GALLOWAY ENVIRONMENTAL, INC
3102-220th PL SE (425) 688-8852
Sammamish, WA 98075
E-mail Gary@GallowayEnvironmental.com

WDOE NWRO, HWTRP
Attn. Byung Maeng
3190 160th Avenue SE
Bellevue, Washington 98008

E-mailed to: bmae461@ecy.wa.gov

SUBJECT: ***"CONTAINED-IN" DETERMINATION REQUEST FOR THE LAKE STEVENS CLEANERS SITE, MARKETPLACE SHOPPING CENTER, 303 91ST AVENUE, SUITE C, LAKE STEVENS, WASHINGTON 98258***

Dear Mr. Maeng:

I am an environmental consultant working on the cleanup of solvent impacted soils at a previous dry cleaning facility in Lake Stevens, Washington. The facility has recently been closed and the dry cleaning units have been removed.

The owner is completing the cleanup under a voluntary independent remedial action and will enter Ecology's VCP in anticipation of receiving a No Further Action determination from Ecology following the cleanup of the Site. We are currently working on a Remedial Work Plan to remove the impacted soils that are present in a landscaped area behind the facility at depths ranging to approximately seven feet belowground.

I have been provided a copy of RCRA's "Contained-In" Policy Criteria. I have attached a summary of the site cleanup, including a table of the laboratory results for the impacted soils that we would like to dispose of at Waste Management's Columbia Ridge Non-hazardous Waste facility. The laboratory data sheets are available at your request.

SUMMARY

The impacted F002-Listed soils contain concentrations that do not warrant management as dangerous wastes - the contaminant concentrations of impacted soils do not exceed the currently-allowable MTCA Method B CULs. All of the following conditions will be implemented regarding the impacted soils.

1. Approximately 311 cy of PCE contaminated soil shall be sent directly to and disposed of at the Waste Management Columbia Ridge facility in Arlington, Oregon *(See Figure 4 for impacted removal location - 30'x40'x7'/27 = 311 cy).* We expect to remove the impacted soil during the second half of March 2015.
2. These soils will be loaded directly into truck, or railcar and the truck or railcar shall be plastic-lined, and during transport, all loads shall be covered to prevent wind dispersion.
3. These contaminated soils shall be placed directly in the landfill cell and are not to be used as daily, intermediate or final cover at the facility.
4. GEI will forward copies of all bills of lading/weight (scale) tickets and signed solid waste landfill receipt records for these contaminated soils within 10 days of our receipt to the Ecology Northwest Regional Office, Attn: Byung Maeng.

Background information and environmental investigations are summarized below.

FACILITY NAME & ADDRESS

Lake Stevens Cleaners
303 91st Avenue NE, Suite C-302
Everett, Washington 98258

OWNER'S NAME & CONTACT INFORMATION

Lake Stevens Marketplace, LLC
3502 Tieton Drive
Yakima, Washington 98902
Phone contact: Keith Therrien, Esq. (509) 453-8907

CONSULTANTS NAME & CONTACT INFORMATION

GALLOWAY ENVIRONMENTAL, INC.
3102 220th PL SE
Sammamish, Washington 98075-9540
Gary Galloway, LHG, REA

Phone 425 688-8852, E-mail Gary@GallowayEnvironmental.com

WDOE VCP SITE MANAGER

Not yet assigned

FACILITY BACKGROUND

The Site is located approximately 4½ miles northeast of Everett's Central Business District and approximately ½ mile southwest of Lake Stevens in Snohomish County, Washington *(See Figure 1 — Site Location Map).*

Snohomish County Assessors records list the property as Parcel #00804000000107. The Site is situated in the NE¼ of Section 13, Township 29 North, Range 5 East. The Parcel consists of approximately 0.71 acres and is improved with a one story, built up, 3,840 square foot structure that was built in 1993. The Lake Stevens Cleaners facility shares the building with the Boeing Employees Credit Union *(See Figure 2 — Site Plan & Vicinity Map).* Reportedly, the dry cleaning operation has been at the subject property since the construction of the shopping center.

The site is relatively simple in that the primary contaminant of concern is a dry cleaning-related compounds — Tetrachloroethylene ("PCE"). This compound was confirmed to be present in soil and groundwater at the subject property. PCE concentrations were above the currently allowable Washington State Model Toxics Control Act (MTCA Cleanup Regulation 173-340) Cleanup Levels in soil and groundwater *(See Table 1 and attached reports).*

Based on these data, the owner asked GEI to perform an independent voluntary cleanup of the site targeted to comply with the following regulations: 1) Washington State Model Toxics Control Act *(MTCA, WAC 173-340),* 2) Washington State Dangerous Waste Regulations *(WAC 173-303),* and the 3) Environmental Protection Agency Resource Conservation and Recovery Act *(RCRA).*

The owner would like to enter into the Washington Department of Ecology's (Ecology's) Voluntary Cleanup Program (VCP) with the ultimate goal of receiving a "No Further Action" letter from the Agency following the cleanup of the Site.

PREVIOUS ENVIRONMENTAL INVESTIGATIONS

Several environmental studies have been completed at the Site. The soil and groundwater sampling locations are shown in Figure 4 and the laboratory results are summarized in Table 1, below.

These investigations are summarized as follows.

Preliminary Subsurface Investigation for Lake Stevens Cleaners - ADR Environmental Group

In October 2013, ADR subcontracted GEI to assist them in conducting a preliminary subsurface investigation within and adjacent to the cleaners facility. The investigation was targeted to assess whether potential dry cleaning compounds had impacted the underlying soil or vapors beneath the facility's concrete or in the landscaped area east of the facility *(See Appendix A — Previous Environmental Reports)*. Based on the findings of the preliminary investigation, ADR concluded that these dry cleaning compounds were present in the soil and vapor at concentrations above the currently allowable Washington State action levels and recommended that additional site characterization of the Site was necessary to determine whether these contaminants pose a potential threat to human health or the environment.

Focused Phase II Environmental Site Assessment at the Lake Stevens Cleaners Site — GEI

This investigation included soil and groundwater sampling outside the perimeter of the structure. GEI collected soil samples from four direct push penetrations from the surface to the bottoms of the holes for field screening and laboratory analysis. The samples were field screened for obvious signs of contamination (i.e. photoionization detector (PID), discolored soil, obvious odors, etc.), which are sometimes characteristic of impacts to soil. The soil penetrations and sampling are summarized as follows:

- Two 20 foot deep penetrations were drilled west and north of the cleaners facility. Minor amounts of water was observed to seeping into the penetration at about seven feet below the bgs. We collected one soil and one groundwater sample from each penetration for analysis for the Chemicals of Concern (COCs - Halogenated Volatile Organic Compounds (HVOCs)).
- One ten foot deep penetration (P-3) was drilled in the asphalt parking area east of the cleaners facility. Water was observed at approximately the top of the dense glacial till surface — about 4 ½ feel bgs. We submitted one soil and one water sample from approximately 4 ½ feet bgs for laboratory analysis for the COCs.
- One 12 foot deep penetration (P-4) was drilled in the asphalt area south of the adjoining Rite Aid Pharmacy store, situated on the southern side of the cleaners facility. No water was encountered in the penetration due to the very dense nature of the glacial till encountered in the boring. We submitted one soil sample from approximately seven feet bgs for laboratory analysis for the COCs.

RI/FS at the Lake Stevens Cleaners Site — GEI (This report is currently being completed)

GEI has recently conducted soil and groundwater sampling at the Site. This investigation is targeted to further determine the nature and extent of the contamination. Four brings were drilled and converted to groundwater monitoring wells at the locations shown in Figure 4.

Conclusions

- Environmental impacts to the Site's soil has been confirmed beneath the concrete slab inside the facility (near the existing dry cleaning unit) and in the landscaped area behind the facility
- Impacted groundwater has been identified in the GeoProbe penetrations and groundwater monitoring wells situated east and north of the cleaners facility at depths ranging from approximately four to seven feet below the ground surface (bgs) — this depth represents the approximate depth of the very dense till surface
- Based on these data, there appears to be two contaminant source areas: 1) The COCs appear to have leaked from the dry cleaning units to the soils beneath the concrete slab, and 2) Contaminants appear to have been spilled onto the soil exposed in the landscaped area east of the facility

If you have any questions or comments regarding this letter, please feel free to contact me at the addresses listed above.
Respectfully Submitted,
GALLOWAY ENVIRONMENTAL, INC.

Gary L. Galloway, LHG, REA, CHMM
President

TABLE — SAMPLE RESULTS SUMMARY

Sample No. & depths (feet)	Media	Laboratory Analysis (mg/kg) See Figure 4 for sample locations				
		PCE	DCE	Chloroform	TCE	Remarks
B-1 @ 4'	Soil	**0.087**	ND	ND	ND	ADR Prelim. Report
B-2 @ 4'	"	**0.14**	"	"	"	"
B-3 @ 4'	"	ND	0.011	"	"	"
B-4 @ 4'	"	**0.065**	ND	"	"	"
P1@18'	"	ND	"	"	"	GEI Phase II Report
P2@20'	"	0.025	"	"	"	"
P3@4'	"	ND	"	"	"	"
P4@7'	"	"	"	"	"	"
MW1@8'	"	"	"	"	"	GEI RI/FS data
MW2@8'	"	0.0082	"	"	"	"
MW3@8'	"	ND	0.0035	"	"	"
MW4@7'	"	"	ND	"	"	"
MTCA Method A Limits	Soil	0.05	16000	800/32.3	0.03	Method B CULs for PCE in soil = 480 mg/kg

PCE = Tetrachloroethene, DCE = Dichlorodifluoromethane, TCE = Trichloroethene
NA = Not Applicable
ND = Not Detected @ Practical Quantification Limits (see Appendix C - data sheets)
- - - = Not analyzed
Shaded cells = > MTCA Method A Unrestricted Land Use Limits

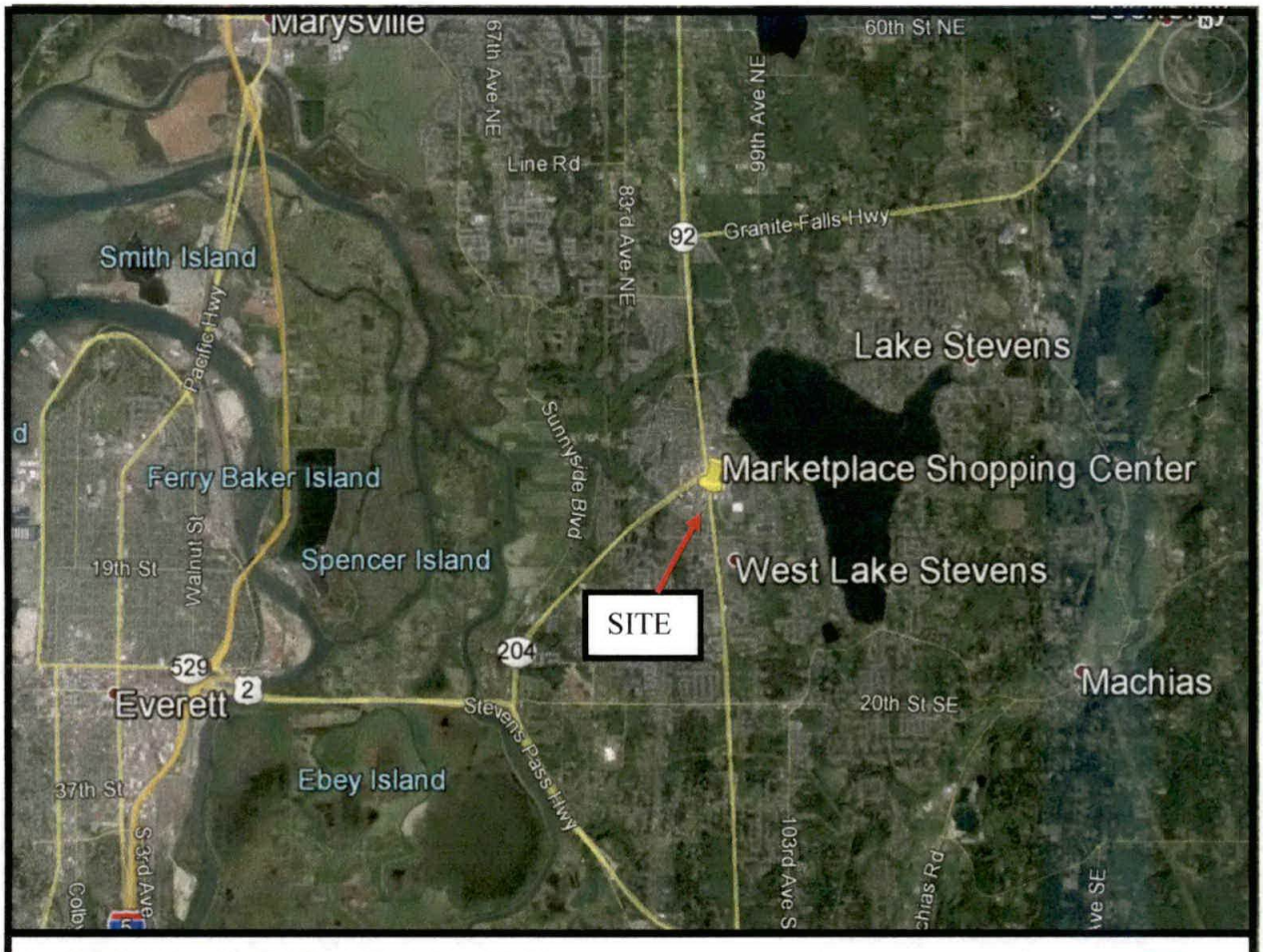

FIGURE 1 — SITE LOCATION MAP
Lake Stevens Cleaners Focused Phase II ESA
Source: Google Maps 2013, GEI Project #35002

