN.)	N/A	LENGTH	5'			**GS:**		ELEVATION (Ft):	

SAMPLE INFORMATION								PID (PPM)
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/El.)	SOIL DESCRIPTION	WELL CONST	Background/ Actual
					ASPHALT			
1					SP	SAND (SP) - tan, dense, moist, w/ some gravel		
2								
3								18.10
	V-104(3.5)							
4								
5					CL	CLAY (CL) - gray, mottled orange, stiff, moist		
6								
7								1.70
8								
9								
10								
11								
12								4.60
13								
14								
15					SM	SILTY SAND (SM) - gray, dense, mosit - becomes saturated @ 15.5 - hit refusal @ 16.5 feet		
16								
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								

MODIFIER		SAND AND GRAVEL		SILT AND CLAY		LOCATION:				WELL CONSTRUCTION
1 - 10%	**Trace**	**Density**	**Blows (N)**	**Consistency**	**Blows (N)**	**MONITORING WELL CONSTRUCTION DATA**				Screen
10 - 20%	**Little**	**Very loose**	**0 - 4**	**Very soft**	**<2**	DEPTH:		DEPTH/TYPE PACK:		Riser
20 - 35%	**Some**	**Loose**	**4 - 10**	**Soft**	**2 - 4**	DIAMETER (inches):		DEPTH/TYPE SEAL:		Concrete
35 - 50%	**And**	**Medium Dense**	**10 - 30**	**Medium Stiff**	**4 - 8**	MATERIAL:		BACKFILL MATERIAL:		Bentonite
		Dense	**30 - 50**	**Stiff**	**8 - 15**	SLOT SIZE (inches):		SURFACE SEAL:		Native
		Very Dense	**>50**	**Very Stiff**	**15 - 30**	SCREEN INTERVAL:		ROADBOX DESC.:		Sand
				Hard	**>30**	LENGTH OF RISER:				Grout

NOTES:

1. Soil are visually classified in general accordance with the Modified Burmister Soil Classification System.

SOIL BORING/MONITORING WELL CONSTRUCTION LOG

DESIGNATION	**V-105(MW)**		
PROJECT:	**Redmond Sears**	PROJECT NO.:	46676
LOCATION:	**2200 148th Avenue Northeast, Redmond, Washington**	DRILLER:	Holt Services
		INSPECTOR:	
INSTALLATION DATES	9/26/2017	PAGE	1 of 1

SAMPLER			CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS			
TYPE		Geoprobe7800	TYPE	N/A	BARREL TYPE	5' Continuous Tube	**ELEVATION INFORMATION**		DATE:	
SIZE (ID)		2"	MATERIAL	N/A	SIZE (ID)	5'	**DATUM:**		TIME:	
HAMMER (LB.)		N/A	DIAMETER	2"	DIAMETER	2"	**TOC:**		DEPTH (Ft):	
FALL (IN.)		N/A	LENGTH	5'			**GS:**		ELEVATION (Ft):	

SAMPLE INFORMATION									
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/El.)	SOIL DESCRIPTION	WELL CONST	PID (PPM) Background/ Actual
					ASPHALT			
1								
2					SM	SILTY SAND (SM) - tan, dense, moist		
3								
4								
					ML	SILT (ML) - dark brown, stiff, moist, w/ tree roots, strong petroleum odor		3.20
5								
6	V-105(6)					- becomes gray, slightly mottled orange		
7						slight petroleum odor @ 7 feet		
8								
9								1.60
10								
11						- organic odor @ 11 feet		
12					SM	SILTY SAND (SM) - gray, dense, moist		
13								
14								0.40
15								
16						-becomes saturated @ 16.5 feet		
17					SP	SAND (SP) - gray, dense, saturated, w/ trace gravel		
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								

MODIFIER		SAND AND GRAVEL		SILT AND CLAY	
1 - 10%	**Trace**	**Density**	**Blows (N)**	**Consistency**	**Blows (N)**
10 - 20%	**Little**	**Very loose**	**0 - 4**	**Very soft**	**<2**
20 - 35%	**Some**	**Loose**	**4 - 10**	**Soft**	**2 - 4**
35 - 50%	**And**	**Medium Dense**	**10 - 30**	**Medium Stiff**	**4 - 8**
		Dense	**30 - 50**	**Stiff**	**8 - 15**
		Very Dense	**>50**	**Very Stiff**	**15 - 30**
				Hard	**>30**

LOCATION:			
MONITORING WELL CONSTRUCTION DATA			
DEPTH:		DEPTH/TYPE PACK:	
DIAMETER (inches):		DEPTH/TYPE SEAL:	
MATERIAL:		BACKFILL MATERIAL:	
SLOT SIZE (inches):		SURFACE SEAL:	
SCREEN INTERVAL:		ROADBOX DESC.:	
LENGTH OF RISER:			

WELL CONSTRUCTION

Screen
Riser
Concrete
Bentonite
Native
Sand
Grout

NOTES:

1. Soil are visually classified in general accordance with the Modified Burmister Soil Classification System.

SOIL BORING/MONITORING WELL CONSTRUCTION LOG

DESIGNATION	**V-106(MW)**		
PROJECT:	**Redmond Sears**	PROJECT NO.:	46676
LOCATION:	**2200 148th Avenue Northeast, Redmond, Washington**	DRILLER:	Holt Services
		INSPECTOR:	
INSTALLATION DATES	9/27/2017	PAGE	1 of 1

SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS			
TYPE	Geoprobe 7800	TYPE	N/A	BARREL TYPE	5' Continuous Tube	**ELEVATION INFORMATION**		DATE:	
SIZE (ID)	N/A	MATERIAL	N/A	SIZE (ID)		**DATUM:**		TIME:	
HAMMER (LB.)	N/A	DIAMETER	2"	DIAMETER		**TOC:**		DEPTH (Ft):	
FALL (IN.)	N/A	LENGTH	5'			**GS:**		ELEVATION (Ft):	

SAMPLE INFORMATION								
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/El.)	**SOIL DESCRIPTION**	**WELL CONST**	**PID (PPM)** Background/ Actual
					ASPHALT			
1						SILTY SAND (SM) - tan, dense, moist, w/ trace gravel		
2								
3					SM			
4								5.30
5								
6					ML	SILT (ML) - gray, mottled orange, stiff, moist		
7								
8						-becomes gray @ 8.5 feet		
9								13.70
10					SM	SILTY SAND (SM) - gray, dense, moist		
11								
12								
13						-strong petroleum odor		
	V-106(13.5)							37.60
14								
15								
16						-becomes saturated @ 16 feet		
17								
18								
19					SP	SAND (SP) - gray, dense, saturated, strong petroleum odor		
20								
21								
22								
	V-106(22.5)							1,500.00
23								
24					SM	SILTY SAND (SM) - gray, very dense, saturated		
25								
26								
27								
28								
29								

MODIFIER		SAND AND GRAVEL		SILT AND CLAY	
1 - 10%	**Trace**	**Density**	**Blows (N)**	**Consistency**	**Blows (N)**
10 - 20%	**Little**	**Very loose**	**0 - 4**	**Very soft**	**<2**
20 - 35%	**Some**	**Loose**	**4 - 10**	**Soft**	**2 - 4**
35 - 50%	**And**	**Medium Dense**	**10 - 30**	**Medium Stiff**	**4 - 8**
		Dense	**30 - 50**	**Stiff**	**8 - 15**
		Very Dense	**>50**	**Very Stiff**	**15 - 30**
				Hard	**>30**

LOCATION:			
MONITORING WELL CONSTRUCTION DATA			
DEPTH:		DEPTH/TYPE PACK:	
DIAMETER (inches):		DEPTH/TYPE SEAL:	
MATERIAL:		BACKFILL MATERIAL:	
SLOT SIZE (inches):		SURFACE SEAL:	
SCREEN INTERVAL:		ROADBOX DESC.:	
LENGTH OF RISER:			

WELL CONSTRUCTION

Screen
Riser
Concrete
Bentonite
Native
Sand
Grout

NOTES:

1. Soil are visually classified in general accordance with the Modified Burmister Soil Classification System.

SOIL BORING/MONITORING WELL CONSTRUCTION LOG

DESIGNATION	V-107		
PROJECT:	Redmond Sears	PROJECT NO.:	46676
LOCATION:	2200 148th Avenue Northeast, Redmond, Washington	DRILLER:	Holt Services
		INSPECTOR:	
INSTALLATION DATES	9/27/2017	PAGE	1 of 1

SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS				
TYPE	Geoprobe 7800	TYPE	N/A	BARREL TYPE	5' Continuous Tube	ELEVATION INFORMATION		DATE:		
SIZE (ID)	2"	MATERIAL	N/A	SIZE (ID)		DATUM:		TIME:		
HAMMER (LB.)	N/A	DIAMETER	2"	DIAMETER		TOC:		DEPTH (Ft):		
FALL (IN.)	N/A	LENGTH	5'			GS:		ELEVATION (Ft):		

SAMPLE INFORMATION						SOIL DESCRIPTION	WELL CONST	PID (PPM)
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/El.)			Background/ Actual
					ASPHALT			
1					SM	SILTY SAND (SM) - tan, dense, moist, w/ trace gravel		
2								
3								
4								7.70
5								
6					ML	SILT (ML) - tan, stiff, moist		
7					SM	SILTY SAND (SM) - tan, dense, moist, w/ trace gravel		
8	V-107(8)							13.50
9								
10						-pea gravel fill from 10-13 feet		
11								
12								
13								11.10
14								
15								
16								
17						-hit refusal @ 17.5 feet		
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								

MODIFIER		SAND AND GRAVEL		SILT AND CLAY		LOCATION:				WELL CONSTRUCTION
1 - 10%	Trace	Density	Blows (N)	Consistency	Blows (N)	MONITORING WELL CONSTRUCTION DATA				Screen
10 - 20%	Little	Very loose	0 - 4	Very soft	<2	DEPTH:		DEPTH/TYPE PACK:		Riser
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4	DIAMETER (inches):		DEPTH/TYPE SEAL:		Concrete
35 - 50%	And	Medium Dense	10 - 30	Medium Stiff	4 - 8	MATERIAL:		BACKFILL MATERIAL:		Bentonite
		Dense	30 - 50	Stiff	8 - 15	SLOT SIZE (inches):		SURFACE SEAL:		Native
		Very Dense	>50	Very Stiff	15 - 30	SCREEN INTERVAL:		ROADBOX DESC.:		Sand
				Hard	>30	LENGTH OF RISER:				Grout