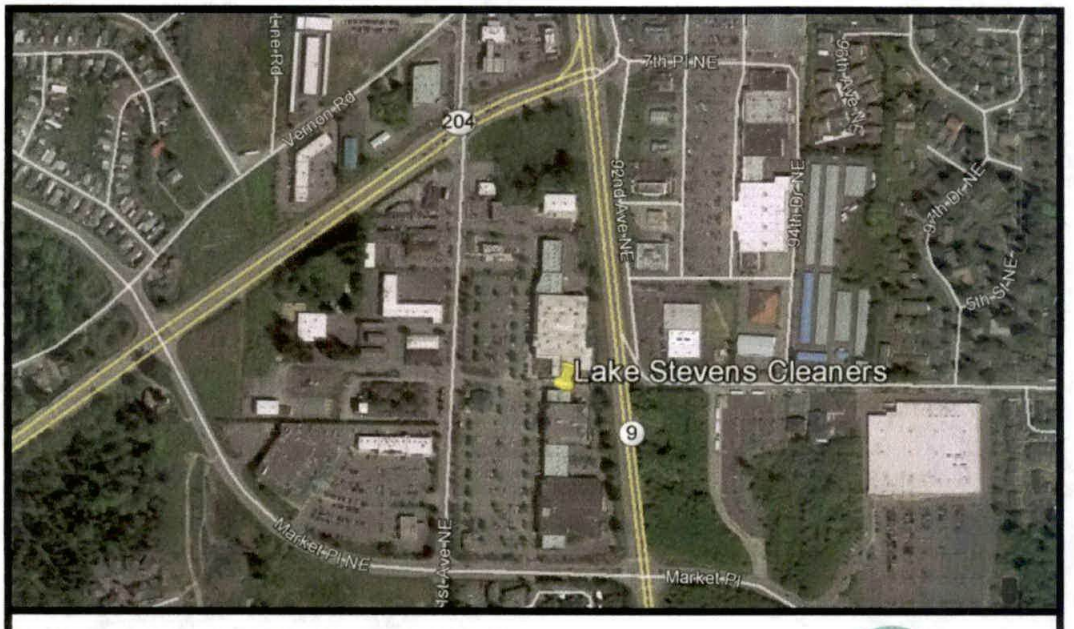

FIGURE 2 — SITE VICINTY MAP
Lake Stevens Cleaners Focused Phase II ESA
Source: Google Maps 2013, GEI Project #35002

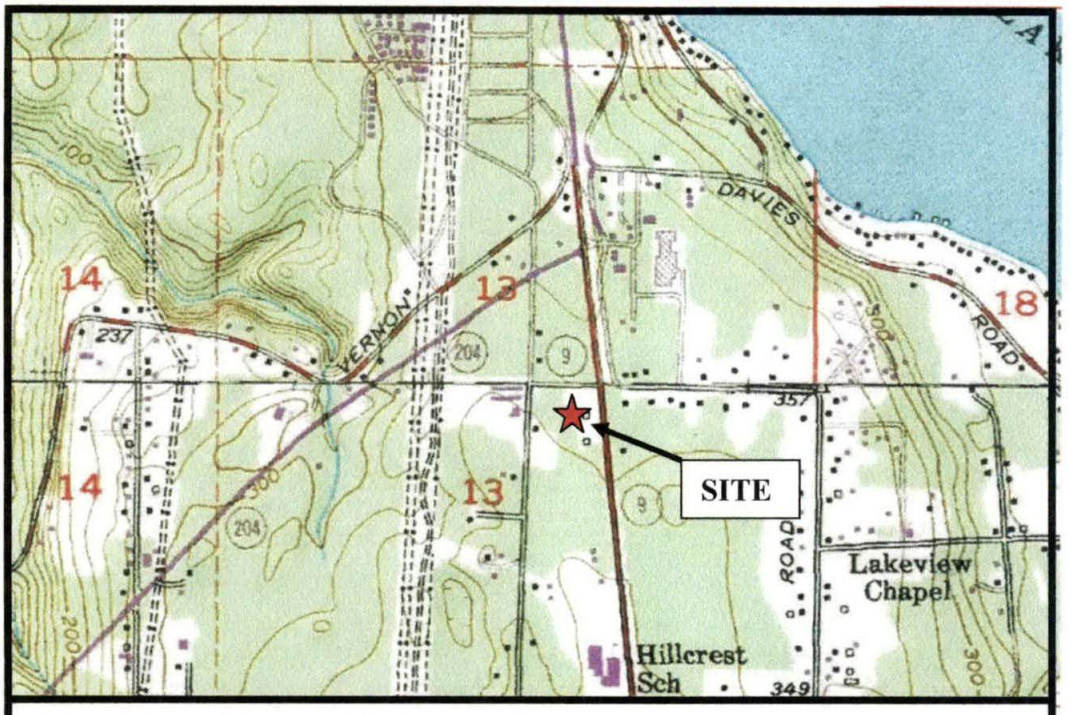

FIGURE 3 — SITE TOPOGRAPHIC MAP
Lake Stevens Cleaners Focused Phase II ESA
Source: MyTopo.com, GEI Project #35002

FIGURE 4 — SITE PLAN AND SAMPLE LOCATIONS
Lake Stevens Cleaners Focused Phase II ESA & RI/FS (currently being completed)
Source: Google earth 2012, GEI Project #35002

GALLOWAY ENVIRONMENTAL INC.

RI/FS Lab data - Soil borings/ Groundwater Wells

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

February 4, 2015

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Sammamish, WA 98075

Re: Analytical Data for Project 35004
Laboratory Reference No. 1502-004

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on February 2, 2015.

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: February 4, 2015
Samples Submitted: February 2, 2015
Laboratory Reference: 1502-004
Project: 35004

Case Narrative

Samples were collected on January 31, 2015 and received by the laboratory on February 2, 2015. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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: February 4, 2015
Samples Submitted: February 2, 2015
Laboratory Reference: 1502-004
Project: 35004

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	02-004-01					
Dichlorodifluoromethane	ND	0.26	EPA 8260C	2-3-15	2-3-15	
Chloromethane	ND	1.0	EPA 8260C	2-3-15	2-3-15	
Vinyl Chloride	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Bromomethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Chloroethane	ND	1.0	EPA 8260C	2-3-15	2-3-15	
Trichlorofluoromethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1-Dichloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Iodomethane	ND	1.0	EPA 8260C	2-3-15	2-3-15	
Methylene Chloride	ND	1.0	EPA 8260C	2-3-15	2-3-15	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1-Dichloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
2,2-Dichloropropane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Bromochloromethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Chloroform	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Carbon Tetrachloride	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1-Dichloropropene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dichloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Trichloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dichloropropane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Dibromomethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Bromodichloromethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	2-3-15	2-3-15	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-3-15	2-3-15	

Date of Report: February 4, 2015
Samples Submitted: February 2, 2015
Laboratory Reference: 1502-004
Project: 35004

HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-1**					
Laboratory ID:	02-004-01					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Tetrachloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,3-Dichloropropane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Dibromochloromethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dibromoethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Chlorobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Bromoform	ND	1.0	EPA 8260C	2-3-15	2-3-15	
Bromobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
2-Chlorotoluene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
4-Chlorotoluene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	2-3-15	2-3-15	
1,2,4-Trichlorobenzene	ND	0.31	EPA 8260C	2-3-15	2-3-15	
Hexachlorobutadiene	ND	0.31	EPA 8260C	2-3-15	2-3-15	
1,2,3-Trichlorobenzene	ND	0.33	EPA 8260C	2-3-15	2-3-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*104*	*79-122*				
Toluene-d8	*100*	*80-120*				
4-Bromofluorobenzene	*96*	*80-120*				

Date of Report: February 4, 2015
Samples Submitted: February 2, 2015
Laboratory Reference: 1502-004
Project: 35004

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	02-004-02					
Dichlorodifluoromethane	ND	2.6	EPA 8260C	2-3-15	2-3-15	
Chloromethane	ND	10	EPA 8260C	2-3-15	2-3-15	
Vinyl Chloride	ND	2.0	EPA 8260C	2-3-15	2-3-15	
Bromomethane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
Chloroethane	ND	10	EPA 8260C	2-3-15	2-3-15	
Trichlorofluoromethane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
1,1-Dichloroethene	ND	2.0	EPA 8260C	2-3-15	2-3-15	
Iodomethane	ND	10	EPA 8260C	2-3-15	2-3-15	
Methylene Chloride	ND	10	EPA 8260C	2-3-15	2-3-15	
(trans) 1,2-Dichloroethene	ND	2.0	EPA 8260C	2-3-15	2-3-15	
1,1-Dichloroethane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
2,2-Dichloropropane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
(cis) 1,2-Dichloroethene	ND	2.0	EPA 8260C	2-3-15	2-3-15	
Bromochloromethane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
Chloroform	ND	2.0	EPA 8260C	2-3-15	2-3-15	
1,1,1-Trichloroethane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
Carbon Tetrachloride	ND	2.0	EPA 8260C	2-3-15	2-3-15	
1,1-Dichloropropene	ND	2.0	EPA 8260C	2-3-15	2-3-15	
1,2-Dichloroethane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
Trichloroethene	ND	2.0	EPA 8260C	2-3-15	2-3-15	
1,2-Dichloropropane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
Dibromomethane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
Bromodichloromethane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
2-Chloroethyl Vinyl Ether	ND	20	EPA 8260C	2-3-15	2-3-15	
(cis) 1,3-Dichloropropene	ND	2.0	EPA 8260C	2-3-15	2-3-15	
(trans) 1,3-Dichloropropene	ND	2.0	EPA 8260C	2-3-15	2-3-15	

Date of Report: February 4, 2015
Samples Submitted: February 2, 2015
Laboratory Reference: 1502-004
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HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-2**					
Laboratory ID:	02-004-02					
1,1,2-Trichloroethane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
Tetrachloroethene	450	2.0	EPA 8260C	2-3-15	2-3-15	
1,3-Dichloropropane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
Dibromochloromethane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
1,2-Dibromoethane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
Chlorobenzene	ND	2.0	EPA 8260C	2-3-15	2-3-15	
1,1,1,2-Tetrachloroethane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
Bromoform	ND	10	EPA 8260C	2-3-15	2-3-15	
Bromobenzene	ND	2.0	EPA 8260C	2-3-15	2-3-15	
1,1,2,2-Tetrachloroethane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
1,2,3-Trichloropropane	ND	2.0	EPA 8260C	2-3-15	2-3-15	
2-Chlorotoluene	ND	2.0	EPA 8260C	2-3-15	2-3-15	
4-Chlorotoluene	ND	2.0	EPA 8260C	2-3-15	2-3-15	
1,3-Dichlorobenzene	ND	2.0	EPA 8260C	2-3-15	2-3-15	
1,4-Dichlorobenzene	ND	2.0	EPA 8260C	2-3-15	2-3-15	
1,2-Dichlorobenzene	ND	2.0	EPA 8260C	2-3-15	2-3-15	
1,2-Dibromo-3-chloropropane	ND	10	EPA 8260C	2-3-15	2-3-15	
1,2,4-Trichlorobenzene	ND	3.1	EPA 8260C	2-3-15	2-3-15	
Hexachlorobutadiene	ND	3.1	EPA 8260C	2-3-15	2-3-15	
1,2,3-Trichlorobenzene	ND	3.3	EPA 8260C	2-3-15	2-3-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*97*	*79-122*				
Toluene-d8	*92*	*80-120*				
4-Bromofluorobenzene	*90*	*80-120*				

Date of Report: February 4, 2015
Samples Submitted: February 2, 2015
Laboratory Reference: 1502-004
Project: 35004

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3**					
Laboratory ID:	02-004-03					
Dichlorodifluoromethane	2.8	0.26	EPA 8260C	2-3-15	2-3-15	Y
Chloromethane	ND	1.0	EPA 8260C	2-3-15	2-3-15	
Vinyl Chloride	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Bromomethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Chloroethane	ND	1.0	EPA 8260C	2-3-15	2-3-15	
Trichlorofluoromethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1-Dichloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Iodomethane	ND	1.0	EPA 8260C	2-3-15	2-3-15	
Methylene Chloride	ND	1.0	EPA 8260C	2-3-15	2-3-15	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1-Dichloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
2,2-Dichloropropane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Bromochloromethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Chloroform	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Carbon Tetrachloride	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1-Dichloropropene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dichloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Trichloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dichloropropane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Dibromomethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Bromodichloromethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	2-3-15	2-3-15	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-3-15	2-3-15	

Date of Report: February 4, 2015
Samples Submitted: February 2, 2015
Laboratory Reference: 1502-004
Project: 35004

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3**					
Laboratory ID:	02-004-03					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Tetrachloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,3-Dichloropropane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Dibromochloromethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dibromoethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Chlorobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Bromoform	ND	1.0	EPA 8260C	2-3-15	2-3-15	
Bromobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
2-Chlorotoluene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
4-Chlorotoluene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	2-3-15	2-3-15	
1,2,4-Trichlorobenzene	ND	0.31	EPA 8260C	2-3-15	2-3-15	
Hexachlorobutadiene	ND	0.31	EPA 8260C	2-3-15	2-3-15	
1,2,3-Trichlorobenzene	ND	0.33	EPA 8260C	2-3-15	2-3-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*104*	*79-122*				
Toluene-d8	*99*	*80-120*				
4-Bromofluorobenzene	*95*	*80-120*				

Date of Report: February 4, 2015
Samples Submitted: February 2, 2015
Laboratory Reference: 1502-004
Project: 35004

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	02-004-04					
Dichlorodifluoromethane	0.94	0.26	EPA 8260C	2-3-15	2-3-15	Y
Chloromethane	ND	1.0	EPA 8260C	2-3-15	2-3-15	
Vinyl Chloride	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Bromomethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Chloroethane	ND	1.0	EPA 8260C	2-3-15	2-3-15	
Trichlorofluoromethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1-Dichloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Iodomethane	ND	1.0	EPA 8260C	2-3-15	2-3-15	
Methylene Chloride	ND	1.0	EPA 8260C	2-3-15	2-3-15	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1-Dichloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
2,2-Dichloropropane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Bromochloromethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Chloroform	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Carbon Tetrachloride	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1-Dichloropropene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dichloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Trichloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dichloropropane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Dibromomethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Bromodichloromethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	2-3-15	2-3-15	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-3-15	2-3-15	

Date of Report: February 4, 2015
Samples Submitted: February 2, 2015
Laboratory Reference: 1502-004
Project: 35004

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4**					
Laboratory ID:	02-004-04					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Tetrachloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,3-Dichloropropane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Dibromochloromethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dibromoethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Chlorobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Bromoform	ND	1.0	EPA 8260C	2-3-15	2-3-15	
Bromobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
2-Chlorotoluene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
4-Chlorotoluene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	2-3-15	2-3-15	
1,2,4-Trichlorobenzene	ND	0.31	EPA 8260C	2-3-15	2-3-15	
Hexachlorobutadiene	ND	0.31	EPA 8260C	2-3-15	2-3-15	
1,2,3-Trichlorobenzene	ND	0.33	EPA 8260C	2-3-15	2-3-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*79-122*				
Toluene-d8	*99*	*80-120*				
4-Bromofluorobenzene	*97*	*80-120*				

Date of Report: February 4, 2015
Samples Submitted: February 2, 2015
Laboratory Reference: 1502-004
Project: 35004