NOTES:

1. Soil are visually classified in general accordance with the Modified Burmister Soil Classification System.

SOIL BORING/MONITORING WELL CONSTRUCTION LOG

DESIGNATION	**V-108**		
PROJECT:	**Redmond Sears**	PROJECT NO.:	46676
LOCATION:	**2200 148th Avenue Northeast**	DRILLER:	Holt Services
		INSPECTOR:	
INSTALLATION DATES	9/27/2017	PAGE	1 of 1

SAMPLER		**CASING**		**CORE**		**GROUNDWATER DEPTH MEASUREMENTS**				
TYPE	Geoprobe 7800	TYPE	N/A	BARREL TYPE	5' Continuous Tube	**ELEVATION INFORMATION**		DATE:		
SIZE (ID)	2"	MATERIAL	N/A	SIZE (ID)		**DATUM:**		TIME:		
HAMMER (LB.)	N/A	DIAMETER	2"	DIAMETER		**TOC:**		DEPTH (Ft):		
FALL (IN.)	N/A	LENGTH	5'			**GS:**		ELEVATION (Ft):		

SAMPLE INFORMATION								**PID (PPM)**
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/El.)	**SOIL DESCRIPTION**	**WELL CONST**	Background/ Actual
					ASPHALT			
1					SM	SILTY SAND (SM) - tan, dense, moist, w/ trace gravel		
2								
3								
4								
					ML	SILT (ML) - gray, stiff, moist, w/ organic odor		7.10
5								
6								
7								
					SM	SILTY SAND (SM) - gray, dense, moist		
8								
9								
								7.10
10								
11								
12								
						-strong petroleum odor		1,500.00
13	V-108(13)							
14								
15								
16								
17								
18								
19								9.60
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								

MODIFIER		**SAND AND GRAVEL**		**SILT AND CLAY**		**LOCATION:**				**WELL CONSTRUCTION**
1 - 10%	**Trace**	**Density**	**Blows (N)**	**Consistency**	**Blows (N)**	**MONITORING WELL CONSTRUCTION DATA**				Screen
10 - 20%	**Little**	**Very loose**	**0 - 4**	**Very soft**	**<2**	DEPTH:		DEPTH/TYPE PACK:		Riser
20 - 35%	**Some**	**Loose**	**4 - 10**	**Soft**	**2 - 4**	DIAMETER (inches):		DEPTH/TYPE SEAL:		Concrete
35 - 50%	**And**	**Medium Dense**	**10 - 30**	**Medium Stiff**	**4 - 8**	MATERIAL:		BACKFILL MATERIAL:		Bentonite
		Dense	**30 - 50**	**Stiff**	**8 - 15**	SLOT SIZE (inches):		SURFACE SEAL:		Native
		Very Dense	**>50**	**Very Stiff**	**15 - 30**	SCREEN INTERVAL:		ROADBOX DESC.:		Sand
				Hard	**>30**	LENGTH OF RISER:				Grout

NOTES:

1. Soil are visually classified in general accordance with the Modified Burmister Soil Classification System.

SOIL BORING/MONITORING WELL CONSTRUCTION LOG

DESIGNATION	V-109		
PROJECT:	Redmond Sears	PROJECT NO.:	46676
LOCATION:	2200 14th Avenue Northeast, Redmond, Washingon	DRILLER:	Holt Services
		INSPECTOR:	
INSTALLATION DATES	9/27/2017	PAGE	1 of 1

SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS				
TYPE	Geoprobe 7800	TYPE	N/A	BARREL TYPE	5' Continuous Tube	ELEVATION INFORMATION		DATE:		
SIZE (ID)	2"	MATERIAL	N/A	SIZE (ID)		DATUM:		TIME:		
HAMMER (LB.)	N/A	DIAMETER	2"	DIAMETER		TOC:		DEPTH (Ft):		
FALL (IN.)	N/A	LENGTH	5'			GS:		ELEVATION (Ft):		

SAMPLE INFORMATION								PID (PPM)
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/El.)	SOIL DESCRIPTION	WELL CONST	Background/ Actual
					ASPHALT			
1					SM	SILTY SAND (SM) - tan, dense, moist, w/ trace gravel		
2								
3								
4								
5					ML	SILT (ML) - gray, mottled orange, stiff, moist		
6								
7								
8								
9								
10					SM	SILTY SAND (SM) - gray, dense, moist		
11					SP	SAND (SP) - gray, dense, moist		
12					SM	SILTY SAND (SM) - gray, very dense, moist		
13								
14	V-109(14)							
15								
16								
17								
18								
19								
20								
21								
22								
23						- hit refusal @ 24 feet		
24								
25								
26								
27								
28								
29								

MODIFIER		SAND AND GRAVEL		SILT AND CLAY	
1 - 10%	Trace	Density	Blows (N)	Consistency	Blows (N)
10 - 20%	Little	Very loose	0 - 4	Very soft	<2
20 - 35%	Some	Loose	4 - 10	Soft	2 - 4
35 - 50%	And	Medium Dense	10 - 30	Medium Stiff	4 - 8
		Dense	30 - 50	Stiff	8 - 15
		Very Dense	>50	Very Stiff	15 - 30
				Hard	>30

LOCATION:				WELL CONSTRUCTION
MONITORING WELL CONSTRUCTION DATA				Screen
DEPTH:		DEPTH/TYPE PACK:		Riser
DIAMETER (inches):		DEPTH/TYPE SEAL:		Concrete
MATERIAL:		BACKFILL MATERIAL:		Bentonite
SLOT SIZE (inches):		SURFACE SEAL:		Native
SCREEN INTERVAL:		ROADBOX DESC.:		Sand
LENGTH OF RISER:				Grout

NOTES:

1. Soil are visually classified in general accordance with the Modified Burmister Soil Classification System.

SOIL BORING/MONITORING WELL CONSTRUCTION LOG

DESIGNATION	**V-110**		
PROJECT:	**Redmond Sears**	PROJECT NO.:	46676
LOCATION:	**2200 14th Avenue Northeast, Redmond, Washingon**	DRILLER:	Holt Services
		INSPECTOR:	
INSTALLATION DATES	9/27/2017	PAGE	1 of 1

SAMPLER		CASING		CORE		GROUNDWATER DEPTH MEASUREMENTS			
TYPE	Geoprobe 7800	TYPE	N/A	BARREL TYPE	5' Continuous Tube	**ELEVATION INFORMATION**		DATE:	
SIZE (ID)	2"	MATERIAL	N/A	SIZE (ID)		**DATUM:**		TIME:	
HAMMER (LB.)	N/A	DIAMETER	2"	DIAMETER		**TOC:**		DEPTH (Ft):	
FALL (IN.)	N/A	LENGTH	5'			**GS:**		ELEVATION (Ft):	

SAMPLE INFORMATION								PID (PPM)
DEPTH ELEVATION	INTERVAL	PEN / REC	BLOWS / 6"	SPT	STRATA CHANGE (Ft/El.)	SOIL DESCRIPTION	WELL CONST	Background/ Actual
					ASPHALT			
1					SM	SILTY SAND (SM) - tan, dense, moist, w/ trace gravel		
2								
3								
4					ML	SILT (ML) - tan, mottled orange, stiff, moist, w/ trace gravel		
5								
6								
7					SM	SILTY SAND (SM) - gray, dense, moist, w/ trace gravel		
8								
9								
10								
11								
12								
13								
14						-becomes wet		
15								
16	V-110(16)							
17						-hit refusal @ 17.5 feet		
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
28								
29								

MODIFIER		SAND AND GRAVEL		SILT AND CLAY	
1 - 10%	**Trace**	**Density**	**Blows (N)**	**Consistency**	**Blows (N)**
10 - 20%	**Little**	**Very loose**	**0 - 4**	**Very soft**	**<2**
20 - 35%	**Some**	**Loose**	**4 - 10**	**Soft**	**2 - 4**
35 - 50%	**And**	**Medium Dense**	**10 - 30**	**Medium Stiff**	**4 - 8**
		Dense	**30 - 50**	**Stiff**	**8 - 15**
		Very Dense	**>50**	**Very Stiff**	**15 - 30**
				Hard	**>30**

LOCATION:			
MONITORING WELL CONSTRUCTION DATA			
DEPTH:		DEPTH/TYPE PACK:	
DIAMETER (inches):		DEPTH/TYPE SEAL:	
MATERIAL:		BACKFILL MATERIAL:	
SLOT SIZE (inches):		SURFACE SEAL:	
SCREEN INTERVAL:		ROADBOX DESC.:	
LENGTH OF RISER:			

WELL CONSTRUCTION
Screen
Riser
Concrete
Bentonite
Native
Sand
Grout

NOTES:

1. Soil are visually classified in general accordance with the Modified Burmister Soil Classification System.

APPENDIX B:

Laboratory Analytical Reports

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

October 9, 2017

Ross Stainsby
The Vertex Companies, Inc.
810 Third Avenue, Ste. 307
Seattle, WA 98104

Re: Analytical Data for Project 46676
Laboratory Reference No. 1709-335

Dear Ross:

Enclosed are the analytical results and associated quality control data for samples submitted on September 27, 2017.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-335
Project: 46676

Case Narrative

Samples were collected on September 26, 2017 and received by the laboratory on September 27, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-335
Project: 46676

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-102 (TMW)**					
Laboratory ID:	09-335-01					
Gasoline	**ND**	100	NWTPH-Gx	9-28-17	9-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*101*	*61-118*				

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-335
Project: 46676

NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0928W1					
Gasoline	**ND**	100	NWTPH-Gx	9-28-17	9-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*61-118*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-335-01										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*101*	*97*	*61-118*			

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-335
Project: 46676

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-102 (TMW)**					
Laboratory ID:	09-335-01					
Diesel Range Organics	**ND**	0.27	NWTPH-Dx	9-28-17	9-28-17	
Lube Oil Range Organics	**ND**	0.44	NWTPH-Dx	9-28-17	9-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*99*	*50-150*				