HALOGENATED VOLATILES 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:	MB0203W1					
Dichlorodifluoromethane	ND	0.26	EPA 8260C	2-3-15	2-3-15	
Chloromethane	ND	1.0	EPA 8260C	2-3-15	2-3-15	
Vinyl Chloride	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Bromomethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Chloroethane	ND	1.0	EPA 8260C	2-3-15	2-3-15	
Trichlorofluoromethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1-Dichloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Iodomethane	ND	1.0	EPA 8260C	2-3-15	2-3-15	
Methylene Chloride	ND	1.0	EPA 8260C	2-3-15	2-3-15	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1-Dichloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
2,2-Dichloropropane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Bromochloromethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Chloroform	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Carbon Tetrachloride	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1-Dichloropropene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dichloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Trichloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dichloropropane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Dibromomethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Bromodichloromethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	2-3-15	2-3-15	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	2-3-15	2-3-15	

Date of Report: February 4, 2015
Samples Submitted: February 2, 2015
Laboratory Reference: 1502-004
Project: 35004

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0203W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Tetrachloroethene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,3-Dichloropropane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Dibromochloromethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dibromoethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Chlorobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
Bromoform	ND	1.0	EPA 8260C	2-3-15	2-3-15	
Bromobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	2-3-15	2-3-15	
2-Chlorotoluene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
4-Chlorotoluene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	2-3-15	2-3-15	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	2-3-15	2-3-15	
1,2,4-Trichlorobenzene	ND	0.31	EPA 8260C	2-3-15	2-3-15	
Hexachlorobutadiene	ND	0.31	EPA 8260C	2-3-15	2-3-15	
1,2,3-Trichlorobenzene	ND	0.33	EPA 8260C	2-3-15	2-3-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*102*	*79-122*				
Toluene-d8	*98*	*80-120*				
4-Bromofluorobenzene	*95*	*80-120*				

Date of Report: February 4, 2015
Samples Submitted: February 2, 2015
Laboratory Reference: 1502-004
Project: 35004

HALOGENATED VOLATILES 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:	SB0203W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**9.65**	**9.30**	10.0	10.0	97	93	64-138	4	16	
Benzene	**10.0**	**9.84**	10.0	10.0	100	98	76-125	1	14	
Trichloroethene	**9.36**	**8.61**	10.0	10.0	94	86	70-125	8	16	
Toluene	**9.54**	**9.22**	10.0	10.0	95	92	75-125	3	15	
Chlorobenzene	**9.43**	**9.15**	10.0	10.0	94	92	80-140	3	15	
Surrogate:										
Dibromofluoromethane					*96*	*100*	*79-122*			
Toluene-d8					*96*	*97*	*80-120*			
4-Bromofluorobenzene					*92*	*96*	*80-120*			

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: GALLOWAY ENV.
Project Number: 35004
Project Name: LK Stevens GW
Project Manager: Gary Galloway
Sampled by: Gary Galloway

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: 02-004

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	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	MW-1	1/31/15	13:00	W	2						X											
2	2		13:20	W							Y											
3	3		14:00	W							Y											
4	4		14:30	W							Y											

	Signature	Company	Date	Time
Relinquished		GALLOWAY	2/2/15	
Received			2/2/15	1126
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐

Electronic Data Deliverables (EDDs) ☐ _____

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

January 30, 2015

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Sammamish, WA 98075

Re: Analytical Data for Project Lake Stevens Cleaners
Laboratory Reference No. 1501-133

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on January 22, 2015.

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: January 30, 2015
Samples Submitted: January 22, 2015
Laboratory Reference: 1501-133
Project: Lake Stevens Cleaners

Case Narrative

Samples were collected on January 21, 2015 and received by the laboratory on January 22, 2015. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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.

Halogenated Volatiles EPA 8260C Analysis

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

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

Date of Report: January 30, 2015
Samples Submitted: January 22, 2015
Laboratory Reference: 1501-133
Project: Lake Stevens Cleaners

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW1 @ 8'**					
Laboratory ID:	01-133-01					
Dichlorodifluoromethane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Chloromethane	ND	0.0045	EPA 8260C	1-23-15	1-23-15	
Vinyl Chloride	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Bromomethane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Chloroethane	ND	0.0045	EPA 8260C	1-23-15	1-23-15	
Trichlorofluoromethane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
1,1-Dichloroethene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Iodomethane	ND	0.0045	EPA 8260C	1-23-15	1-23-15	
Methylene Chloride	ND	0.0045	EPA 8260C	1-23-15	1-23-15	
(trans) 1,2-Dichloroethene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
1,1-Dichloroethane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
2,2-Dichloropropane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
(cis) 1,2-Dichloroethene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Bromochloromethane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Chloroform	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
1,1,1-Trichloroethane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Carbon Tetrachloride	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
1,1-Dichloropropene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
1,2-Dichloroethane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Trichloroethene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
1,2-Dichloropropane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Dibromomethane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Bromodichloromethane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
2-Chloroethyl Vinyl Ether	ND	0.0045	EPA 8260C	1-23-15	1-23-15	
(cis) 1,3-Dichloropropene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
(trans) 1,3-Dichloropropene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	

Date of Report: January 30, 2015
Samples Submitted: January 22, 2015
Laboratory Reference: 1501-133
Project: Lake Stevens Cleaners

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW1 @ 8'**					
Laboratory ID:	01-133-01					
1,1,2-Trichloroethane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Tetrachloroethene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
1,3-Dichloropropane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Dibromochloromethane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
1,2-Dibromoethane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Chlorobenzene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
1,1,1,2-Tetrachloroethane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Bromoform	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Bromobenzene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
1,1,2,2-Tetrachloroethane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
1,2,3-Trichloropropane	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
2-Chlorotoluene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
4-Chlorotoluene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
1,3-Dichlorobenzene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
1,4-Dichlorobenzene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
1,2-Dichlorobenzene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
1,2-Dibromo-3-chloropropane	ND	0.0045	EPA 8260C	1-23-15	1-23-15	
1,2,4-Trichlorobenzene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Hexachlorobutadiene	ND	0.0045	EPA 8260C	1-23-15	1-23-15	
1,2,3-Trichlorobenzene	ND	0.00089	EPA 8260C	1-23-15	1-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*114*	*76-131*				
Toluene-d8	*111*	*82-129*				
4-Bromofluorobenzene	*103*	*79-126*				

Date of Report: January 30, 2015
Samples Submitted: January 22, 2015
Laboratory Reference: 1501-133
Project: Lake Stevens Cleaners

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW2 @ 8'**					
Laboratory ID:	01-133-02					
Dichlorodifluoromethane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Chloromethane	ND	0.0044	EPA 8260C	1-23-15	1-23-15	
Vinyl Chloride	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Bromomethane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Chloroethane	ND	0.0044	EPA 8260C	1-23-15	1-23-15	
Trichlorofluoromethane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
1,1-Dichloroethene	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Iodomethane	ND	0.0044	EPA 8260C	1-23-15	1-23-15	
Methylene Chloride	ND	0.0044	EPA 8260C	1-23-15	1-23-15	
(trans) 1,2-Dichloroethene	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
1,1-Dichloroethane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
2,2-Dichloropropane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
(cis) 1,2-Dichloroethene	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Bromochloromethane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Chloroform	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
1,1,1-Trichloroethane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Carbon Tetrachloride	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
1,1-Dichloropropene	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
1,2-Dichloroethane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Trichloroethene	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
1,2-Dichloropropane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Dibromomethane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Bromodichloromethane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
2-Chloroethyl Vinyl Ether	ND	0.0044	EPA 8260C	1-23-15	1-23-15	
(cis) 1,3-Dichloropropene	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
(trans) 1,3-Dichloropropene	ND	0.00088	EPA 8260C	1-23-15	1-23-15	

Date of Report: January 30, 2015
Samples Submitted: January 22, 2015
Laboratory Reference: 1501-133
Project: Lake Stevens Cleaners

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW2 @ 8'**					
Laboratory ID:	01-133-02					
1,1,2-Trichloroethane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Tetrachloroethene	0.0082	0.00088	EPA 8260C	1-23-15	1-23-15	
1,3-Dichloropropane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Dibromochloromethane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
1,2-Dibromoethane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Chlorobenzene	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
1,1,1,2-Tetrachloroethane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Bromoform	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Bromobenzene	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
1,1,2,2-Tetrachloroethane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
1,2,3-Trichloropropane	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
2-Chlorotoluene	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
4-Chlorotoluene	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
1,3-Dichlorobenzene	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
1,4-Dichlorobenzene	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
1,2-Dichlorobenzene	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
1,2-Dibromo-3-chloropropane	ND	0.0044	EPA 8260C	1-23-15	1-23-15	
1,2,4-Trichlorobenzene	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Hexachlorobutadiene	ND	0.0044	EPA 8260C	1-23-15	1-23-15	
1,2,3-Trichlorobenzene	ND	0.00088	EPA 8260C	1-23-15	1-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*116*	*76-131*				
Toluene-d8	*115*	*82-129*				
4-Bromofluorobenzene	*106*	*79-126*				

Date of Report: January 30, 2015
Samples Submitted: January 22, 2015
Laboratory Reference: 1501-133
Project: Lake Stevens Cleaners

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0123S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Chloromethane	ND	0.0050	EPA 8260C	1-23-15	1-23-15	
Vinyl Chloride	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Bromomethane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Chloroethane	ND	0.0050	EPA 8260C	1-23-15	1-23-15	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Iodomethane	ND	0.0050	EPA 8260C	1-23-15	1-23-15	
Methylene Chloride	ND	0.0050	EPA 8260C	1-23-15	1-23-15	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Bromochloromethane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Chloroform	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Trichloroethene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Dibromomethane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Bromodichloromethane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	1-23-15	1-23-15	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	

Date of Report: January 30, 2015
Samples Submitted: January 22, 2015
Laboratory Reference: 1501-133
Project: Lake Stevens Cleaners

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0123S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Tetrachloroethene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Dibromochloromethane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Chlorobenzene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Bromoform	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Bromobenzene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
2-Chlorotoluene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
4-Chlorotoluene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	1-23-15	1-23-15	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	1-23-15	1-23-15	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	1-23-15	1-23-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*116*	*76-131*				
Toluene-d8	*112*	*82-129*				
4-Bromofluorobenzene	*106*	*79-126*				

Date of Report: January 30, 2015
Samples Submitted: January 22, 2015
Laboratory Reference: 1501-133
Project: Lake Stevens Cleaners

HALOGENATED 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:	SB0123S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0426**	**0.0477**	0.0500	0.0500	85	95	66-129	11	15	
Benzene	**0.0483**	**0.0511**	0.0500	0.0500	97	102	71-123	6	15	
Trichloroethene	**0.0473**	**0.0493**	0.0500	0.0500	95	99	75-115	4	15	
Toluene	**0.0478**	**0.0506**	0.0500	0.0500	96	101	75-120	6	15	
Chlorobenzene	**0.0439**	**0.0461**	0.0500	0.0500	88	92	75-121	5	15	
Surrogate:										
Dibromofluoromethane					*103*	*106*	*76-131*			
Toluene-d8					*101*	*103*	*82-129*			
4-Bromofluorobenzene					*96*	*98*	*79-126*			

Date of Report: January 30, 2015
Samples Submitted: January 22, 2015
Laboratory Reference: 1501-133
Project: Lake Stevens Cleaners

% MOISTURE

Date Analyzed: 1-23-15

Client ID	Lab ID	% Moisture
MW1 @ 8'	01-133-01	11
MW2 @ 8'	01-133-02	9

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

Laboratory Number: 01-133

Company: GALLOWAY ENV.
Project Number: Lake Stevens Cleaners
Project Name: "
Project Manager: Gary Galloway
Sampled by: Gary Galloway

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

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	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	MW1 @8'	1-21-15	10:00	S	4						X																X
2	MW2 @8'	↓	11:00	S	4						X																X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		Galloway Env	1-22-15	15:15	
Received			1/22/15	1515	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

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

January 28, 2015

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Sammamish, WA 98075

Re: Analytical Data for Project 35004
Laboratory Reference No. 1501-184

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on January 27, 2015.

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: January 28, 2015
Samples Submitted: January 27, 2015
Laboratory Reference: 1501-184
Project: 35004

Case Narrative

Samples were collected on January 27, 2015 and received by the laboratory on January 27, 2015. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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.

Halogenated Volatiles EPA 8260C Analysis

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

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

Date of Report: January 28, 2015
Samples Submitted: January 27, 2015
Laboratory Reference: 1501-184
Project: 35004

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3 @ 8'**					
Laboratory ID:	01-184-01					
Dichlorodifluoromethane	0.0035	0.00078	EPA 8260C	1-27-15	1-27-15	
Chloromethane	ND	0.0039	EPA 8260C	1-27-15	1-27-15	
Vinyl Chloride	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
Bromomethane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
Chloroethane	ND	0.0039	EPA 8260C	1-27-15	1-27-15	
Trichlorofluoromethane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
1,1-Dichloroethene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
Iodomethane	ND	0.0039	EPA 8260C	1-27-15	1-27-15	
Methylene Chloride	ND	0.0039	EPA 8260C	1-27-15	1-27-15	
(trans) 1,2-Dichloroethene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
1,1-Dichloroethane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
2,2-Dichloropropane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
(cis) 1,2-Dichloroethene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
Bromochloromethane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
Chloroform	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
1,1,1-Trichloroethane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
Carbon Tetrachloride	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
1,1-Dichloropropene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
1,2-Dichloroethane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
Trichloroethene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
1,2-Dichloropropane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
Dibromomethane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
Bromodichloromethane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
2-Chloroethyl Vinyl Ether	ND	0.0039	EPA 8260C	1-27-15	1-27-15	
(cis) 1,3-Dichloropropene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
(trans) 1,3-Dichloropropene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	

Date of Report: January 28, 2015
Samples Submitted: January 27, 2015
Laboratory Reference: 1501-184
Project: 35004

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-3 @ 8'**					
Laboratory ID:	01-184-01					
1,1,2-Trichloroethane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
Tetrachloroethene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
1,3-Dichloropropane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
Dibromochloromethane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
1,2-Dibromoethane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
Chlorobenzene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
1,1,1,2-Tetrachloroethane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
Bromoform	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
Bromobenzene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
1,1,2,2-Tetrachloroethane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
1,2,3-Trichloropropane	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
2-Chlorotoluene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
4-Chlorotoluene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
1,3-Dichlorobenzene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
1,4-Dichlorobenzene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
1,2-Dichlorobenzene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
1,2-Dibromo-3-chloropropane	ND	0.0039	EPA 8260C	1-27-15	1-27-15	
1,2,4-Trichlorobenzene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
Hexachlorobutadiene	ND	0.0039	EPA 8260C	1-27-15	1-27-15	
1,2,3-Trichlorobenzene	ND	0.00078	EPA 8260C	1-27-15	1-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*112*	*76-131*				
Toluene-d8	*109*	*82-129*				
4-Bromofluorobenzene	*101*	*79-126*				