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-335
Project: 46676

NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0928W2					
Diesel Range Organics	**ND**	0.10	NWTPH-Dx	9-28-17	9-28-17	
Lube Oil Range Organics	**ND**	0.16	NWTPH-Dx	9-28-17	9-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*74*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-320-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*76*	*88*	*50-150*			

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-335
Project: 46676

VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-102 (TMW)**					
Laboratory ID:	09-335-01					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Chloromethane	ND	1.0	EPA 8260C	9-29-17	9-29-17	
Vinyl Chloride	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Bromomethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Chloroethane	ND	1.0	EPA 8260C	9-29-17	9-29-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Acetone	5.1	5.0	EPA 8260C	9-29-17	9-29-17	
Iodomethane	ND	1.0	EPA 8260C	9-29-17	9-29-17	
Carbon Disulfide	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Methylene Chloride	ND	1.0	EPA 8260C	9-29-17	9-29-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Vinyl Acetate	ND	1.0	EPA 8260C	9-29-17	9-29-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
2-Butanone	ND	5.0	EPA 8260C	9-29-17	9-29-17	
Bromochloromethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Chloroform	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Benzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,2-Dichloroethane	14	0.20	EPA 8260C	9-29-17	9-29-17	
Trichloroethene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Dibromomethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Bromodichloromethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
2-Chloroethyl Vinyl Ether	ND	2.5	EPA 8260C	9-29-17	9-29-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Methyl Isobutyl Ketone	ND	2.7	EPA 8260C	9-29-17	9-29-17	
Toluene	ND	1.0	EPA 8260C	9-29-17	9-29-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-29-17	9-29-17	

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-335
Project: 46676

VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-102 (TMW)**					
Laboratory ID:	09-335-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Tetrachloroethene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
2-Hexanone	ND	2.0	EPA 8260C	9-29-17	9-29-17	
Dibromochloromethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Chlorobenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Ethylbenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
m,p-Xylene	ND	0.40	EPA 8260C	9-29-17	9-29-17	
o-Xylene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Styrene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Bromoform	ND	1.0	EPA 8260C	9-29-17	9-29-17	
Isopropylbenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Bromobenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,1,2,2-Tetrachloroethane	ND	0.26	EPA 8260C	9-29-17	9-29-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
n-Propylbenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
n-Butylbenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-29-17	9-29-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Naphthalene	ND	1.3	EPA 8260C	9-29-17	9-29-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*92*	*77-129*				
Toluene-d8	*95*	*80-127*				
4-Bromofluorobenzene	*98*	*78-125*				

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-335
Project: 46676

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:	MB0929W1					
Dichlorodifluoromethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Chloromethane	ND	1.0	EPA 8260C	9-29-17	9-29-17	
Vinyl Chloride	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Bromomethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Chloroethane	ND	1.0	EPA 8260C	9-29-17	9-29-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Acetone	ND	5.0	EPA 8260C	9-29-17	9-29-17	
Iodomethane	ND	1.0	EPA 8260C	9-29-17	9-29-17	
Carbon Disulfide	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Methylene Chloride	ND	1.0	EPA 8260C	9-29-17	9-29-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Vinyl Acetate	ND	1.0	EPA 8260C	9-29-17	9-29-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
2-Butanone	ND	5.0	EPA 8260C	9-29-17	9-29-17	
Bromochloromethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Chloroform	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Benzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Trichloroethene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Dibromomethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Bromodichloromethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
2-Chloroethyl Vinyl Ether	ND	2.5	EPA 8260C	9-29-17	9-29-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Methyl Isobutyl Ketone	ND	2.7	EPA 8260C	9-29-17	9-29-17	
Toluene	ND	1.0	EPA 8260C	9-29-17	9-29-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	9-29-17	9-29-17	

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-335
Project: 46676

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0929W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Tetrachloroethene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
2-Hexanone	ND	2.0	EPA 8260C	9-29-17	9-29-17	
Dibromochloromethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Chlorobenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Ethylbenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
m,p-Xylene	ND	0.40	EPA 8260C	9-29-17	9-29-17	
o-Xylene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Styrene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Bromoform	ND	1.0	EPA 8260C	9-29-17	9-29-17	
Isopropylbenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Bromobenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,1,2,2-Tetrachloroethane	ND	0.26	EPA 8260C	9-29-17	9-29-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	9-29-17	9-29-17	
n-Propylbenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
n-Butylbenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	9-29-17	9-29-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Naphthalene	ND	1.3	EPA 8260C	9-29-17	9-29-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	9-29-17	9-29-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*92*	*77-129*				
Toluene-d8	*95*	*80-127*				
4-Bromofluorobenzene	*98*	*78-125*				

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-335
Project: 46676

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB0929W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**8.99**	**8.91**	10.0	10.0	90	89	63-127	1	17	
Benzene	**9.75**	**9.78**	10.0	10.0	98	98	76-121	0	12	
Trichloroethene	**8.95**	**8.86**	10.0	10.0	90	89	64-120	1	15	
Toluene	**9.69**	**9.66**	10.0	10.0	97	97	82-120	0	13	
Chlorobenzene	**9.84**	**9.76**	10.0	10.0	98	98	80-120	1	14	
Surrogate:										
Dibromofluoromethane					*87*	*90*	*77-129*			
Toluene-d8					*94*	*94*	*80-127*			
4-Bromofluorobenzene					*98*	*98*	*78-125*			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

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

Z -

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

Chain of Custody

Page 1 of 1

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

Company: VERTEX
Project Number: 46676
Project Name: Redmond Sears
Project Manager: Ross Stainsby
Sampled by: Maddie Steenis

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 09-335

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
1	V-102(TMW)	1303	9/20/17	GW	7		X		X	X																	

	Signature	Company	Date	Time
Relinquished	Madelyn Steenis	VERTEX	9/21/17	757
Received		COSE	9/25/17	1557
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☒ Level III ☐ Level IV ☐

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

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

October 9, 2017

Ross Stainsby
The Vertex Companies, Inc.
810 Third Avenue, Ste. 307
Seattle, WA 98104

Re: Analytical Data for Project 46676
Laboratory Reference No. 1709-336

Dear Ross:

Enclosed are the analytical results and associated quality control data for samples submitted on September 27, 2017.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-336
Project: 46676

Case Narrative

Samples were collected on September 26 and 27, 2017 and received by the laboratory on September 27, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

Volatiles EPA 8260C Analysis

Some MTCA Method A cleanup levels are non-achievable for sample V-106 (22.5) due to the necessary dilution of the sample.

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

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-336
Project: 46676

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-102 (5)**					
Laboratory ID:	09-336-03					
Gasoline	**ND**	5.2	NWTPH-Gx	9-28-17	9-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*63-124*				
Client ID:	**V-103 (12)**					
Laboratory ID:	09-336-04					
Gasoline	**ND**	5.6	NWTPH-Gx	9-28-17	9-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*63-124*				
Client ID:	**V-103 (18)**					
Laboratory ID:	09-336-05					
Gasoline	**ND**	6.3	NWTPH-Gx	9-28-17	9-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*63-124*				
Client ID:	**V-104 (3.5)**					
Laboratory ID:	09-336-06					
Gasoline	**ND**	6.0	NWTPH-Gx	9-28-17	9-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*63-124*				
Client ID:	**V-106 (13.5)**					
Laboratory ID:	09-336-08					
Gasoline	**ND**	12	NWTPH-Gx	9-28-17	9-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*63-124*				
Client ID:	**V-106 (22.5)**					
Laboratory ID:	09-336-09					
Gasoline	**120**	62	NWTPH-Gx	9-28-17	9-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*63-124*				

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-336
Project: 46676

NWTPH-Gx/BTEX

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-107 (8)**					
Laboratory ID:	09-336-10					
Benzene	**ND**	0.020	EPA 8021B	9-28-17	9-28-17	
Toluene	**ND**	0.042	EPA 8021B	9-28-17	9-28-17	
Ethyl Benzene	**ND**	0.042	EPA 8021B	9-28-17	9-28-17	
m,p-Xylene	**ND**	0.042	EPA 8021B	9-28-17	9-28-17	
o-Xylene	**ND**	0.042	EPA 8021B	9-28-17	9-28-17	
Gasoline	**ND**	4.2	NWTPH-Gx	9-28-17	9-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*63-124*				
Client ID:	**V-108 (13)**					
Laboratory ID:	09-336-11					
Benzene	**0.10**	0.020	EPA 8021B	9-28-17	9-28-17	
Toluene	**ND**	0.050	EPA 8021B	9-28-17	9-28-17	
Ethyl Benzene	**0.20**	0.050	EPA 8021B	9-28-17	9-28-17	
m,p-Xylene	**0.49**	0.050	EPA 8021B	9-28-17	9-28-17	
o-Xylene	**0.16**	0.050	EPA 8021B	9-28-17	9-28-17	
Gasoline	**32**	5.0	NWTPH-Gx	9-28-17	9-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*93*	*63-124*				
Client ID:	**V-109 (14)**					
Laboratory ID:	09-336-12					
Benzene	**ND**	0.020	EPA 8021B	9-28-17	9-28-17	
Toluene	**ND**	0.050	EPA 8021B	9-28-17	9-28-17	
Ethyl Benzene	**ND**	0.050	EPA 8021B	9-28-17	9-28-17	
m,p-Xylene	**ND**	0.050	EPA 8021B	9-28-17	9-28-17	
o-Xylene	**ND**	0.050	EPA 8021B	9-28-17	9-28-17	
Gasoline	**ND**	5.0	NWTPH-Gx	9-28-17	9-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*98*	*63-124*				
Client ID:	**V-110 (16)**					
Laboratory ID:	09-336-13					
Gasoline	**ND**	5.0	NWTPH-Gx	9-28-17	9-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*94*	*63-124*				

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-336
Project: 46676

NWTPH-Gx/BTEX
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0928S1					
Benzene	**ND**	0.020	EPA 8021B	9-28-17	9-28-17	
Toluene	**ND**	0.050	EPA 8021B	9-28-17	9-28-17	
Ethyl Benzene	**ND**	0.050	EPA 8021B	9-28-17	9-28-17	
m,p-Xylene	**ND**	0.050	EPA 8021B	9-28-17	9-28-17	
o-Xylene	**ND**	0.050	EPA 8021B	9-28-17	9-28-17	
Gasoline	**ND**	5.0	NWTPH-Gx	9-28-17	9-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*63-124*				
Laboratory ID:	MB0928S2					
Benzene	**ND**	0.020	EPA 8021B	9-28-17	9-28-17	
Toluene	**ND**	0.050	EPA 8021B	9-28-17	9-28-17	
Ethyl Benzene	**ND**	0.050	EPA 8021B	9-28-17	9-28-17	
m,p-Xylene	**ND**	0.050	EPA 8021B	9-28-17	9-28-17	
o-Xylene	**ND**	0.050	EPA 8021B	9-28-17	9-28-17	
Gasoline	**ND**	5.0	NWTPH-Gx	9-28-17	9-28-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*88*	*63-124*				

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-336
Project: 46676

NWTPH-Gx/BTEX
QUALITY CONTROL

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-334-01										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*87*	*92*	*63-124*			
Laboratory ID:	09-334-02										
	ORIG	DUP									
Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Toluene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Ethyl Benzene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
m,p-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
o-Xylene	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*92*	*97*	*63-124*			
SPIKE BLANKS											
Laboratory ID:	SB0928S1										
	SB	SBD	SB	SBD		SB	SBD				
Benzene	**1.03**	**1.00**	1.00	1.00		**103**	**100**	70-124	3	12	
Toluene	**1.03**	**1.01**	1.00	1.00		**103**	**101**	73-119	2	12	
Ethyl Benzene	**1.04**	**1.02**	1.00	1.00		**104**	**102**	74-117	2	12	
m,p-Xylene	**1.03**	**1.02**	1.00	1.00		**103**	**102**	75-117	1	13	
o-Xylene	**1.02**	**1.01**	1.00	1.00		**102**	**101**	75-116	1	12	
Surrogate:											
Fluorobenzene						*100*	*97*	*63-124*			

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-336
Project: 46676

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-101 (6)**					
Laboratory ID:	09-336-01					
Diesel Range Organics	**ND**	30	NWTPH-Dx	10-3-17	10-6-17	
Lube Oil Range Organics	**ND**	60	NWTPH-Dx	10-3-17	10-6-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				
Client ID:	**V-101 (17.5)**					
Laboratory ID:	09-336-02					
Diesel Range Organics	**ND**	28	NWTPH-Dx	10-3-17	10-6-17	
Lube Oil Range Organics	**ND**	55	NWTPH-Dx	10-3-17	10-6-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*82*	*50-150*				
Client ID:	**V-102 (5)**					
Laboratory ID:	09-336-03					
Diesel Range Organics	**ND**	27	NWTPH-Dx	10-3-17	10-6-17	
Lube Oil Range Organics	**ND**	54	NWTPH-Dx	10-3-17	10-6-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				
Client ID:	**V-103 (12)**					
Laboratory ID:	09-336-04					
Diesel Range Organics	**ND**	39	NWTPH-Dx	10-3-17	10-6-17	U1
Lube Oil	**390**	53	NWTPH-Dx	10-3-17	10-6-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*98*	*50-150*				
Client ID:	**V-103 (18)**					
Laboratory ID:	09-336-05					
Diesel Range Organics	**ND**	27	NWTPH-Dx	10-3-17	10-6-17	
Lube Oil Range Organics	**ND**	54	NWTPH-Dx	10-3-17	10-6-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				
Client ID:	**V-104 (3.5)**					
Laboratory ID:	09-336-06					
Diesel Range Organics	**ND**	26	NWTPH-Dx	10-3-17	10-4-17	
Lube Oil	**210**	53	NWTPH-Dx	10-3-17	10-4-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*94*	*50-150*				

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-336
Project: 46676

NWTPH-Dx

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-106 (13.5)**					
Laboratory ID:	09-336-08					
Diesel Range Organics	**ND**	28	NWTPH-Dx	10-3-17	10-6-17	
Lube Oil	**120**	55	NWTPH-Dx	10-3-17	10-6-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*102*	*50-150*				
Client ID:	**V-106 (22.5)**					
Laboratory ID:	09-336-09					
Diesel Range Organics	**ND**	52	NWTPH-Dx	10-3-17	10-8-17	U1,M
Lube Oil	**81**	61	NWTPH-Dx	10-3-17	10-8-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				
Client ID:	**V-107 (8)**					
Laboratory ID:	09-336-10					
Diesel Range Organics	**ND**	27	NWTPH-Dx	10-3-17	10-6-17	
Lube Oil Range Organics	**ND**	54	NWTPH-Dx	10-3-17	10-6-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*86*	*50-150*				
Client ID:	**V-108 (13)**					
Laboratory ID:	09-336-11					
Diesel Range Organics	**ND**	28	NWTPH-Dx	10-3-17	10-8-17	
Lube Oil Range Organics	**ND**	56	NWTPH-Dx	10-3-17	10-8-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*83*	*50-150*				
Client ID:	**V-109 (14)**					
Laboratory ID:	09-336-12					
Diesel Range Organics	**ND**	28	NWTPH-Dx	10-3-17	10-6-17	
Lube Oil Range Organics	**ND**	56	NWTPH-Dx	10-3-17	10-6-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*92*	*50-150*				
Client ID:	**V-110 (16)**					
Laboratory ID:	09-336-13					
Diesel Range Organics	**ND**	28	NWTPH-Dx	10-3-17	10-8-17	
Lube Oil Range Organics	**ND**	56	NWTPH-Dx	10-3-17	10-8-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*88*	*50-150*				

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-336
Project: 46676

NWTPH-Dx
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1003S4					
Diesel Range Organics	**ND**	25	NWTPH-Dx	10-3-17	10-8-17	
Lube Oil Range Organics	**ND**	50	NWTPH-Dx	10-3-17	10-8-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*100*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	09-336-09										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	U1
Lube Oil	**66.2**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*92*	*85*	*50-150*			

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-336
Project: 46676

VOLATILES EPA 8260C
Page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-102 (5)**					
Laboratory ID:	09-336-03					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	10-4-17	10-4-17	
Chloromethane	ND	0.0049	EPA 8260C	10-4-17	10-4-17	
Vinyl Chloride	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Bromomethane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Chloroethane	ND	0.0049	EPA 8260C	10-4-17	10-4-17	
Trichlorofluoromethane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Acetone	0.018	0.0049	EPA 8260C	10-4-17	10-4-17	
Iodomethane	ND	0.0049	EPA 8260C	10-4-17	10-4-17	
Carbon Disulfide	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Methylene Chloride	ND	0.0098	EPA 8260C	10-4-17	10-4-17	
(trans) 1,2-Dichloroethene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Methyl t-Butyl Ether	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Vinyl Acetate	ND	0.0049	EPA 8260C	10-4-17	10-4-17	
2,2-Dichloropropane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
(cis) 1,2-Dichloroethene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
2-Butanone	ND	0.0049	EPA 8260C	10-4-17	10-4-17	
Bromochloromethane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Chloroform	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,1,1-Trichloroethane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Carbon Tetrachloride	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloropropene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Benzene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloroethane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Trichloroethene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloropropane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Dibromomethane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Bromodichloromethane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
2-Chloroethyl Vinyl Ether	ND	0.0049	EPA 8260C	10-4-17	10-4-17	
(cis) 1,3-Dichloropropene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Methyl Isobutyl Ketone	ND	0.0049	EPA 8260C	10-4-17	10-4-17	
Toluene	ND	0.0049	EPA 8260C	10-4-17	10-4-17	
(trans) 1,3-Dichloropropene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	

Date of Report: October 9, 2017
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Laboratory Reference: 1709-336
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-102 (5)**					
Laboratory ID:	09-336-03					
1,1,2-Trichloroethane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Tetrachloroethene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,3-Dichloropropane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
2-Hexanone	ND	0.0049	EPA 8260C	10-4-17	10-4-17	
Dibromochloromethane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromoethane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Chlorobenzene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,1,1,2-Tetrachloroethane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Ethylbenzene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-4-17	10-4-17	
o-Xylene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Styrene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Bromoform	ND	0.0049	EPA 8260C	10-4-17	10-4-17	
Isopropylbenzene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Bromobenzene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,1,2,2-Tetrachloroethane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichloropropane	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
n-Propylbenzene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
2-Chlorotoluene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
4-Chlorotoluene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,3,5-Trimethylbenzene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
tert-Butylbenzene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trimethylbenzene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
sec-Butylbenzene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,3-Dichlorobenzene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
p-Isopropyltoluene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,4-Dichlorobenzene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,2-Dichlorobenzene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
n-Butylbenzene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromo-3-chloropropane	ND	0.0049	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trichlorobenzene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Hexachlorobutadiene	ND	0.0049	EPA 8260C	10-4-17	10-4-17	
Naphthalene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichlorobenzene	ND	0.00098	EPA 8260C	10-4-17	10-4-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*117*	*73-134*				
Toluene-d8	*111*	*81-124*				
4-Bromofluorobenzene	*112*	*80-131*				