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HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4 @ 8'**					
Laboratory ID:	01-184-02					
Dichlorodifluoromethane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Chloromethane	ND	0.0041	EPA 8260C	1-27-15	1-27-15	
Vinyl Chloride	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Bromomethane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Chloroethane	ND	0.0041	EPA 8260C	1-27-15	1-27-15	
Trichlorofluoromethane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
1,1-Dichloroethene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Iodomethane	ND	0.0041	EPA 8260C	1-27-15	1-27-15	
Methylene Chloride	ND	0.0041	EPA 8260C	1-27-15	1-27-15	
(trans) 1,2-Dichloroethene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
1,1-Dichloroethane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
2,2-Dichloropropane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
(cis) 1,2-Dichloroethene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Bromochloromethane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Chloroform	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
1,1,1-Trichloroethane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Carbon Tetrachloride	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
1,1-Dichloropropene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
1,2-Dichloroethane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Trichloroethene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
1,2-Dichloropropane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Dibromomethane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Bromodichloromethane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
2-Chloroethyl Vinyl Ether	ND	0.0041	EPA 8260C	1-27-15	1-27-15	
(cis) 1,3-Dichloropropene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
(trans) 1,3-Dichloropropene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	

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HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**MW-4 @ 8'**					
Laboratory ID:	01-184-02					
1,1,2-Trichloroethane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Tetrachloroethene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
1,3-Dichloropropane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Dibromochloromethane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
1,2-Dibromoethane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Chlorobenzene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
1,1,1,2-Tetrachloroethane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Bromoform	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Bromobenzene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
1,1,2,2-Tetrachloroethane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
1,2,3-Trichloropropane	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
2-Chlorotoluene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
4-Chlorotoluene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
1,3-Dichlorobenzene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
1,4-Dichlorobenzene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
1,2-Dichlorobenzene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
1,2-Dibromo-3-chloropropane	ND	0.0041	EPA 8260C	1-27-15	1-27-15	
1,2,4-Trichlorobenzene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Hexachlorobutadiene	ND	0.0041	EPA 8260C	1-27-15	1-27-15	
1,2,3-Trichlorobenzene	ND	0.00082	EPA 8260C	1-27-15	1-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*114*	*76-131*				
Toluene-d8	*111*	*82-129*				
4-Bromofluorobenzene	*101*	*79-126*				

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HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0127S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Chloromethane	ND	0.0050	EPA 8260C	1-27-15	1-27-15	
Vinyl Chloride	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Bromomethane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Chloroethane	ND	0.0050	EPA 8260C	1-27-15	1-27-15	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Iodomethane	ND	0.0050	EPA 8260C	1-27-15	1-27-15	
Methylene Chloride	ND	0.0050	EPA 8260C	1-27-15	1-27-15	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Bromochloromethane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Chloroform	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Trichloroethene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Dibromomethane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Bromodichloromethane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	1-27-15	1-27-15	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	

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HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0127S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Tetrachloroethene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Dibromochloromethane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Chlorobenzene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Bromoform	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Bromobenzene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
2-Chlorotoluene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
4-Chlorotoluene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	1-27-15	1-27-15	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	1-27-15	1-27-15	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	1-27-15	1-27-15	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*116*	*76-131*				
Toluene-d8	*112*	*82-129*				
4-Bromofluorobenzene	*106*	*79-126*				

Date of Report: January 28, 2015
Samples Submitted: January 27, 2015
Laboratory Reference: 1501-184
Project: 35004

HALOGENATED 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:	SB0127S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0540**	**0.0507**	0.0500	0.0500	108	101	66-129	6	15	
Benzene	**0.0532**	**0.0516**	0.0500	0.0500	106	103	71-123	3	15	
Trichloroethene	**0.0495**	**0.0490**	0.0500	0.0500	99	98	75-115	1	15	
Toluene	**0.0509**	**0.0494**	0.0500	0.0500	102	99	75-120	3	15	
Chlorobenzene	**0.0457**	**0.0436**	0.0500	0.0500	91	87	75-121	5	15	
Surrogate:										
Dibromofluoromethane					*105*	*103*	*76-131*			
Toluene-d8					*103*	*101*	*82-129*			
4-Bromofluorobenzene					*95*	*93*	*79-126*			

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Samples Submitted: January 27, 2015
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Project: 35004

% MOISTURE

Date Analyzed: 1-27-15

Client ID	Lab ID	% Moisture
MW-3 @ 8'	01-184-01	11
MW-4 @ 8'	01-184-02	16

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: Galloway ENV.
Project Number: 35004
Project Name: Lake Stevens Cleaners
Project Manager: Gary Galloway
Sampled by: Gary

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: 01-184

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	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	MW-3 @ 8'	1-27-15	0915	S							X											5
2	MW-4 @ 8'	"	1100	S							X											7

	Signature	Company	Date	Time
Relinquished		Galloway ENV.	1-27-15	12:45
Received			1/27/15	1245
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions

Reviewed/Date

Reviewed/Date

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☐ Level IV ☐

Electronic Data Deliverables (EDDs) ☐ _____

Previous Reports

FOCUSED PHASE II ENVIRONMENTAL SITE ASSESSMENT

At the

LAKE STEVENS CLEANERS

Prepared for

Lake Stevens Marketplace, LLC
c/o Keith Therrien
Powers & Therrien, P.S.
3502 Tieton Drive
Yakima, Washington 98902

Prepared by

Gary Galloway, LHG
President

GALLOWAY ENVIRONMENTAL, INC.
3102 – 220th Place SE
Sammamish, Washington 98075-9540
(425) 688-8852

November 11, 2014

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A	*PREVIOUS ENVIRONMENTAL INVESTIGATIONS*
B	*GEOPROBE SOIL LOGS*
C	*LABORATORY ANALYTICAL RESULTS*
D	*SAMPLING AND ANALYTICAL PROCEDURES*

EXECUTIVE SUMMARY

This report presents the results of Galloway Environmental, Inc.'s (GEI's) Focused Phase II – Environmental Site Assessment (ESA) at the Lake Stevens Cleaners property, 303 91st Avenue NE, Suite C-302, Everett, Washington.

The Site is located in a commercial area in Lake Stevens, Washington approximately 4 ½ miles northeast of Everett's central business district and approximately ½ mile southwest of Lake Stevens in Snohomish County, Washington.

The Parcel consists of approximately 0.71 acres and is improved with a one story, built up, 3,840 square foot structure that was built in 1993. Lake Stevens Cleaners shares the building with the Boeing Employees Credit Union.

ESA Purpose and Objectives

The goal of this study is to investigate for potential dry cleaning solvents-related impacts to the Site's soil and/or groundwater at this dry cleaning facility.

Work Scope Performed by GEI during this Phase II ESA

This investigation included soil and groundwater sampling outside the perimeter of the structure. GEI collected soil samples from four direct push penetrations from the surface to the bottoms of the holes for field screening and laboratory analysis. The samples were field screened for obvious signs of contamination (i.e. photoionization detector (PID), discolored soil, obvious odors, etc.), which are sometimes characteristic of impacts to soil. The locations of the penetrations are shown in the Figure 3-1 — Site Plan & GeoProbe Locations. The soil penetrations and sampling are summarized as follows:

1. Two 20 foot deep penetrations (P-1 & P-2) were drilled west and north of the cleaners facility. Minor amounts of water was observed to seeping into the penetration at about seven feet below the bgs. We collected one soil and one groundwater sample from each penetration for analysis for the Chemicals of Concern (COCs - Halogenated Volatile Organic Compounds (HVOCs)).
2. One ten foot deep penetration (P-3) was drilled in the asphalt parking area east of the cleaners facility. Water was observed at approximately the top of the dense glacial till surface — about 4 ½ feel bgs. We submitted one soil and one water sample from approximately 4 ½ feet bgs for laboratory analysis for the COCs.
3. One 12 foot deep penetration (P-4) was drilled in the asphalt area south of the adjoining Rite Aid Pharmacy store, situated on the southern side of the cleaners facility. No water was encountered in the penetration — Cascade could not penetrated deeper in the ground at this location due to the very dense nature of the glacial till encountered in the boring. We submitted one soil sample from approximately seven feet bgs for laboratory analysis for the COCs.

Based on information gained in ADR's previous investigation *(See Appendix A —Previous Environmental Investigations)* and the results of this study, the following conclusions and recommendations can be made.

Conclusions

- Environmental impacts to the Site's soil has been confirmed beneath the concrete slab inside the facility (near the existing dry cleaning unit) and in the landscaped area behind the facility
- Impacted groundwater has been identified in the GeoProbe penetrations situated east and north of the cleaners facility at depths ranging from approximately four to seven feet below the ground surface (bgs) — this depth represents the approximate depth of the very dense till surface
- Based on these data, there appears to be two contaminant source areas: 1) The COCs appear to have leaked from the dry cleaning units to the soils beneath the concrete slab, and 2) Contaminants appear to have been spilled onto the soil exposed in the landscaped area east of the facility

Recommendations

The following recommendations are based on the cleaners facility staying in operation during the Site's remediation and that the treatment option consists of insitu treatment methods.

- GEI recommends groundwater wells be installed to track contaminant concentrations in the groundwater migrating to and from the facility
- We recommend injecting chemical oxidation compounds and solvent-degrading microbes beneath the concrete slab and in the vegetation area east of the facility

1.0 *INTRODUCTION*

Galloway Environmental, Inc. (GEI) has completed this Focused Phase II Environmental Site Assessment (ESA) on behalf of Lake Stevens Marketplace, LLC - c/o Powers & Therrien, P.S., 3502 Tieton Drive, Yakima, Washington 98902.

1.0.1 *Site Location and Property Description*

Snohomish county Assessors records list the property's address as 303 91st Avenue NE, Suite C-302, Everett, Washington. The Site is located approximately 4 ½ miles northeast of Everett's central business district and approximately ½ mile southwest of Lake Stevens in Snohomish County, Washington *(See Figure 1-1 Site Location Map).*

Snohomish county Assessors records list the property as Parcel #00804000000107 and is situated in the NE¼ of Section 13, Township 29 North, Range 5 East. The Parcel consists of approximately 0.71 acres and is improved with a one story, built up, 3,840 square foot structure that was built in 1993. The Lake Stevens Cleaners facility shares the building with the Boeing Employees Credit Union *(See Figure 1-2 — Site Plan & Vicinity Map).*

1.0.2 *Previous Environmental Studies*

GEI was provided a Preliminary Subsurface Investigation Report for Lake Stevens Cleaners by the ADR Environmental Group, dated December 6, 2013 *(See Appendix A – Previous Environmental Reports).*

ADR's report referenced two Phase 1 ESAs that had been completed by Krazan & Associates, one in April 2000 and the second report issued in August 2003 – GEI was not provided a copy of these reports. Krazan inspected the cleaners facility and conducted interviews of the facility's operators regarding the use of dry cleaning solvents. Krazan did not observe any cracks on the floor of the facility where these contaminants may have been spilled and subsequently leaked to the underlying soils. Based on these observations, Krazan concluded that no further assessment was necessary at the facility.

In October 2013, ADR subcontracted GEI to assist them in conducting a preliminary subsurface investigation within and adjacent to the cleaners facility. The investigation was targeted to assess whether potential dry cleaning compounds had impacted the underlying soil or vapors beneath the facility's concrete or in the landscaped area east of the facility *(See Appendix A – Previous Environmental Reports).* Based on the findings of the preliminary investigation, ADR concluded that these dry cleaning compounds were present in the soil and vapor at concentrations above the currently allowable Washington State action levels and recommended that additional site characterization of the Site was necessary to determine whether these contaminants pose a potential threat to human health or the environment.

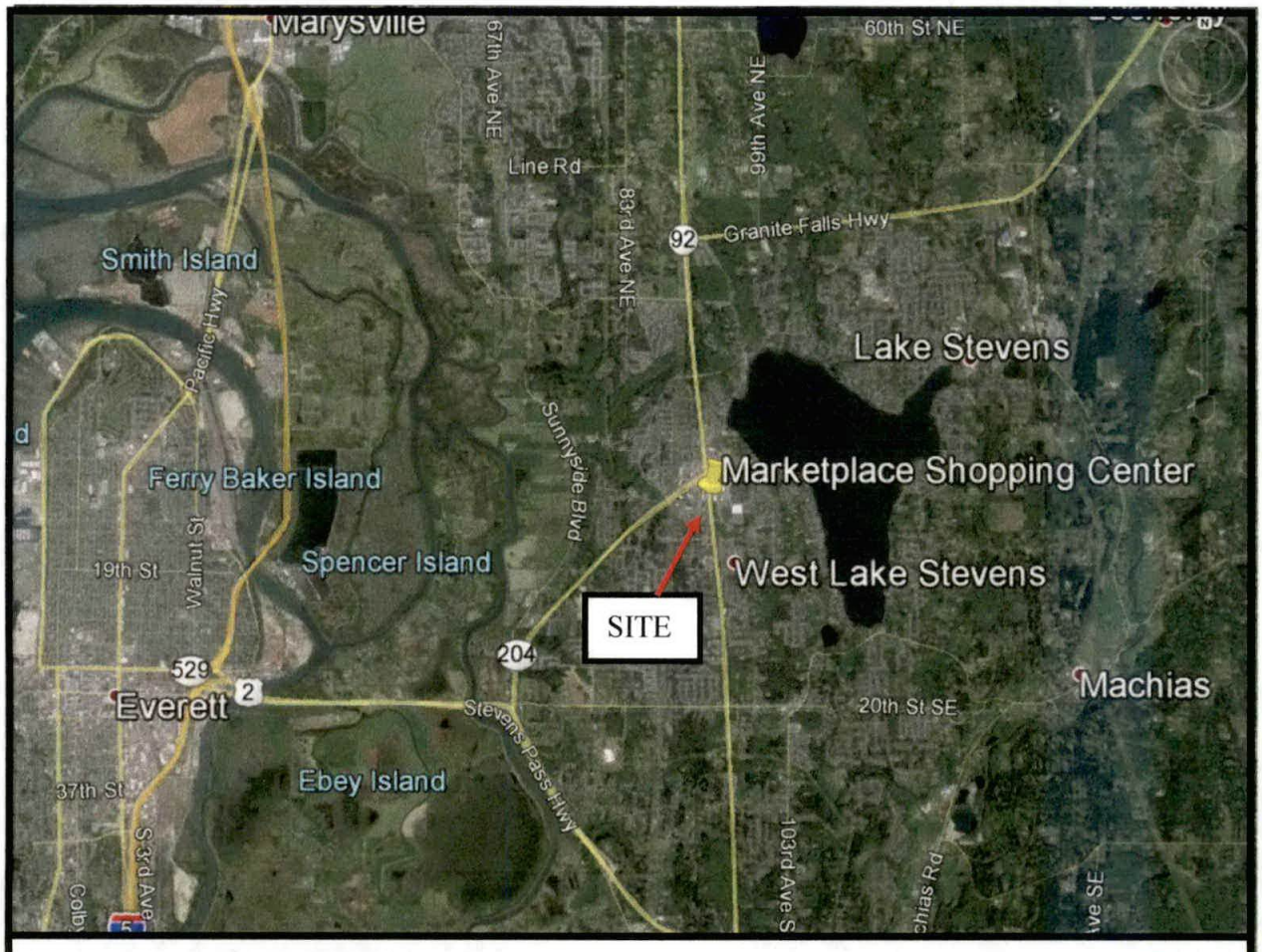

FIGURE 1-1 — SITE LOCATION MAP
Lake Stevens Cleaners Focused Phase II ESA
Source: Google Maps 2013, GEI Project #34040