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-336
Project: 46676

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-103 (12)**					
Laboratory ID:	09-336-04					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	10-4-17	10-4-17	
Chloromethane	ND	0.0042	EPA 8260C	10-4-17	10-4-17	
Vinyl Chloride	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Bromomethane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Chloroethane	ND	0.0042	EPA 8260C	10-4-17	10-4-17	
Trichlorofluoromethane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Acetone	0.021	0.0042	EPA 8260C	10-4-17	10-4-17	
Iodomethane	ND	0.0042	EPA 8260C	10-4-17	10-4-17	
Carbon Disulfide	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Methylene Chloride	ND	0.0083	EPA 8260C	10-4-17	10-4-17	
(trans) 1,2-Dichloroethene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Methyl t-Butyl Ether	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Vinyl Acetate	ND	0.0042	EPA 8260C	10-4-17	10-4-17	
2,2-Dichloropropane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
(cis) 1,2-Dichloroethene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
2-Butanone	ND	0.0042	EPA 8260C	10-4-17	10-4-17	
Bromochloromethane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Chloroform	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,1,1-Trichloroethane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Carbon Tetrachloride	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloropropene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Benzene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloroethane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Trichloroethene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloropropane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Dibromomethane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Bromodichloromethane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
2-Chloroethyl Vinyl Ether	ND	0.0042	EPA 8260C	10-4-17	10-4-17	
(cis) 1,3-Dichloropropene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Methyl Isobutyl Ketone	ND	0.0042	EPA 8260C	10-4-17	10-4-17	
Toluene	ND	0.0042	EPA 8260C	10-4-17	10-4-17	
(trans) 1,3-Dichloropropene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-103 (12)**					
Laboratory ID:	09-336-04					
1,1,2-Trichloroethane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Tetrachloroethene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,3-Dichloropropane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
2-Hexanone	ND	0.0042	EPA 8260C	10-4-17	10-4-17	
Dibromochloromethane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromoethane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Chlorobenzene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,1,1,2-Tetrachloroethane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Ethylbenzene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
m,p-Xylene	0.0038	0.0017	EPA 8260C	10-4-17	10-4-17	
o-Xylene	0.0020	0.00083	EPA 8260C	10-4-17	10-4-17	
Styrene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Bromoform	ND	0.0042	EPA 8260C	10-4-17	10-4-17	
Isopropylbenzene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Bromobenzene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,1,2,2-Tetrachloroethane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichloropropane	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
n-Propylbenzene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
2-Chlorotoluene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
4-Chlorotoluene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,3,5-Trimethylbenzene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
tert-Butylbenzene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trimethylbenzene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
sec-Butylbenzene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,3-Dichlorobenzene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
p-Isopropyltoluene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,4-Dichlorobenzene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,2-Dichlorobenzene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
n-Butylbenzene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromo-3-chloropropane	ND	0.0042	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trichlorobenzene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Hexachlorobutadiene	ND	0.0042	EPA 8260C	10-4-17	10-4-17	
Naphthalene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichlorobenzene	ND	0.00083	EPA 8260C	10-4-17	10-4-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*123*	*73-134*				
Toluene-d8	*116*	*81-124*				
4-Bromofluorobenzene	*118*	*80-131*				

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Project: 46676

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-103 (18)**					
Laboratory ID:	09-336-05					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	10-4-17	10-4-17	
Chloromethane	ND	0.0046	EPA 8260C	10-4-17	10-4-17	
Vinyl Chloride	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Bromomethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Chloroethane	ND	0.0046	EPA 8260C	10-4-17	10-4-17	
Trichlorofluoromethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Acetone	ND	0.0046	EPA 8260C	10-4-17	10-4-17	
Iodomethane	ND	0.0046	EPA 8260C	10-4-17	10-4-17	
Carbon Disulfide	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Methylene Chloride	ND	0.0093	EPA 8260C	10-4-17	10-4-17	
(trans) 1,2-Dichloroethene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Methyl t-Butyl Ether	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Vinyl Acetate	ND	0.0046	EPA 8260C	10-4-17	10-4-17	
2,2-Dichloropropane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
(cis) 1,2-Dichloroethene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
2-Butanone	ND	0.0046	EPA 8260C	10-4-17	10-4-17	
Bromochloromethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Chloroform	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,1,1-Trichloroethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Carbon Tetrachloride	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloropropene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Benzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloroethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Trichloroethene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloropropane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Dibromomethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Bromodichloromethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
2-Chloroethyl Vinyl Ether	ND	0.0046	EPA 8260C	10-4-17	10-4-17	
(cis) 1,3-Dichloropropene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Methyl Isobutyl Ketone	ND	0.0046	EPA 8260C	10-4-17	10-4-17	
Toluene	ND	0.0046	EPA 8260C	10-4-17	10-4-17	
(trans) 1,3-Dichloropropene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-103 (18)**					
Laboratory ID:	09-336-05					
1,1,2-Trichloroethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Tetrachloroethene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,3-Dichloropropane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
2-Hexanone	ND	0.0046	EPA 8260C	10-4-17	10-4-17	
Dibromochloromethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromoethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Chlorobenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,1,1,2-Tetrachloroethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Ethylbenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
m,p-Xylene	ND	0.0019	EPA 8260C	10-4-17	10-4-17	
o-Xylene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Styrene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Bromoform	ND	0.0046	EPA 8260C	10-4-17	10-4-17	
Isopropylbenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Bromobenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,1,2,2-Tetrachloroethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichloropropane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
n-Propylbenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
2-Chlorotoluene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
4-Chlorotoluene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,3,5-Trimethylbenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
tert-Butylbenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trimethylbenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
sec-Butylbenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,3-Dichlorobenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
p-Isopropyltoluene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,4-Dichlorobenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,2-Dichlorobenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
n-Butylbenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromo-3-chloropropane	ND	0.0046	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trichlorobenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Hexachlorobutadiene	ND	0.0046	EPA 8260C	10-4-17	10-4-17	
Naphthalene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichlorobenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*109*	*73-134*				
Toluene-d8	*103*	*81-124*				
4-Bromofluorobenzene	*106*	*80-131*				

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-336
Project: 46676

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-104 (3.5)**					
Laboratory ID:	09-336-06					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	10-4-17	10-4-17	
Chloromethane	ND	0.0051	EPA 8260C	10-4-17	10-4-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Bromomethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Chloroethane	ND	0.0051	EPA 8260C	10-4-17	10-4-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Acetone	ND	0.0051	EPA 8260C	10-4-17	10-4-17	
Iodomethane	ND	0.0051	EPA 8260C	10-4-17	10-4-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Methylene Chloride	ND	0.010	EPA 8260C	10-4-17	10-4-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Vinyl Acetate	ND	0.0051	EPA 8260C	10-4-17	10-4-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
2-Butanone	ND	0.0051	EPA 8260C	10-4-17	10-4-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Chloroform	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Benzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
2-Chloroethyl Vinyl Ether	ND	0.0051	EPA 8260C	10-4-17	10-4-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Methyl Isobutyl Ketone	ND	0.0051	EPA 8260C	10-4-17	10-4-17	
Toluene	ND	0.0051	EPA 8260C	10-4-17	10-4-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	

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Project: 46676

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-104 (3.5)**					
Laboratory ID:	09-336-06					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
2-Hexanone	ND	0.0051	EPA 8260C	10-4-17	10-4-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-4-17	10-4-17	
o-Xylene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Styrene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Bromoform	ND	0.0051	EPA 8260C	10-4-17	10-4-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromo-3-chloropropane	ND	0.0051	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Hexachlorobutadiene	ND	0.0051	EPA 8260C	10-4-17	10-4-17	
Naphthalene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*127*	*73-134*				
Toluene-d8	*123*	*81-124*				
4-Bromofluorobenzene	*123*	*80-131*				

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-105 (6)**					
Laboratory ID:	09-336-07					
Dichlorodifluoromethane	ND	0.0015	EPA 8260C	10-4-17	10-4-17	
Chloromethane	ND	0.0053	EPA 8260C	10-4-17	10-4-17	
Vinyl Chloride	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Bromomethane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Chloroethane	ND	0.0053	EPA 8260C	10-4-17	10-4-17	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Acetone	0.074	0.0053	EPA 8260C	10-4-17	10-4-17	
Iodomethane	ND	0.0053	EPA 8260C	10-4-17	10-4-17	
Carbon Disulfide	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Methylene Chloride	ND	0.011	EPA 8260C	10-4-17	10-4-17	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Methyl t-Butyl Ether	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Vinyl Acetate	ND	0.0053	EPA 8260C	10-4-17	10-4-17	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
2-Butanone	0.0073	0.0053	EPA 8260C	10-4-17	10-4-17	
Bromochloromethane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Chloroform	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Benzene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Trichloroethene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Dibromomethane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Bromodichloromethane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
2-Chloroethyl Vinyl Ether	ND	0.0053	EPA 8260C	10-4-17	10-4-17	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Methyl Isobutyl Ketone	ND	0.0053	EPA 8260C	10-4-17	10-4-17	
Toluene	ND	0.0053	EPA 8260C	10-4-17	10-4-17	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-105 (6)**					
Laboratory ID:	09-336-07					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Tetrachloroethene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
2-Hexanone	ND	0.0053	EPA 8260C	10-4-17	10-4-17	
Dibromochloromethane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Chlorobenzene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Ethylbenzene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
m,p-Xylene	0.0041	0.0021	EPA 8260C	10-4-17	10-4-17	
o-Xylene	0.0021	0.0011	EPA 8260C	10-4-17	10-4-17	
Styrene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Bromoform	ND	0.0053	EPA 8260C	10-4-17	10-4-17	
Isopropylbenzene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Bromobenzene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
n-Propylbenzene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
2-Chlorotoluene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
4-Chlorotoluene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,3,5-Trimethylbenzene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
tert-Butylbenzene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trimethylbenzene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
sec-Butylbenzene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
p-Isopropyltoluene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
n-Butylbenzene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromo-3-chloropropane	ND	0.0053	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Hexachlorobutadiene	ND	0.0053	EPA 8260C	10-4-17	10-4-17	
Naphthalene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	10-4-17	10-4-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*105*	*73-134*				
Toluene-d8	*99*	*81-124*				
4-Bromofluorobenzene	*99*	*80-131*				

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-106 (13.5)**					
Laboratory ID:	09-336-08					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	10-4-17	10-4-17	
Chloromethane	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Bromomethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Chloroethane	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Acetone	0.014	0.0050	EPA 8260C	10-4-17	10-4-17	
Iodomethane	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Methylene Chloride	ND	0.010	EPA 8260C	10-4-17	10-4-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
2-Butanone	0.0058	0.0050	EPA 8260C	10-4-17	10-4-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Chloroform	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Benzene	0.0018	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
Toluene	0.040	0.0050	EPA 8260C	10-4-17	10-4-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-106 (13.5)**					
Laboratory ID:	09-336-08					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Ethylbenzene	0.062	0.0010	EPA 8260C	10-4-17	10-4-17	
m,p-Xylene	0.18	0.0020	EPA 8260C	10-4-17	10-4-17	
o-Xylene	0.10	0.0010	EPA 8260C	10-4-17	10-4-17	
Styrene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Bromoform	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
Isopropylbenzene	0.0025	0.0010	EPA 8260C	10-4-17	10-4-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
n-Propylbenzene	0.010	0.0010	EPA 8260C	10-4-17	10-4-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,3,5-Trimethylbenzene	0.020	0.0010	EPA 8260C	10-4-17	10-4-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trimethylbenzene	0.077	0.0010	EPA 8260C	10-4-17	10-4-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
n-Butylbenzene	0.0026	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
Naphthalene	0.032	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*73-134*				
Toluene-d8	*103*	*81-124*				
4-Bromofluorobenzene	*102*	*80-131*				