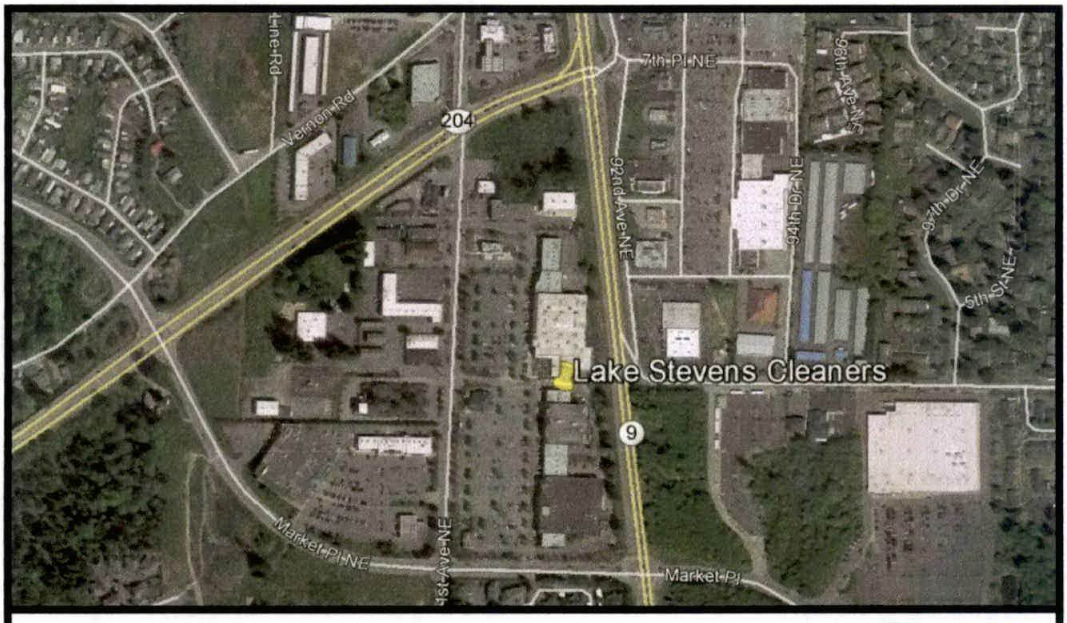

FIGURE 1-2 — SITE VICINITY MAP
Lake Stevens Cleaners Focused Phase II ESA
Source: Google Maps 2013, GEI Project #34040

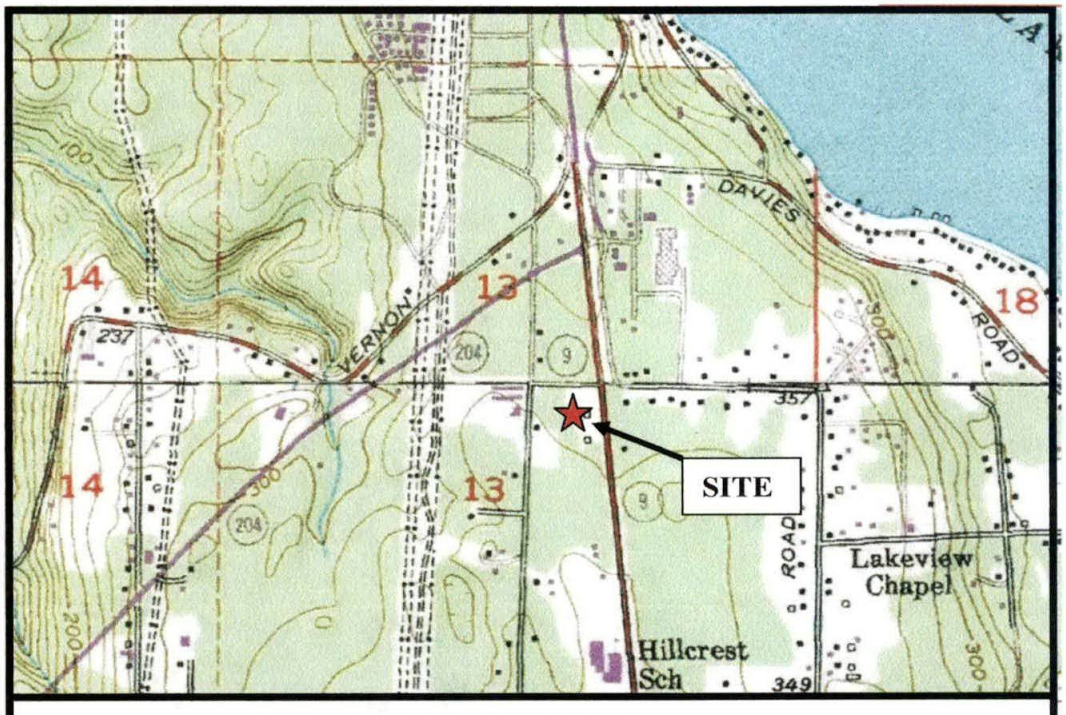

FIGURE 1-3 — SITE TOPOGRAPHIC MAP
Lake Stevens Cleaners Focused Phase II ESA
Source: MyTopo.com, GEI Project #34040

1.0.3 *Purpose and ESA Objectives*

The purpose of this ESA was to investigate for the presence of adverse potential environmental impacts at the subject property identified by ADR in their recent Preliminary Subsurface Investigation at the Site by performing data collection and analysis of soil and groundwater at the Site. This information was deemed necessary in order to evaluate potential environmental remediation options at the property, if remediation was deemed necessary.

Data reviewed or obtained during this ESA were compared to current Washington State Model Toxics Control Act (MTCA - WAC 73-340) and the US Environmental Protection Agency (EPA) cleanup regulations for exceedences of potential contaminants of concern (COCs).

1.1 *REGIONAL AND SITE GEOLOGY*

The subject property is located within the Puget Sound Lowland Physiologic Province, which covers most of Snohomish County. This north-south trending structural and topographic depression is bordered on its west side by the Olympic Mountains, and to the east by the Cascade Mountain foothills. The Puget Lowland is underlain by Tertiary volcanic and sedimentary bedrock, and has been filled to the present day land surface with Pleistocene glacial and non-glacial sediments.[1]

The present day landscape and underlying hydro-stratigraphy of Snohomish County are the result of repeated advances and retreats of Pleistocene continental glaciers, which inundated the Puget Lowland during recent geologic time. Over the past 300,000 years, at least six glacial and intervening interglacial episodes have affected the region. During this time, a large volume of glacial and interglacial material was deposited over the basin, resulting in complex accumulation of unconsolidated sediments, which is up to 3,000 feet thick in some places.

Within the coastal lowland, plateau segments 200 to 600 feet or more in altitude are separated by flat-bottomed, alluviated river gorges. The river flats in some cases represent the surface of as much as 500 to 600 feet of glacial and alluvial deposits backfilled into canyon arms of the ancestral drainage system.

The separate mesa-like plateaus of the Puget Sound lowland are more or less disconnected and altered segments of a former universal level. Their surfaces in general are smooth and gently rolling, terraces form along the margins, lumpy moraine deposits, and marshy depressions all diversify the surface in detail. This report (USGS WSP 1135) describes the area of the subject property as being in the "Intercity plateau" for the upland plain between the Puget Sound and the Snohomish River. The Intercity plateau is an undulating upland plain sloping southward from and are-shaped drainage divide that follows closely about its north, east, and western edges. The un-drained swales in the till plain are sites of impounded water, such as Silver and Thomas Lakes.

The Pleistocene deposits, occurring above sea level, consist of about 200 feet of Admiralty clay and as much as 1,000 feet of deposits of Vashon glaciation. The latter include as much as 300 feet of either clay or sand units of advance outwash, up to 150

[1] Groundwater Resources of Snohomish County Washington, USGS WSP 1135, by R. C. Newcomb

feet thick of till, and variable thicknesses of outwash terrace and train material. The Admiralty clay is composed largely of clayey materials without important quantities of water. Similar clayey sediments are known to continue downward for more than 1,000 feet below sea level. The sand unit, and to a lesser extent, the clay unit are largely advance outwash of the Vashon glaciation. They are water-bearing, and the position of their groundwater reservoirs -- in flat-shaped bodies perched on the Admiralty clay beneath the plateau surfaces and slopes, makes them particularly susceptible to useful development. The till is a persistent ground moraine deposit that mantles most of the area of the plateau segments and passes beneath most of the area of the plateau segments and passes beneath much of the outwash and alluvium of the valleys. The till is a great waster of precipitation; it sheds off to the creeks much water that would otherwise recharge the groundwater reservoirs. A small amount of water percolates irregularly through the till or accumulates in the soil zones on top, where it is tapped by "hardpan" wells of small yield. Outwash terraces of gravels and sands, where they lie below the local water table, carry large quantities of ground water. The alluvial materials of the river valleys are good aquifers, but the water is iron-bearing in many places and is saline in places in the lower parts of the Snohomish Valleys.

Geologic mapping for the area *(See USGS Geologic Map of the Everett 7.5 Minute Quadrangle, Snohomish County, by J. P. Minard, 1985, MF-1748)* show the site as being underlain by Quaternary glacial advance outwash deposits. Advance outwash is described by Minard as being primarily composed of sand with some pebbles, cobbles, and localized silt areas.

Nearby studies by HWA Geosciences *(See Geotechnical Report, Pacific Avenue Overcrossing, HWA, dated October 28, 1999)* describe soil borings along Pacific Avenue between McDougall and Fulton Streets as encountering (from youngest to oldest) fill, native lacustrine clays, and advance outwash sands. Native clay was encountered underlying fills extending from 7.5 feet to 20 feet of depth. Typically, native clay consisted of medium stiff to stiff lean clay with some soft and highly plastic clay layers. Glacially consolidated advance outwash was encountered beneath the native clay deposits and extended to the bottoms of their borings. The advance outwash generally consisted of dense to very dense sand with varying gravel and silt content.

The US Department of Agriculture Soil Conservation Survey maps two soils series in the vicinity of the property - the Alderwood and Norma series of soils. The Alderwood soil series consists of moderately well drained soil with a perched water table developing for short periods during the winter and spring rainy seasons. Surface runoff is very slow to slow and erosion hazard is slight. The soil has the natural ability to support large loads.

Soils encountered by GEI during this study are summarized in GEI's Boring Logs, which are provided in Appendix A of this report.

1.2 *REGIONAL AND SITE HYDROGEOLOGY*

1.2.1 *Groundwater Occurrence*

Measurements by GEI during this study have confirmed that shallow groundwater is present at approximately four to eight feet below the ground surface (bgs) in three of the four penetrations performed during this study.

Based on observations made by GEI during the investigation, GEI believes that the water encountered during the drilling was water that had infiltrated into the subsurface and did not penetrate into the underlying glacial tills beneath these surficial soils. Shallow groundwater is inferred to mimic the surficial topography in vicinity of the property and flows north, northeasterly, or northwesterly, additional groundwater studies are necessary to confirm the groundwater flow direction and gradient *(See Figure 1-2 — Topographic Map).*

1.2.2 *Current Groundwater Use*

The subject property is supplied water from a local municipal source.

1.3 *SURFACE WATER*

On-site drainage is handled through on-site ground retention and storm drains. Surface drainage appears to be adequate and there is no evidence of standing water in vicinity of the site.

2.0 *FIELD INVESTIGATION ACTIVITIES*

This investigation included soil and groundwater sampling outside the perimeter of the structure.

GEI collected soil samples from four direct push penetrations from the surface to the bottoms of the holes for field screening and laboratory analysis. The samples were field screened for obvious signs of contamination (i.e. photoionization detector (PID), discolored soil, obvious odors, etc.), which are sometimes characteristic of impacts to soil. The locations of the proposed penetrations are shown in the Figure 3-1 — GeoProbe Locations. The soil penetrations and sampling are summarized as follows:

1. Two 20 foot deep penetrations (P-1 & P-2) were drilled west and north of the cleaners facility. Minor amounts of water was observed to seeping into the penetration at about seven feet below the bgs. We collected one soil and one groundwater sample from each penetration for analysis for the Chemicals of Concern (COCs - Halogenated Volatile Organic Compounds (HVOCs)).
2. One ten foot deep penetration (P-3) was drilled in the asphalt parking area east of the cleaners facility. Minor amounts of water was observed at about 4 ½ feel bgs. We submitted one soil and one water sample from approximately 4 ½ feet bgs for laboratory analysis for the COCs.
3. One 12 foot deep penetration (P-4) was drilled in the asphalt area south of the adjoining Rite Aid Pharmacy store, situated on the southern side of the cleaners facility. No water was encountered in the penetration — Cascade could not penetrated deeper in the ground at this location due to the very dense nature of the glacial till encountered in the boring ("refusal"). We submitted one soil sample from approximately seven feet bgs for laboratory analysis for the COCs.

2.1 *SOIL INVESTIGATION*

2.1.1 *GeoProbe Penetrations*

Cascade Drilling Co. provided a truck mounted direct push rig (GeoProbe™) and crew to access subsurface soil samples for this study. The probe rig consisted of a hydraulically powered percussion/direct push machine that drives a tool string into the ground to access subsurface soils for sampling *(See Appendix A — GeoProbe Boring Logs).*

Continuous soil samples were collected from the ground surface to a maximum depths ranging from ten to 20 feet of depth for field screening and potential laboratory analysis. The soil samples were collected in a 1 ½ inch diameter, 5-foot long sampler attached to the end of the drive rods for field screening and potential laboratory analysis.

In order to reduce the potential for cross contamination of samples collected during this study, the samplers and other down hole equipment were thoroughly cleaned and decontaminated between probe locations as per EPA SW846 recommended decontamination guidelines.