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-336
Project: 46676

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-106 (22.5)**					
Laboratory ID:	09-336-09					
Dichlorodifluoromethane	ND	0.17	EPA 8260C	10-4-17	10-4-17	
Chloromethane	ND	0.60	EPA 8260C	10-4-17	10-4-17	
Vinyl Chloride	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Bromomethane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Chloroethane	ND	0.60	EPA 8260C	10-4-17	10-4-17	
Trichlorofluoromethane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Acetone	ND	0.60	EPA 8260C	10-4-17	10-4-17	
Iodomethane	ND	0.60	EPA 8260C	10-4-17	10-4-17	
Carbon Disulfide	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Methylene Chloride	ND	1.2	EPA 8260C	10-4-17	10-4-17	
(trans) 1,2-Dichloroethene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Methyl t-Butyl Ether	ND	0.12	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Vinyl Acetate	ND	0.60	EPA 8260C	10-4-17	10-4-17	
2,2-Dichloropropane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
(cis) 1,2-Dichloroethene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
2-Butanone	ND	0.60	EPA 8260C	10-4-17	10-4-17	
Bromochloromethane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Chloroform	ND	0.12	EPA 8260C	10-4-17	10-4-17	
1,1,1-Trichloroethane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Carbon Tetrachloride	ND	0.12	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloropropene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Benzene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloroethane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Trichloroethene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloropropane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Dibromomethane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Bromodichloromethane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
2-Chloroethyl Vinyl Ether	ND	0.60	EPA 8260C	10-4-17	10-4-17	
(cis) 1,3-Dichloropropene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Methyl Isobutyl Ketone	ND	0.60	EPA 8260C	10-4-17	10-4-17	
Toluene	2.4	0.60	EPA 8260C	10-4-17	10-4-17	
(trans) 1,3-Dichloropropene	ND	0.12	EPA 8260C	10-4-17	10-4-17	

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
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Project: 46676

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-106 (22.5)**					
Laboratory ID:	09-336-09					
1,1,2-Trichloroethane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Tetrachloroethene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
1,3-Dichloropropane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
2-Hexanone	ND	0.60	EPA 8260C	10-4-17	10-4-17	
Dibromochloromethane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromoethane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Chlorobenzene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
1,1,1,2-Tetrachloroethane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Ethylbenzene	2.3	0.12	EPA 8260C	10-4-17	10-4-17	
m,p-Xylene	10	0.24	EPA 8260C	10-4-17	10-4-17	
o-Xylene	4.0	0.12	EPA 8260C	10-4-17	10-4-17	
Styrene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Bromoform	ND	0.60	EPA 8260C	10-4-17	10-4-17	
Isopropylbenzene	0.19	0.12	EPA 8260C	10-4-17	10-4-17	
Bromobenzene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
1,1,2,2-Tetrachloroethane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichloropropane	ND	0.12	EPA 8260C	10-4-17	10-4-17	
n-Propylbenzene	0.78	0.12	EPA 8260C	10-4-17	10-4-17	
2-Chlorotoluene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
4-Chlorotoluene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
1,3,5-Trimethylbenzene	1.8	0.12	EPA 8260C	10-4-17	10-4-17	
tert-Butylbenzene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trimethylbenzene	6.0	0.12	EPA 8260C	10-4-17	10-4-17	
sec-Butylbenzene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
1,3-Dichlorobenzene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
p-Isopropyltoluene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
1,4-Dichlorobenzene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
1,2-Dichlorobenzene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
n-Butylbenzene	0.41	0.12	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromo-3-chloropropane	ND	0.60	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trichlorobenzene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Hexachlorobutadiene	ND	0.60	EPA 8260C	10-4-17	10-4-17	
Naphthalene	0.77	0.12	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichlorobenzene	ND	0.12	EPA 8260C	10-4-17	10-4-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*112*	*73-134*				
Toluene-d8	*118*	*81-124*				
4-Bromofluorobenzene	*112*	*80-131*				

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-110 (16)**					
Laboratory ID:	09-336-13					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	10-4-17	10-4-17	
Chloromethane	ND	0.0047	EPA 8260C	10-4-17	10-4-17	
Vinyl Chloride	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Bromomethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Chloroethane	ND	0.0047	EPA 8260C	10-4-17	10-4-17	
Trichlorofluoromethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Acetone	0.0090	0.0047	EPA 8260C	10-4-17	10-4-17	
Iodomethane	ND	0.0047	EPA 8260C	10-4-17	10-4-17	
Carbon Disulfide	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Methylene Chloride	ND	0.0093	EPA 8260C	10-4-17	10-4-17	
(trans) 1,2-Dichloroethene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Methyl t-Butyl Ether	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Vinyl Acetate	ND	0.0047	EPA 8260C	10-4-17	10-4-17	
2,2-Dichloropropane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
(cis) 1,2-Dichloroethene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
2-Butanone	ND	0.0047	EPA 8260C	10-4-17	10-4-17	
Bromochloromethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Chloroform	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,1,1-Trichloroethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Carbon Tetrachloride	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloropropene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Benzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloroethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Trichloroethene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloropropane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Dibromomethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Bromodichloromethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
2-Chloroethyl Vinyl Ether	ND	0.0047	EPA 8260C	10-4-17	10-4-17	
(cis) 1,3-Dichloropropene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Methyl Isobutyl Ketone	ND	0.0047	EPA 8260C	10-4-17	10-4-17	
Toluene	ND	0.0047	EPA 8260C	10-4-17	10-4-17	
(trans) 1,3-Dichloropropene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-110 (16)**					
Laboratory ID:	09-336-13					
1,1,2-Trichloroethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Tetrachloroethene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,3-Dichloropropane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
2-Hexanone	ND	0.0047	EPA 8260C	10-4-17	10-4-17	
Dibromochloromethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromoethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Chlorobenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,1,1,2-Tetrachloroethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Ethylbenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
m,p-Xylene	ND	0.0019	EPA 8260C	10-4-17	10-4-17	
o-Xylene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Styrene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Bromoform	ND	0.0047	EPA 8260C	10-4-17	10-4-17	
Isopropylbenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Bromobenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,1,2,2-Tetrachloroethane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichloropropane	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
n-Propylbenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
2-Chlorotoluene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
4-Chlorotoluene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,3,5-Trimethylbenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
tert-Butylbenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trimethylbenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
sec-Butylbenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,3-Dichlorobenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
p-Isopropyltoluene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,4-Dichlorobenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,2-Dichlorobenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
n-Butylbenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromo-3-chloropropane	ND	0.0047	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trichlorobenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Hexachlorobutadiene	ND	0.0047	EPA 8260C	10-4-17	10-4-17	
Naphthalene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichlorobenzene	ND	0.00093	EPA 8260C	10-4-17	10-4-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*117*	*73-134*				
Toluene-d8	*117*	*81-124*				
4-Bromofluorobenzene	*116*	*80-131*				

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-336
Project: 46676

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1004S3					
Dichlorodifluoromethane	ND	0.0014	EPA 8260C	10-4-17	10-4-17	
Chloromethane	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Bromomethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Chloroethane	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Acetone	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
Iodomethane	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
Carbon Disulfide	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Methylene Chloride	ND	0.010	EPA 8260C	10-4-17	10-4-17	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Methyl t-Butyl Ether	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Vinyl Acetate	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
2-Butanone	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
Bromochloromethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Chloroform	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Benzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Trichloroethene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Dibromomethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Methyl Isobutyl Ketone	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
Toluene	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	

Date of Report: October 9, 2017
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Project: 46676

VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1004S3					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
2-Hexanone	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Chlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Ethylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
m,p-Xylene	ND	0.0020	EPA 8260C	10-4-17	10-4-17	
o-Xylene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Styrene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Bromoform	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
Isopropylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Bromobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
n-Propylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,3,5-Trimethylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
tert-Butylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trimethylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
sec-Butylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
p-Isopropyltoluene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
n-Butylbenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-4-17	10-4-17	
Naphthalene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-4-17	10-4-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*99*	*73-134*				
Toluene-d8	*98*	*81-124*				
4-Bromofluorobenzene	*101*	*80-131*				

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-336
Project: 46676

VOLATILES EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1004S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0473**	**0.0487**	0.0500	0.0500	95	97	66-127	3	15	
Benzene	**0.0491**	**0.0511**	0.0500	0.0500	98	102	76-122	4	15	
Trichloroethene	**0.0459**	**0.0461**	0.0500	0.0500	92	92	78-120	0	15	
Toluene	**0.0474**	**0.0477**	0.0500	0.0500	95	95	83-120	1	15	
Chlorobenzene	**0.0472**	**0.0473**	0.0500	0.0500	94	95	81-120	0	15	
Surrogate:										
Dibromofluoromethane					*101*	*100*	*73-134*			
Toluene-d8					*100*	*96*	*81-124*			
4-Bromofluorobenzene					*99*	*96*	*80-131*			

Date of Report: October 9, 2017
Samples Submitted: September 27, 2017
Laboratory Reference: 1709-336
Project: 46676

% MOISTURE

Date Analyzed: 9-28-17

Client ID	Lab ID	% Moisture
V-101 (6)	09-336-01	17
V-101 (17.5)	09-336-02	9
V-102 (5)	09-336-03	8
V-103 (12)	09-336-04	6
V-103 (18)	09-336-05	8
V-104 (3.5)	09-336-06	5
V-105 (6)	09-336-07	15
V-106 (13.5)	09-336-08	10
V-106 (22.5)	09-336-09	18
V-107 (8)	09-336-10	7
V-108 (13)	09-336-11	10
V-109 (14)	09-336-12	10
V-110 (16)	09-336-13	10

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

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

Z -

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

Chain of Custody

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

Company: VERTEX
Project Number: 466726
Project Name: Redmond Sears
Project Manager: Ross Stainsby
Sampled by: MaddieSteenis

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 09-336

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	V-101(6)	9/26/17	1014	S	1				X														X
2	V-101(17.5)	9/26/17	1031	S	1				X														↓
3	V-102(5)	9/26/17	1127	S	5		X	X	X	X													
4	V-103(12)	9/26/17	1313	S	5		X	X	X	X													
5	V-103(18)	9/26/17	1323	S	5		X	X	X	X													
6	V-104(3.5)	9/26/17	1406	S	5		X	X	X	X													
7	V-105(6)	9/26/17	1451	S	4					X													
8	V-106(13.5)	9/27/17	927	S	5		X	X	X	X													
9	V-106(22.5)	9/27/17	935	S	5		X	X	X	X													
10	V-107(8)	9/27/17	1037	S	2		X		X														↓

	Signature	Company	Date	Time
Relinquished	Madelyn Steenis	VERTEX	9/27/17	357
Received		CDE	9/27/17	1559
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☒ Level III ☐ Level IV ☐

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

Chain of Custody

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

Company: VERTEX
Project Number: 466776
Project Name: Redmond Sears
Project Manager: ROSS Stainsby
Sampled by: Maddie Steenis

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 09-336

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
11	V-108 (13)	9/27/17	1313	S	2		X		X																		X
12	V-109 (14)	9/27/17	1327	S	2		X		X																		
13	V-110 (16)	9/27/17	1503	S	5		~~X~~	X	X	X																	

	Signature	Company	Date	Time
Relinquished	Madelyn Steenis	VERTEX	9/27/17	357
Received		OSE	9/27/17	1557
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☒ Level III ☐ Level IV ☐

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

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

October 11, 2017

Ross Stainsby
The Vertex Companies, Inc.
810 Third Avenue, Ste. 307
Seattle, WA 98104

Re: Analytical Data for Project 46676
Laboratory Reference No. 1710-012

Dear Ross:

Enclosed are the analytical results and associated quality control data for samples submitted on October 2, 2017.