2.1.2 *Field Sampling and Screening of Soil Samples*

Soil samples were collected continuously from the ground surface to the maximum penetration depths using standard penetration techniques. Soil samples and cuttings were visually examined and classified according to the Unified Soil Classification System (USCS). The samples were field-screened for obvious signs of contamination (discolored soil, sheen, obvious odors, etc.), which are sometimes characteristic of petroleum compounds in the soil. Discrete soil samples were also field-tested using a photoionization detector (PID - Photovac 2010 or equivalent) to screen for volatile compounds in the samples. The PID was fully calibrated using a 100-ppm span gas and ambient air and the battery was fully charged prior to its use on-site. Detailed descriptions of observations made at each boring/probe have been provided in boring logs *(See Appendix A – GeoProbe Boring Logs).*

Based on field observations and the objectives of this survey, the field sampler selected representative soil samples from each location for laboratory analysis. The soil samples were collected according to EPA and Washington State Department of Ecology (Ecology) sampling and preservation guidelines, including EPA Method 8260B and NWTPH-Gx/BTEX analyses procedures (EPA Method 5035A).

The samples were placed in laboratory supplied glass jars and 40-ml glass VOA vials with Teflon-lined septum caps. The samples were properly labeled, stored in a chilled container (with ice), and hand delivered to a Washington State certified laboratory in for testing for the targeted contaminants of concern (COCs).

2.1.3 *Chemical Analysis of Soil Samples*

GEI submitted the samples to a WDOE-certified laboratory test for Halogenated Volatile Organic Compounds (HVOCs) using EPA Method 8260C analysis.

All of the samples collected during this investigation were placed in laboratory-supplied containers and properly labeled with the sample location, depth, and date and time of collection. The samples were stored in an iced cooler for delivery to the laboratory under standard chain-of-custody procedures *(See Appendix C — Sampling and Analytical Procedures).*

2.2 *GROUNDWATER INVESTIGATION*

2.2.1 *Water Sampling*

To test for potential impacts to the Site's groundwater, GEI collected one groundwater sample from the 20-foot deep penetration for laboratory analysis *(See Figure 3-1 — GeoProbe Locations).*

The water sample was collected using a peristaltic pump with dedicated tubing. The water sample was placed directly into 40-ml glass VOA vials with Teflon-lined septum caps. The sample contained appropriate preservatives, typically hydrochloric or sulfuric acid for organic compounds, and nitric acid for metals analysis. The sample to be analyzed for volatile organics were contained in VOA vials free of headspace (i.e. no air bubbles in the containers). The water was not filtered in the field or by the laboratory prior to its laboratory analysis.

2.2.2 *Chemical Analysis of Water Samples*

GEI submitted the water samples to a WDOE-certified laboratory test for Halogenated Volatile Organic Compounds (HVOCs) using EPA Method 8260C analysis.

All of the samples collected during this investigation were placed in laboratory-supplied containers and properly labeled with the sample location, depth, and date and time of collection. The samples were stored in an iced cooler for delivery to the laboratory under standard chain-of-custody procedures *(See Appendix C — Sampling and Analytical Procedures)*.

3.0 CONTAMINATION ASSESSMENT

The following summary is intended for introductory purposes and should be used in conjunction with the full text of the report.

3.0.1 *Soil Sample Results*

Laboratory analysis of the soil samples resulted in concentrations of Chemicals of Concern - COCs) within the currently allowable Washington State Model Toxics Control Act Method A (MTCA) Cleanup Levels (CULs) for Unrestricted Land Use (ULU) in all of the four soil penetrations *(See Table 3-1 — Sample Results Summary, below).*

3.0.2 *Water Sample Results*

Laboratory analysis of the water samples resulted in COCs concentrations above the currently allowable MTCA CULs in two of the three penetrations *(See Table 3-1 — Sample Results Summary, below).*

3.1 CONCLUSIONS AND RECOMMENDATIONS

Based on information gained in ADR's previous investigation *(See Appendix A)* and the results of this study, the following conclusions can be made.

Conclusions

- Environmental impacts to the Site's soil has been confirmed beneath the concrete slab inside the facility (near the existing dry cleaning unit) and in the landscaped area behind the facility
- Impacted groundwater has been identified in the GeoProbe penetrations situated east and north of the cleaners facility at depths ranging from approximately four to seven feet below the ground surface (bgs)
- Based on these data, there appears to be two contaminant source areas: 1) The COCs appear to have leaked from the dry cleaning units to the soils beneath the concrete slab, and 2) Contaminants appear to have been spilled onto the soil exposed in the landscaped area east of the facility

Recommendations

The following recommendations are based on the cleaners facility staying in operation during the Site's remediation and that the treatment option consists of insitu treatment methods.

- GEI recommends groundwater wells be installed to track contaminant concentrations in the groundwater migrating to and from the facility
- GEI recommends injecting chemical oxidation compounds and solvent-degrading microbes beneath the concrete slab and in the vegetation area east of the facility

TABLE 3-1 — SAMPLE RESULTS SUMMARY							
Sample No. & depths (feet)	Media	PID Readings (ppm)	Laboratory Analysis (mg/kg (ppm) for soil and µg/L (ppb) for water)				
			PCE	DCE	Chloroform	TCE	Remarks
P1@18	Soil	0.0	ND	ND	ND	ND	
P2@20	"	0.0	0.025	"	"	"	
P3@4	"	0.0	ND	"	"	"	
P4@7	"	0.0	"	"	"	"	
P1	Water	NA	"	"	"	"	Water at 7' bgs (See boring logs)
P2	"	"	**40**	"	"	"	Water at 8' bgs
P3	"	"	**31**	3.5	1.5	0.78	Water at 4' bgs
MTCA Limits	Soil Water		0.05 5	16000 1600	800/32.3 80	0.03 5	

PCE = Tetrachloroethene, DCE = Dichlorodifluoromethane, TCE = Trichloroethene
NA = Not Applicable
ND = Not Detected @ Practical Quantification Limits (see Appendix C - data sheets)
- - - = Not analyzed
Shaded cells = > MTCA Method A Unrestricted Land Use Limits

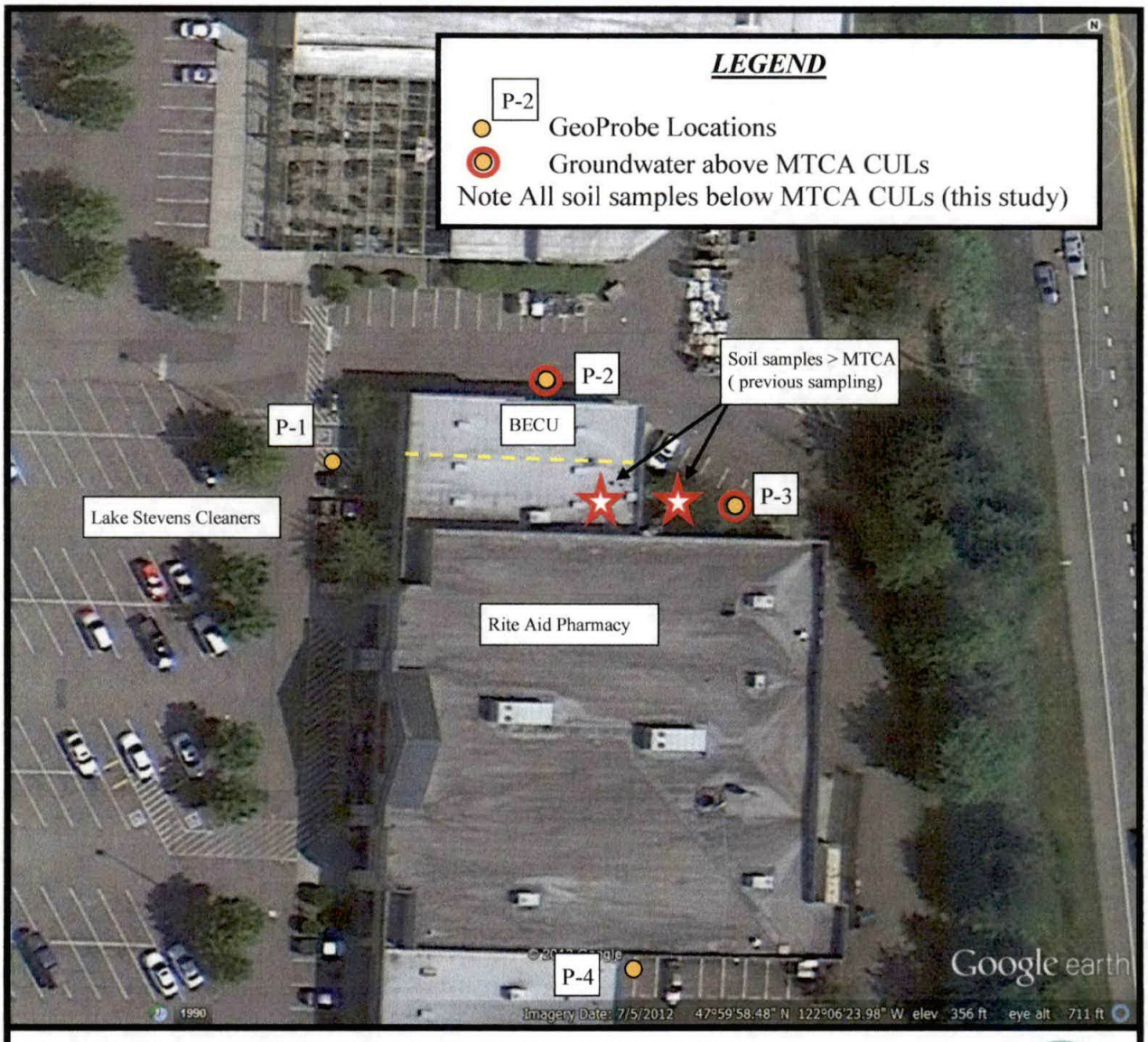

FIGURE 3-1 — SITE PLAN & GEOPROBE LOCATIONS
Lake Stevens Cleaners Focused Phase II ESA
Source: Google earth 2012, GEI Project #34040

4.0 *SPECIAL TERMS AND CONDITIONS*

This report is based upon the application of scientific principles and professional judgment to certain facts with resultant subjective interpretations. Professional judgments expressed herein are based upon the facts currently available within the limits of the existing data, scope of work, budget and schedule and may undergo revision as additional data are obtained. To the extent that more definitive conclusions are desired by the client than are warranted by the currently available facts, it is specifically GEI's intent that the conclusions and recommendations stated in our report is intended as guidance and not necessarily a firm course of action except where explicitly stated as such. WE MAKE NO WARRANTIES, EXPRESS OR IMPLIED INCLUDING WITHOUT LIMITATION, WARRANTIES AS TO MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

GEI makes no claims or guarantees with regard to this environmental review. These environmental services have been completed in accordance with the degree of skill and care required by customarily accepted good practices and procedures. This report should not be considered as a complete environmental assessment of the areas in question, but rather a preliminary report of existing conditions.

This report was prepared for the use of Lake Stevens Marketplace, LLC ("Client") and the conclusions and recommendations presented in this report are based upon the agreed scope of work outlined in the report and the Contract for Professional Services between Client and Galloway Environmental, Inc. ("Consultant"). Use or misuse of this report, or the reliance upon the findings hereof by any parties other than the Client, is at their own risk. Neither Client nor Consultant make any representations or warranty to such other parties as to the accuracy or completeness of this report or to the suitability of its use by such other parties for any purpose whatever, known or unknown to Client or Consultant. Neither Client nor Consultant shall have any liability to, or indemnifies or holds harmless third parties for any losses incurred by the actual or purported use or misuse of this report.

APPENDIX A

PREVIOUS ENVIRONMENTAL INVESTIGATIONS

ADR Environmental Group, Inc.

DRAFT

PRELIMINARY SUBSURFACE INVESTIGATION REPORT

FOR

LAKE STEVENS CLEANERS
Lake Stevens Shopping Center
303-91st Avenue N.E., Suite C-302
Everett, Washington

Project Number: WWFC 01-13-258-WA (A)

December 6, 2013

Prepared For

Lake Stevens Marketplace, LLC
c/o Powers & Therrien, P.S.
3502 Tieton Drive
Yakima, Washington 98902

ADR Environmental Group, Inc.
National Customer Service Center
225 30th Street, Suite 202
Sacramento, California 95816
1-888-62 ADREG [622-3734]
www.adreg.com

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1 INTRODUCTION

ADR Environmental Group, Inc. (ADR) is pleased to present this report describing the results of a preliminary subsurface investigation at Lake Stevens Cleaners located at 303 91st Avenue, Suite C-302 in Everett, Washington (subject Property; Figure 1). Given the potential environmental concerns associated with dry cleaning operations, including the previous use of halogenated volatile organic compounds (HVOCs), ADR conducted a subsurface investigation within and adjacent to the dry cleaning tenant space. The soil borings advanced as part of this investigation assessed the presence or absence of HVOCs in soil and soil vapor at specific locations beneath the subject Property. Fieldwork was conducted on October 21, 2013, in accordance with ADR's proposal dated October 15, 2013 addressed to Westwood Financial Corp.

This report includes a summary of site background information, a description of the soil boring advancement, soil and soil vapor sample collection methods, the results of laboratory analyses, and ADR's conclusions and recommendations. Under contract to ADR, State of Washington geologist Gary Galloway, owner of Galloway Environmental, Inc., an environmental consulting company located in Sammamish, Washington, directed the advancement of the soil borings and the collection of soil and soil vapor samples. The project was coordinated by ADR Project Geologist Larry A. Flora and ADR Project Manager Kevin F. Gallagher.

2 BACKGROUND

2.1 Site Description

Lake Stevens Marketplace, located in a commercial and residential area of Everett, consists of a nearly rectangular-shaped parcel of land totaling approximately 12.24 acres. The subject Property, occupied by two multi-tenant buildings and three small detached businesses along the west side, was developed in 1993. Major tenants of the shopping center include Albertsons, Rite Aid, and Ace Hardware. The remaining portion of the shopping center consists of asphalt-paved drives and parking areas, concrete-paved walkways, and modest landscaped areas. The elevation of the subject Property is approximately 350 feet above mean sea level with a regional topographical gradient toward the north.

2.2 Previous Environmental Investigation

In April 2000, Krazan & Associates, Inc. (Krazan) prepared a *Phase I Environmental Site Assessment Report* (ESA) for the Lake Stevens Marketplace. At the time of the investigation, the shopping center consisted of two (north and south) clusters of stores on the east side of the site and three small detected businesses along the west site. From a review of historical records, Krazan determined that the shopping center was developed in 1993. Prior to development, the property was occupied by several farms, scattered residences, and a commercial building at the north end of the site. One tenant, Lake Stevens Cleaners, was interviewed regarding chemical use. According to Krazan, the dry cleaners had operated on the site for six years and have one dry cleaning machine in the facility which used tetrachloroethene (PCE). No solvent was stored on site. No evidence of staining was observed around the floor of the machine. Krazan's report revealed no evidence of a Recognized Environmental Condition (REC) in connection with the shopping center. It was Krazan's opinion that further investigation of the shopping center was not warranted at that time.