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

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

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: October 11, 2017
Samples Submitted: October 2, 2017
Laboratory Reference: 1710-012
Project: 46676

Case Narrative

Samples were collected on October 2, 2017 and received by the laboratory on October 2, 2017. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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

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

Date of Report: October 11, 2017
Samples Submitted: October 2, 2017
Laboratory Reference: 1710-012
Project: 46676

NWTPH-Gx

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-106 (MW)**					
Laboratory ID:	10-012-01					
Gasoline	**680**	100	NWTPH-Gx	10-4-17	10-4-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*92*	*61-118*				
Client ID:	**V-105 (MW)**					
Laboratory ID:	10-012-02					
Gasoline	**ND**	100	NWTPH-Gx	10-3-17	10-3-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*91*	*61-118*				

Date of Report: October 11, 2017
Samples Submitted: October 2, 2017
Laboratory Reference: 1710-012
Project: 46676

NWTPH-Gx
QUALITY CONTROL

Matrix: Water
Units: ug/L (ppb)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1003W1					
Gasoline	**ND**	100	NWTPH-Gx	10-3-17	10-3-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*105*	*61-118*				
Laboratory ID:	MB1004W1					
Gasoline	**ND**	100	NWTPH-Gx	10-4-17	10-4-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Fluorobenzene	*90*	*61-118*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-012-02										
	ORIG	DUP									
Gasoline	**ND**	**ND**	NA	NA		NA		NA	NA	30	
Surrogate:											
Fluorobenzene						*91*	*87*	*61-118*			
Laboratory ID:	09-386-05										
	ORIG	DUP									
Gasoline	**527**	**491**	NA	NA		NA		NA	7	30	
Surrogate:											
Fluorobenzene						*103*	*96*	*61-118*			

Date of Report: October 11, 2017
Samples Submitted: October 2, 2017
Laboratory Reference: 1710-012
Project: 46676

NWTPH-Dx

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-106 (MW)**					
Laboratory ID:	10-012-01					
Diesel Range Organics	**1.5**	0.29	NWTPH-Dx	10-9-17	10-10-17	M
Lube Oil Range Organics	**0.54**	0.46	NWTPH-Dx	10-9-17	10-10-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*84*	*50-150*				
Client ID:	**V-105 (MW)**					
Laboratory ID:	10-012-02					
Diesel Range Organics	**0.86**	0.28	NWTPH-Dx	10-9-17	10-10-17	
Lube Oil Range Organics	**1.0**	0.44	NWTPH-Dx	10-9-17	10-10-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*97*	*50-150*				

Date of Report: October 11, 2017
Samples Submitted: October 2, 2017
Laboratory Reference: 1710-012
Project: 46676

NWTPH-Dx
QUALITY CONTROL

Matrix: Water
Units: mg/L (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB1009W1					
Diesel Range Organics	**ND**	0.25	NWTPH-Dx	10-9-17	10-9-17	
Lube Oil Range Organics	**ND**	0.40	NWTPH-Dx	10-9-17	10-9-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
o-Terphenyl	*93*	*50-150*				

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	10-059-01										
	ORIG	DUP									
Diesel Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Lube Oil Range	**ND**	**ND**	NA	NA		NA		NA	NA	NA	
Surrogate:											
o-Terphenyl						*92*	*97*	*50-150*			

Date of Report: October 11, 2017
Samples Submitted: October 2, 2017
Laboratory Reference: 1710-012
Project: 46676

VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-106 (MW)**					
Laboratory ID:	10-012-01					
Dichlorodifluoromethane	ND	29	EPA 8260C	10-5-17	10-5-17	
Chloromethane	ND	100	EPA 8260C	10-5-17	10-5-17	
Vinyl Chloride	ND	20	EPA 8260C	10-5-17	10-5-17	
Bromomethane	ND	20	EPA 8260C	10-5-17	10-5-17	
Chloroethane	ND	100	EPA 8260C	10-5-17	10-5-17	
Trichlorofluoromethane	ND	20	EPA 8260C	10-5-17	10-5-17	
1,1-Dichloroethene	ND	20	EPA 8260C	10-5-17	10-5-17	
Acetone	ND	500	EPA 8260C	10-5-17	10-5-17	
Iodomethane	ND	160	EPA 8260C	10-5-17	10-5-17	
Carbon Disulfide	ND	20	EPA 8260C	10-5-17	10-5-17	
Methylene Chloride	ND	100	EPA 8260C	10-5-17	10-5-17	
(trans) 1,2-Dichloroethene	ND	20	EPA 8260C	10-5-17	10-5-17	
Methyl t-Butyl Ether	ND	20	EPA 8260C	10-5-17	10-5-17	
1,1-Dichloroethane	ND	20	EPA 8260C	10-5-17	10-5-17	
Vinyl Acetate	ND	100	EPA 8260C	10-5-17	10-5-17	
2,2-Dichloropropane	ND	20	EPA 8260C	10-5-17	10-5-17	
(cis) 1,2-Dichloroethene	ND	20	EPA 8260C	10-5-17	10-5-17	
2-Butanone	ND	500	EPA 8260C	10-5-17	10-5-17	
Bromochloromethane	ND	20	EPA 8260C	10-5-17	10-5-17	
Chloroform	ND	20	EPA 8260C	10-5-17	10-5-17	
1,1,1-Trichloroethane	ND	20	EPA 8260C	10-5-17	10-5-17	
Carbon Tetrachloride	ND	20	EPA 8260C	10-5-17	10-5-17	
1,1-Dichloropropene	ND	20	EPA 8260C	10-5-17	10-5-17	
Benzene	25	20	EPA 8260C	10-5-17	10-5-17	
1,2-Dichloroethane	ND	20	EPA 8260C	10-5-17	10-5-17	
Trichloroethene	ND	20	EPA 8260C	10-5-17	10-5-17	
1,2-Dichloropropane	ND	20	EPA 8260C	10-5-17	10-5-17	
Dibromomethane	ND	20	EPA 8260C	10-5-17	10-5-17	
Bromodichloromethane	ND	20	EPA 8260C	10-5-17	10-5-17	
2-Chloroethyl Vinyl Ether	ND	390	EPA 8260C	10-5-17	10-5-17	
(cis) 1,3-Dichloropropene	ND	20	EPA 8260C	10-5-17	10-5-17	
Methyl Isobutyl Ketone	ND	250	EPA 8260C	10-5-17	10-5-17	
Toluene	2500	100	EPA 8260C	10-5-17	10-5-17	
(trans) 1,3-Dichloropropene	ND	20	EPA 8260C	10-5-17	10-5-17	

Date of Report: October 11, 2017
Samples Submitted: October 2, 2017
Laboratory Reference: 1710-012
Project: 46676

VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-106 (MW)**					
Laboratory ID:	10-012-01					
1,1,2-Trichloroethane	ND	20	EPA 8260C	10-5-17	10-5-17	
Tetrachloroethene	ND	20	EPA 8260C	10-5-17	10-5-17	
1,3-Dichloropropane	ND	20	EPA 8260C	10-5-17	10-5-17	
2-Hexanone	ND	200	EPA 8260C	10-5-17	10-5-17	
Dibromochloromethane	ND	20	EPA 8260C	10-5-17	10-5-17	
1,2-Dibromoethane	ND	20	EPA 8260C	10-5-17	10-5-17	
Chlorobenzene	ND	20	EPA 8260C	10-5-17	10-5-17	
1,1,1,2-Tetrachloroethane	ND	20	EPA 8260C	10-5-17	10-5-17	
Ethylbenzene	700	20	EPA 8260C	10-5-17	10-5-17	
m,p-Xylene	2900	40	EPA 8260C	10-5-17	10-5-17	
o-Xylene	1400	20	EPA 8260C	10-5-17	10-5-17	
Styrene	ND	20	EPA 8260C	10-5-17	10-5-17	
Bromoform	ND	100	EPA 8260C	10-5-17	10-5-17	
Isopropylbenzene	ND	20	EPA 8260C	10-5-17	10-5-17	
Bromobenzene	ND	20	EPA 8260C	10-5-17	10-5-17	
1,1,2,2-Tetrachloroethane	ND	20	EPA 8260C	10-5-17	10-5-17	
1,2,3-Trichloropropane	ND	20	EPA 8260C	10-5-17	10-5-17	
n-Propylbenzene	29	20	EPA 8260C	10-5-17	10-5-17	
2-Chlorotoluene	ND	20	EPA 8260C	10-5-17	10-5-17	
4-Chlorotoluene	ND	20	EPA 8260C	10-5-17	10-5-17	
1,3,5-Trimethylbenzene	75	20	EPA 8260C	10-5-17	10-5-17	
tert-Butylbenzene	ND	20	EPA 8260C	10-5-17	10-5-17	
1,2,4-Trimethylbenzene	340	20	EPA 8260C	10-5-17	10-5-17	
sec-Butylbenzene	ND	20	EPA 8260C	10-5-17	10-5-17	
1,3-Dichlorobenzene	ND	20	EPA 8260C	10-5-17	10-5-17	
p-Isopropyltoluene	ND	20	EPA 8260C	10-5-17	10-5-17	
1,4-Dichlorobenzene	ND	20	EPA 8260C	10-5-17	10-5-17	
1,2-Dichlorobenzene	ND	20	EPA 8260C	10-5-17	10-5-17	
n-Butylbenzene	ND	20	EPA 8260C	10-5-17	10-5-17	
1,2-Dibromo-3-chloropropane	ND	100	EPA 8260C	10-5-17	10-5-17	
1,2,4-Trichlorobenzene	ND	20	EPA 8260C	10-5-17	10-5-17	
Hexachlorobutadiene	ND	20	EPA 8260C	10-5-17	10-5-17	
Naphthalene	ND	130	EPA 8260C	10-5-17	10-5-17	
1,2,3-Trichlorobenzene	ND	20	EPA 8260C	10-5-17	10-5-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*95*	*77-129*				
Toluene-d8	*94*	*80-127*				
4-Bromofluorobenzene	*102*	*78-125*				

Date of Report: October 11, 2017
Samples Submitted: October 2, 2017
Laboratory Reference: 1710-012
Project: 46676

VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-105 (MW)**					
Laboratory ID:	10-012-02					
Dichlorodifluoromethane	ND	0.26	EPA 8260C	10-4-17	10-4-17	
Chloromethane	ND	1.0	EPA 8260C	10-4-17	10-4-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Bromomethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Chloroethane	ND	1.0	EPA 8260C	10-4-17	10-4-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Acetone	23	5.0	EPA 8260C	10-4-17	10-4-17	
Iodomethane	ND	1.3	EPA 8260C	10-4-17	10-4-17	
Carbon Disulfide	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-4-17	10-4-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Vinyl Acetate	ND	1.0	EPA 8260C	10-4-17	10-4-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
2-Butanone	6.5	5.0	EPA 8260C	10-4-17	10-4-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Chloroform	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Benzene	0.24	0.20	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Trichloroethene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Dibromomethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
2-Chloroethyl Vinyl Ether	ND	3.1	EPA 8260C	10-4-17	10-4-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Methyl Isobutyl Ketone	ND	2.5	EPA 8260C	10-4-17	10-4-17	
Toluene	ND	1.0	EPA 8260C	10-4-17	10-4-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-4-17	10-4-17	

Date of Report: October 11, 2017
Samples Submitted: October 2, 2017
Laboratory Reference: 1710-012
Project: 46676

VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**V-105 (MW)**					
Laboratory ID:	10-012-02					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
2-Hexanone	ND	2.0	EPA 8260C	10-4-17	10-4-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Ethylbenzene	0.24	0.20	EPA 8260C	10-4-17	10-4-17	
m,p-Xylene	0.92	0.40	EPA 8260C	10-4-17	10-4-17	
o-Xylene	0.64	0.20	EPA 8260C	10-4-17	10-4-17	
Styrene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Bromoform	ND	1.0	EPA 8260C	10-4-17	10-4-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Bromobenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Naphthalene	ND	1.3	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*96*	*77-129*				
Toluene-d8	*96*	*80-127*				
4-Bromofluorobenzene	*101*	*78-125*				

Date of Report: October 11, 2017
Samples Submitted: October 2, 2017
Laboratory Reference: 1710-012
Project: 46676

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1004W1					
Dichlorodifluoromethane	ND	0.26	EPA 8260C	10-4-17	10-4-17	
Chloromethane	ND	1.0	EPA 8260C	10-4-17	10-4-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Bromomethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Chloroethane	ND	1.0	EPA 8260C	10-4-17	10-4-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Acetone	ND	5.0	EPA 8260C	10-4-17	10-4-17	
Iodomethane	ND	1.3	EPA 8260C	10-4-17	10-4-17	
Carbon Disulfide	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-4-17	10-4-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Vinyl Acetate	ND	1.0	EPA 8260C	10-4-17	10-4-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
2-Butanone	ND	5.0	EPA 8260C	10-4-17	10-4-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Chloroform	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Benzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Trichloroethene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Dibromomethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
2-Chloroethyl Vinyl Ether	ND	3.1	EPA 8260C	10-4-17	10-4-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Methyl Isobutyl Ketone	ND	2.5	EPA 8260C	10-4-17	10-4-17	
Toluene	ND	1.0	EPA 8260C	10-4-17	10-4-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-4-17	10-4-17	

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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:	MB1004W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
2-Hexanone	ND	2.0	EPA 8260C	10-4-17	10-4-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-4-17	10-4-17	
o-Xylene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Styrene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Bromoform	ND	1.0	EPA 8260C	10-4-17	10-4-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Bromobenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-4-17	10-4-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-4-17	10-4-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Naphthalene	ND	1.3	EPA 8260C	10-4-17	10-4-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-4-17	10-4-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*94*	*77-129*				
Toluene-d8	*95*	*80-127*				
4-Bromofluorobenzene	*96*	*78-125*				

Date of Report: October 11, 2017
Samples Submitted: October 2, 2017
Laboratory Reference: 1710-012
Project: 46676

VOLATILES by EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1005W1					
Dichlorodifluoromethane	ND	0.29	EPA 8260C	10-5-17	10-5-17	
Chloromethane	ND	1.0	EPA 8260C	10-5-17	10-5-17	
Vinyl Chloride	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Bromomethane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Chloroethane	ND	1.0	EPA 8260C	10-5-17	10-5-17	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Acetone	ND	5.0	EPA 8260C	10-5-17	10-5-17	
Iodomethane	ND	1.6	EPA 8260C	10-5-17	10-5-17	
Carbon Disulfide	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Methylene Chloride	ND	1.0	EPA 8260C	10-5-17	10-5-17	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Methyl t-Butyl Ether	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Vinyl Acetate	ND	1.0	EPA 8260C	10-5-17	10-5-17	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
2-Butanone	ND	5.0	EPA 8260C	10-5-17	10-5-17	
Bromochloromethane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Chloroform	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Benzene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Trichloroethene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Dibromomethane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Bromodichloromethane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
2-Chloroethyl Vinyl Ether	ND	3.9	EPA 8260C	10-5-17	10-5-17	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Methyl Isobutyl Ketone	ND	2.5	EPA 8260C	10-5-17	10-5-17	
Toluene	ND	1.0	EPA 8260C	10-5-17	10-5-17	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-5-17	10-5-17	

Date of Report: October 11, 2017
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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:	MB1005W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Tetrachloroethene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
2-Hexanone	ND	2.0	EPA 8260C	10-5-17	10-5-17	
Dibromochloromethane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Chlorobenzene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Ethylbenzene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
m,p-Xylene	ND	0.40	EPA 8260C	10-5-17	10-5-17	
o-Xylene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Styrene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Bromoform	ND	1.0	EPA 8260C	10-5-17	10-5-17	
Isopropylbenzene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Bromobenzene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-5-17	10-5-17	
n-Propylbenzene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,3,5-Trimethylbenzene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
tert-Butylbenzene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,2,4-Trimethylbenzene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
sec-Butylbenzene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
p-Isopropyltoluene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
n-Butylbenzene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-5-17	10-5-17	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Naphthalene	ND	1.3	EPA 8260C	10-5-17	10-5-17	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-5-17	10-5-17	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*91*	*77-129*				
Toluene-d8	*95*	*80-127*				
4-Bromofluorobenzene	*96*	*78-125*				

Date of Report: October 11, 2017
Samples Submitted: October 2, 2017
Laboratory Reference: 1710-012
Project: 46676

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1004W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**10.8**	**10.0**	10.0	10.0	108	100	63-127	8	17	
Benzene	**10.7**	**10.2**	10.0	10.0	107	102	76-121	5	12	
Trichloroethene	**9.63**	**9.05**	10.0	10.0	96	91	64-120	6	15	
Toluene	**10.4**	**9.83**	10.0	10.0	104	98	82-120	6	13	
Chlorobenzene	**10.4**	**9.89**	10.0	10.0	104	99	80-120	5	14	
Surrogate:										
Dibromofluoromethane					*90*	*94*	*77-129*			
Toluene-d8					*96*	*95*	*80-127*			
4-Bromofluorobenzene					*97*	*97*	*78-125*			

Date of Report: October 11, 2017
Samples Submitted: October 2, 2017
Laboratory Reference: 1710-012
Project: 46676

VOLATILES by EPA 8260C
SB/SBD QUALITY CONTROL

Matrix: Water
Units: ug/L

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1005W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**10.5**	**10.4**	10.0	10.0	105	104	63-127	1	17	
Benzene	**10.7**	**10.7**	10.0	10.0	107	107	76-121	0	12	
Trichloroethene	**9.72**	**9.37**	10.0	10.0	97	94	64-120	4	15	
Toluene	**10.4**	**10.2**	10.0	10.0	104	102	82-120	2	13	
Chlorobenzene	**10.5**	**10.1**	10.0	10.0	105	101	80-120	4	14	
Surrogate:										
Dibromofluoromethane					*91*	*95*	*77-129*			
Toluene-d8					*95*	*96*	*80-127*			
4-Bromofluorobenzene					*99*	*96*	*78-125*			

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

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

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

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

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

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

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

I - Compound recovery is outside of the control limits.

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

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

L - The RPD is outside of the control limits.

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

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

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

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

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

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

Q - Surrogate recovery is outside of the control limits.

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

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

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

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

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

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

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

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

Z -

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

Chain of Custody

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

Company: VERTEX
Project Number: 426676
Project Name: Redmond Sears
Project Manager: Ross Stainsby
Sampled by: Maddie Steenis

Turnaround Request (in working days)

(Check One)

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

Laboratory Number: 10-012

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A					% Moisture
1	V-106(MW)	10/2/17	1315	GW	7			X	X	X																	
2	V-105(MW)	10/2/17	1416	GW	7			X	X	X																	

	Signature	Company	Date	Time
Relinquished	Maddie Steenis	VERTEX	10/2/17	1522
Received		COC 10 TA	10/7/17	1577
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☒ Level III ☐ Level IV ☐

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