In August 2003, Krazan prepared a *Phase I ESA* for the Lake Stevens Marketplace. At the time of Krazan's report, the shopping center consisted of six parcels totaling approximately 12.24 acres. As part of Krazan's investigation, it was determined that one of the tenant spaces in the Lake Stevens Marketplace was occupied by a dry cleaner (Lake Stevens Cleaners) that has used PCE in their cleaning operations since 1993. However, Krazan's visual inspection revealed no evidence of stains, cracked floors, or floor drains within the cleaners tenant space. Krazan concluded that their assessment revealed no evidence of a REC in connection with the shopping center. They further concluded that no further assessment appeared to be warranted.

2.3 Geologic and Hydrogeologic Setting

The subject Property is located within the Puget Sound Lowland, a structural trough bound by the Olympic Mountains to the west and the Cascade Mountains to the east. In its northern portion, the Puget Sound Lowlands opens to the Pacific Ocean via the Strait of Juan de Fuca. Bedrock in the Puget Sound Lowlands consists of Tertiary terrestrial and marine sediments inter bedded with extrusive lava flows. The underlying bedrock in the Lake Stevens area is covered by up to 600 feet of interbedded glacial and non-glacial sediments consisting of gravel, sand, silt, clay, till, and peat deposits. The site vicinity is immediately underlain by the relatively impermeable Late Pleistocene age Vashon Till.

Site specific groundwater information was not available for review. However, according to Krazan's August 2003 ESA, the depth to regional groundwater in the area exceeds 150 feet below ground surface (bgs), although seasonally perched groundwater in the Vashon Till has been encountered at depths of less than 10 feet below grade. Regional groundwater flow direction is reportedly north to northeast.

3 SCOPE OF WORK

On October 21, 2013, ADR conducted a soil boring investigation to assess the presence or absence of HVOCs in soil and soil vapor at chosen locations beneath and adjacent the Lake Stevens Cleaners tenant space. The completed scope of work for the subsurface investigation included the following:

- Preparation of a site assessment health and safety plan.
- Notifying public and private underground utility services prior to drilling to insure drilling did not encounter utility lines.
- Advancement of four direct push soil borings to a depth of 5 feet below ground surface (bgs) at selected locations within and adjacent to the dry cleaning tenant space.
- Collection of soil samples at a vertical depth of 4 feet from the soil borings. Recovered soil samples from each boring were screened in the field for the presence of organic vapors with a portable photoionization detector (PID).
- Collection of discrete soil vapor samples from each of the soil borings at a depth of 5 feet bgs.
- Analysis of selected soil and soil vapor samples by State of Washington certified analytical laboratory for HVOCs using EPA Method 8260C.
- Preparation of this report summarizing the findings of the investigation.

4 FIELD WORK AND OBSERVATIONS

On October 21, 2013, ADR supervised the advancement of four soil borings (designated B-1 through B-4) at the locations shown on Figure 2. More specifically, soil boring B-1 was located next to the current dry cleaning machine, soil boring B-2 was located outside the western wall of the boiler room (nearest to the boiler room drain), soil boring B-3 was locate over the footprint of the former dry cleaning machine, and soil boring B-4 was located outside the back door of the tenant space. Soil borings B-1 through B-4 were advanced to a total depth of 5 feet bgs using a direct push drill rig owned and operated by ESN Northwest Environmental Services, a State of Washington licensed well driller from Olympia, Washington. Methods used to drill, sample, and log the soil borings are described in Appendix A.

Discrete soil samples were collected at a depth of 4 feet bgs from direct push borings B-1 through B-4 with a "large bore" sampler containing an acrylic tubing liner. After sampler retrieval, soil retained for possible chemical analysis was collected from a bottom section of the recovered acrylic liners into laboratory supplied 40-ml TerraCore samplers. Other sections of the samples were used for soil classification (in accordance with the guidelines of ASTM D-2487-85), and PID screening.

Subjective field observations of soil samples did not indicate the presence of staining or odors in any of the recovered soil samples. Screening of the recovered soil samples in the field using a PID did not indicate the presence of organic vapors.

Soil encountered in borings B-1 through B-4, to a total depth of 5 feet bgs, consisted of light brown to reddish brown, fine-to coarse-grained, moist sand and/or silty sand. Groundwater was not encountered in any of the borings advanced at the site. Soil boring logs describing soil types encountered in each borehole are contained in Appendix B.

To evaluate the presence or absence of HVOCs in soil vapor beneath the subject Property, soil borings B-1 through B-4 were completed as 5 foot deep soil vapor wells. To construct the wells, a 1-inch long soil vapor sampling probe (attached to 1/4-inch outside diameter polyethylene tubing) was installed near the bottom of each soil borehole. A sand pack, extending 6-inches above and below the probe tip, was placed around the probe in each borehole. To seal the probe from ambient air, the remainder of the borehole was sealed with hydrated granular bentonite. To allow for subsurface conditions to equilibrate, soil vapor sampling was not conducted for at least 2 hours following probe installation. Following equilibration, to purge the air in the tubing, a 1-liter Tedlar bag was attached to the intake port of a vacuum sampling box. One liter of air was then purged from the soil vapor wells. Once the purging was complete, another laboratory supplied 1-liter Tedlar bag was attached to the intake port of the vacuum sampling box and a soil vapor sample was collected for chemical analysis.

Soil and soil vapor samples collected for potential chemical analysis were labeled and placed in an iced chest and/or secure storage container for delivery to the off-site laboratories. Each borehole was subsequently abandoned by filling completely with neat cement slurry. The surface materials around each boring were patched to match the existing surface cover.

5 RESULTS OF LABORATORY ANALYSES

The soil and soil vapor samples collected from soil borings B-1 through B-4 were analyzed for HVOCs by EPA Method 8260C by State of Washington certified OnSite Environmental Inc., located in Redmond, Washington. The results of soil and soil vapor analyses are compiled in Tables 1 and 2, respectively. Copies of the certified analytical reports for the analyses are contained in Appendix C.

TABLE 1
Soil Sample Analytical Results, HVOCs
Lake Stevens Cleaners
303-91st Avenue Northeast, Suite C-302
Everett, Washington
HVOC concentrations in milligrams per kilogram (mg/kg)

Soil Boring and Sample Number	Sample Depth (feet)	PCE[1]	TCE[2]	cis-1,2-DCE[3]	Remaining HVOCs[4]
B-1	4	**0.087**	<0.0012[5]	<0.0012	ND[6]
B-2	4	**0.14**	<0.0011	<0.0011	ND
B-3	4	<0.0013	**0.0078**	**0.011**	ND
B-4	4	**0.065**	**0.0019**	<0.00079	ND
Regulatory Standard Comparisons					
MTCA Method A[7]		**0.05**	**0.03**	NSL[8]	-

PCE[1] = Tetrachloroethene
TCE[2] = Trichloroethene
cis-1,2-DCE[3] = cis-1,2-Dichloroethene
HVOCs[4] = Halogenated Volatile Organic Compounds
<0.0012[5] = Compound not detected at method detection limit, see Appendix C for method detection limits
ND[6] = Compound not detected: refer to Appendix C for compound detection limits.
MTCA Method A[7] = Washington State Model Toxics Control Act (MTCA) Method A screening levels for unrestricted land use.
NSL[8] = No screening level established

Laboratory results, as summarized in Table 1, indicate that the dry cleaning solvents PCE and/or trichloroethene (TCE) were detected in the soil samples collected at 4 feet bgs from soil borings B-1 through B-4 at concentrations ranging from 0.0019 to 0.14 milligrams per Kilogram (mg/Kg), respectively. Cis-1,2-dichloroethene (cis-1,2-DCE), a breakdown product of both PCE and TCE, was detected at a concentration of 0.011 mg/Kg in the soil sample collected from boring B-3. The remaining HVOC compounds were below laboratory reporting limits in the soil samples analyzed.

For comparison purposes, the last row of Table 1 contains Model Toxic Control Act (MTCA) Method A unrestricted land use PCE and TCE carcinogenic soil cleanup levels established by the State of Washington Department of Ecology (WDOE). There is no established soil cleanup level for cis-1,2-DCE. Method A cleanup levels are based on the reasonable maximum exposure expected to allow for an adequate margin of safety for protection of human health and the environment. These cleanup levels are applicable to both unrestricted and industrial land use since the ability of a substance to migrate into groundwater does not depend on the land use.

TABLE 2
Soil Vapor Sample Analytical Results, HVOCs
Lake Stevens Cleaners
303-91st Avenue Northeast, Suite C-302
Everett, Washington
Soil vapor concentrations in micrograms per Liter (µg/L)

Soil Boring and Sample Number	Depth Feet (bgs)	PCE[1]	TCE[2]	cis-1,2-DCE[3]	All Other VOCs[4]
B-1	5	<1.0[5]	<1.0	<1.0	ND[6]
B-2	5	<1.0	<1.0	<1.0	ND
B-3	5	**3.8**	<1.0	<1.0	ND
B-4	5	**30**	<1.0	<1.0	ND
Regulatory Standard Comparisons					
MTCA Method B[7]		**4.2**	**1.0**	NSL[8]	-

PCE[1] = Tetrachloroethene
TCE[2] = Trichloroethene
cis-1,2-DCE[3] = cis-1,2-Dichloroethene
VOCs[4] = Volatile organic compounds.
<1.0[5] = Compound not detected at indicated reporting limit (RL)
ND[6] = Compound not detected: refer to Appendix C for compound detection limits.
MTCA Method B[7] = Washington State Model Toxics Control Act (MTCA) Method B soil vapor screening levels.
NSL[8] = No screening level established.

As shown in Table 2, laboratory analysis of the soil vapor samples collected at 5 feet bgs from soil borings B-1 and B-2 did not detect the presence of any HVOC compounds. However, the soil vapor samples obtained from borings B-3 and B-4 indicated the presence of PCE at concentrations of 3.8 and 30 micrograms per Liter (µg/L), respectively. The remaining HVOCs, including TCE, were below laboratory reporting limits in the samples analyzed.

For comparison purposes, the last row of Table 2 contain MTCA Method B PCE and TCE carcinogenic soil vapor screening levels established by WDOE for shallow soil vapor (less than 15 feet bgs) expected not result in exceedance of indoor air cleanup levels in an overlying structure. These screening levels are not site or building specific. No screening level has been established by WDOE for cis-1,2-DCE.

6 CONCLUSIONS

On October 21, 2013, ADR supervised the advancement soil borings B-1 through B-4 at the locations shown in Figure 2. The soil profile encountered in soil borings, to a depth of 5 feet below grade, consisted of light brown to reddish or orange brown, fine-to coarse-grained, most sand and/or silty sand. Regional groundwater, reportedly present at a depth of 150 feet bgs, was not encountered in any of the borings advanced at the subject Property.

Field screening indicated that neither soil staining nor odors were present in any of the soil samples recovered from soil borings B-1 through B-4. PID screening did not detect the presence of organic vapors.

Soil analytical results, summarized in Table 1, indicate that the dry cleaning solvents PCE and/or TCE were detected in the soil samples collected at 4 feet bgs from soil borings B-1 through B-4 at concentrations ranging from 0.0019 to 0.14 mg/Kg, respectively. Cis-1,2-DCE), a breakdown product of both PCE and TCE, was detected at a concentration of 0.011 mg/Kg in the soil sample collected from boring B-3. The remaining HVOC compounds were below laboratory reporting limits in the soil samples analyzed. For comparison purposes, the last row of Table 1 contains examples of PCE and TCE Method A soil cleanup levels established by WDOE that are deemed protective of human health and the environment. No screening level has been established for cis-1,2-DCE. As indicated in Table 1, the concentrations of PCE detected in the soil samples collected from borings B-1, B-2, and B-4 exceeded the Method A soil cleanup level for PCE of 0.05 mg/Kg. The concentrations of TCE reported in soil samples B-3 and B-4 did not exceed the Method A cleanup level for TCE of 0.03 mg/Kg.

As shown in Table 2, laboratory analysis of the soil vapor samples collected at 5 feet bgs from soil borings B-1 and B-2 did not detect the presence of HVOC compounds. However, the PCE was detected in the soil vapor samples collected from borings B-3 and B-4 at concentrations of 3.8 and 30 µg/L, respectively. The remaining HVOCs, including TCE, were below laboratory reporting limits in the samples analyzed. As illustrated in Table 2, the concentration of PCE (30 µg/L) detected in soil boring B-4 (located outside the back door of the tenant space) exceeded the soil vapor MTCA Method B screening level (4.2 µg/L) deemed protective of indoor air quality in overlying buildings.

The reported presence of PCE, TCE, and cis-1,2-DCE in soil and PCE in soil vapor samples collected beneath and adjacent to Lake Stevens Cleaners confirms that the subsurface has been impacted by the dry cleaning operations. The soil borings advanced as part of this investigation do not define the vertical or lateral extent of the subsurface VOC soil and soil vapor impact.

In ADR's experience, the levels of PCE detected in the soil samples collected from borings B-1, B-2, and B-4 and the reported concentration of PCE detected in soil vapor sample B-4 are sufficiently high enough to result in a regulatory requirement for an additional subsurface assessment to determine whether the contamination detected may be a potential threat to human health and the environment and for the collection of data necessary to adequately characterize the site for evaluating potential cleanup action alternatives. Typically, for dry cleaner solvent releases, WDOE would require the collection of groundwater samples that clearly demonstrates that groundwater has not been impacted. Following the results of the additional assessment, the course of further action, if any, could be determined.

In accordance with Washington Administrative Code 173-340-515 (4)(c), the owners or operator of Lake Stevens Cleaners are required to report the discovery of a release of hazardous substances that may pose a threat to human health or the environment. An on-line Environmental Release Incident Report Form must be submitted to the Washington Department of Ecology-Northwest Regional Office within ninety (90) calendar days of discovery.

Additionally, since soil and soil vapor sample analyses have confirmed that a release of VOCs has occurred, ADR recommends that a copy of this report be forwarded to:

Washington Department of Ecology
Northwest Regional Office
Toxic Cleanup Program
Attn: Bob Warren
3190 – 160th Avenue SE
Bellevue, Washington 98008-5452

7 LIMITATIONS

The conclusions presented in this report are professional opinions based solely upon the Scope of Services described in this report. They are intended exclusively for the use of Lake Stevens Marketplace, LLC or agents specified by them. The Scope of Services performed in the execution of this investigation may not be appropriate to satisfy the needs of other users, and any re-use of this document or the findings, conclusions, or recommendations presented herein is at the sole risk of said user. It should be recognized that his study was not intended to be a definitive investigation of potential contamination at the subject Property. Given that the Scope of Services for this investigation was limited, it is possible that currently unrecognized contamination might exist at the site.

Services performed by ADR were conducted in a manner consistent with that of the same care and skill ordinarily exercised by members of the same profession currently practicing in the same locality under the same conditions. It is important to recognize that even the most comprehensive scope of services may fail to detect environmental liabilities on a particular site. Therefore, ADR cannot act as insurers and cannot "certify" that a site is free of environmental contamination. No expressed or implied representation or warranty is included or intended in our reports except that our services were performed, within the limits prescribed by our client, with the customary thoroughness and competence of our profession.

8 SIGNATURE PAGE

This Report was prepared in accordance with generally accepted environmental practices and procedures, employing the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental professionals practicing in this area, as of the date of this Report.

Report Prepared By:

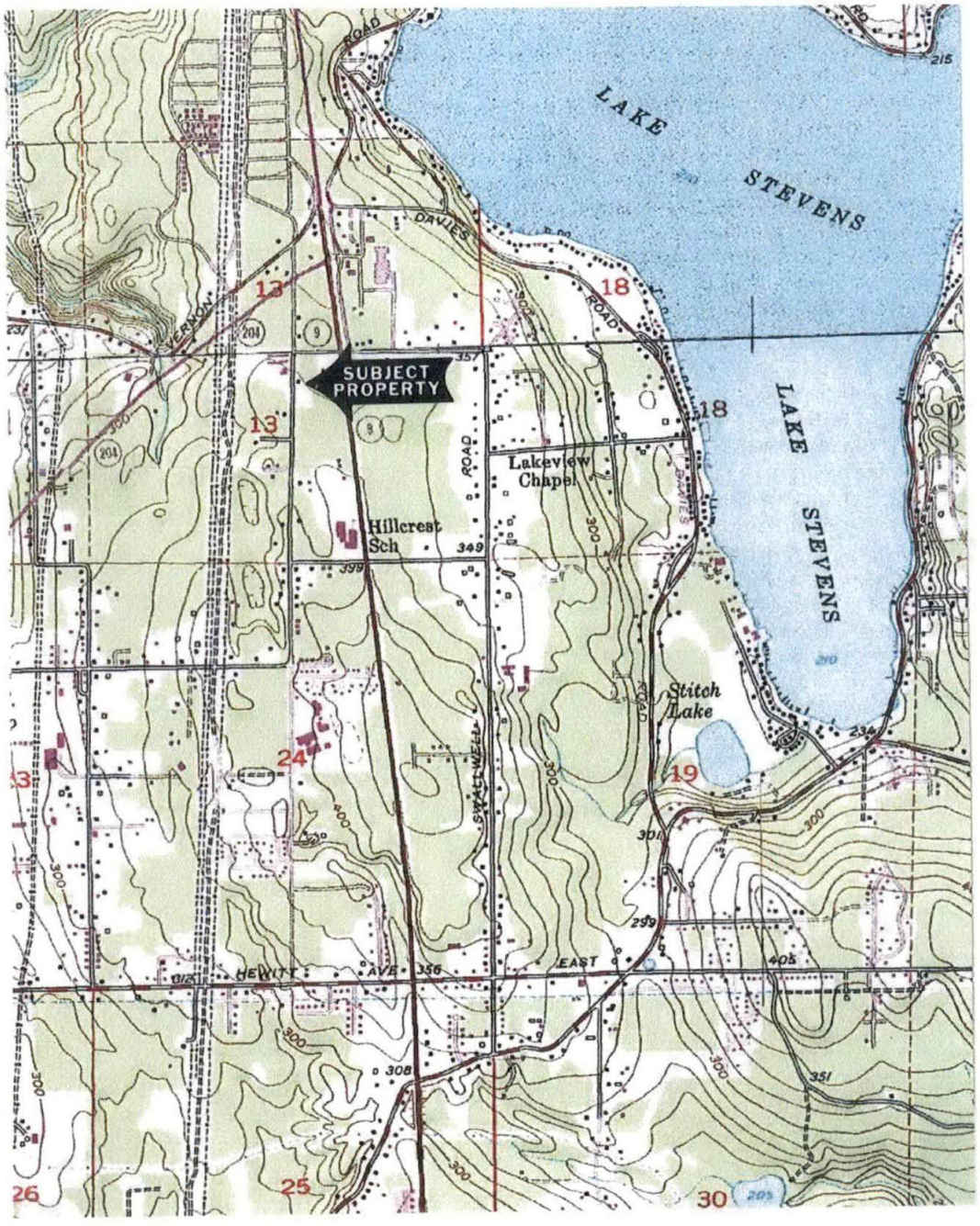
Larry A. Flora
Project Geologist

Report Reviewed By:

Kevin F. Gallagher
Environmental Project Manager

Gary Galloway, LHG, CHMM
Galloway Environmental, Inc.

FIGURES



NORTH

0 1000' 2000'

Scale: 1 inch = 2,000 feet

ADR Environmental Group, Inc.

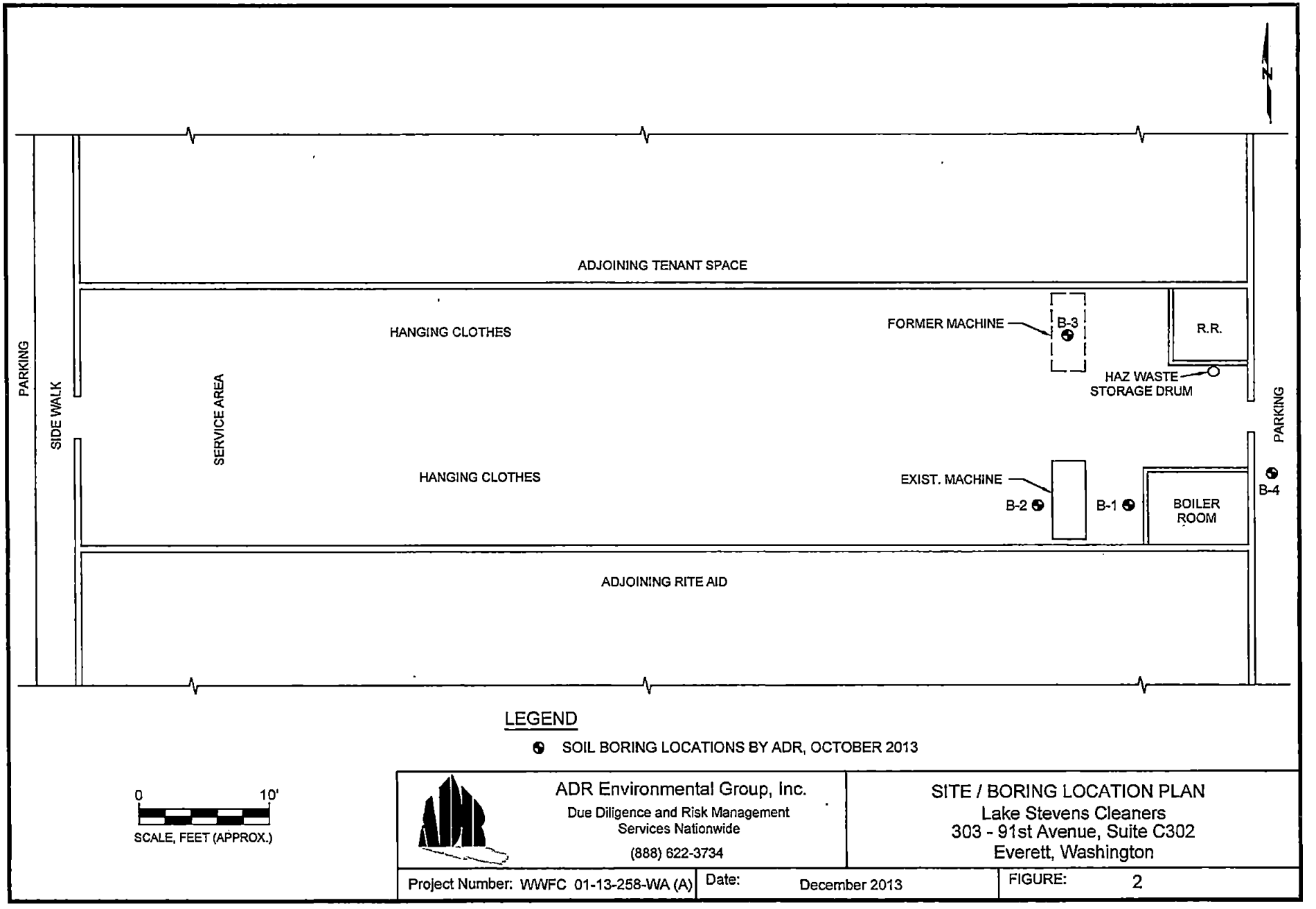
Due Diligence and Risk Management Services Nationwide

(888) 622-3734

7.5 Minute Topographic Map
Lake Stevens, WA Quadrangle Map
303-91st Avenue NE
Everett, Washington

Project Number:	**Date:**	**Figure:**
ADR# WWFC 01-13-258-WA (A)	December 2013	**1**

WWFC-258 FIG2 11-28-13 PYM



ADR Environmental Group, Inc.
Due Diligence and Risk Management
Services Nationwide
(888) 622-3734

SITE / BORING LOCATION PLAN
Lake Stevens Cleaners
303 - 91st Avenue, Suite C302
Everett, Washington

Project Number: WWFC 01-13-258-WA (A) | Date: December 2013 | FIGURE: 2

APPENDIX A
DRILLING AND SOIL SAMPLING METHODOLOGY

Drilling and Soil Sampling Methodology:

This attachment describes procedures followed by ADR Environmental Group, Inc. (ADR), during the advancement of soil borings and the collection of subsurface soil and soil vapor samples. Soil sampling procedures were based on sampling guidance documents from the American Society of Testing and Materials (ASTM) and U.S. Environmental Protection Agency (EPA). Actual sampling procedures employed were based on field conditions and may differ from those described here.

A. EXPLORATION BORING/SOIL SAMPLING PROCEDURES

Soil borings and soil and soil vapor sampling was performed under the direction of an ADR professional geologist. The soil borings was advanced using drilling techniques appropriate for the project, as specified in the project proposal.

Soil samples were collected at vertical intervals of 5 feet or less. After sampler retrieval, soil retained for possible chemical analysis was collected. Other portions of the soil recovered were used for soil classification (in accordance with the guidelines of ASTM D-2487-85) and PID screening. The samples were labeled with an identification number, time, date, location, and requested laboratory analysis. The sample were then stored at approximately 4 (Celsius ((C) in an ice chest for transport to the laboratory. Sample custody procedures outlined in Section D of this attachment were followed.

B. DECONTAMINATION AND DISPOSAL PROCEDURES

All equipment that came into contact with potentially contaminated soil was decontaminated before each use. Decontamination consisted of hot water rinse or trisodium phosphate (TSP) wash and freshwater rinse, as appropriate. Any soil or purge water generated by the field work was stored in 55-gallon drums. The drums were labeled to indicate source of material, site location, property owner, contact phone, and date collected. The drums were located such that they do not constitute a hazard to vehicle or pedestrian traffic.

C. FIELD MEASUREMENTS

Field data will be collected during various sampling and monitoring activities; this section describes routine procedures to be followed by personnel performing field measurements. The methods presented below were intended to ensure that field measurements are consistent and reproducible when performed by various personnel.

C.1 Buried Utility Locations

Prior to commencement of work on site, ADR contacted the appropriate utility companies to have underground utility lines located. ADR also visually surveyed the site to estimate the locations of potentially unmarked underground utilities.

C.2 Lithologic Logging

A log of soil conditions encountered during the drilling and sample collection was maintained using the Unified Soil Classification System by a Texas Professional Geologist employed by High Point Environmental. All boring logs were reviewed by an ADR professional geologist. If proposed in the approved work plan, soil from the acrylic liner was extracted upon recovery, placed in a plastic bag, and sealed for later screening for organic vapors using a photo ionization detector (PID). The remaining portion of the soil sample was examined and a complete log of soil conditions was recorded on a soil boring log (Appendix B) using the Unified Soil Classification System.

C.3 Disposal Procedures

Soils and fluids that were produced and/or used during the drilling and sampling of borings, and that are known or suspected to contain potentially hazardous materials, were contained during the above operations. These substances will be retained on site until chemical testing has been completed to determine the proper means of disposal. Soils and fluids produced and/or used during the above-

described operations that are shown to contain potentially hazardous materials will be disposed of appropriately.

Residual substances generated, if any, during cleaning procedures that are known or suspected to pose a threat to human health or the environment were placed in appropriate containers until chemical testing has been completed to determine the proper means for their disposal.

D. SAMPLE CUSTODY

This section describes standard operating procedures for sample custody and custody documentation. Sample custody procedures were followed through sample collection, transfer, analysis, and ultimate disposal. The purpose of these procedures is to assure that (1) the integrity of samples is maintained during their collection, transportation, and storage prior to analysis and (2) post-analysis sample material is properly disposed of. Sample custody is divided into field procedures and laboratory procedures, as described below.

D.1 Field Custody Procedures

Sample quantities, types, and locations were determined before the actual fieldwork commenced. As few personnel as possible handled the samples. The field sampler is personally responsible for the care and custody of the collected samples until they are properly transferred.

D.1.1 Field Documentation

Each sample was labeled and sealed properly immediately after collection. Sample identification documents were carefully prepared so that identification and chain-of-custody records were maintained and sample disposition controlled. Forms were filled out with waterproof ink. The following sample identification documents were utilized.

Sample labels
Field notebook or soil boring logs
Chain-of-custody forms

D.1.2 Sample Labels

Preprinted Encore sample labels were provided. Each label will contain the following information:

Name of collector
Date and time of collection
Place of collection
ADR project number
Sample number

D.1.3 Chain-of-Custody Record

A chain-of-custody record was filled out for and accompanied every sample and every shipment of samples to the analytical laboratories in order to establish the documentation necessary to trace sample possession from the time of collection. The record contained the following information:

Station of sample number or sample I.D.
Signature of collector, sampler, or recorder.
Date and time of collection.
Place of collection.
Sample type.
Signatures of persons involved in the chain of possession.
Inclusive dates of possession.

The laboratory portion of the form was completed by laboratory personnel and contained the following information:

Name of person receiving the sample.
Laboratory sample number.
Date and time of sample receipt.
Analyses requested.
Sample condition and temperature.

D.2 Corrections to Documentation

Original data recorded in field notebooks, chain-of-custody records, sampling information sheets, and other forms was written in ink. These documents were not be altered, destroyed, or discarded, even if they were illegible or contained inaccuracies that required a replacement document.

If an error was made or found on a document, the individual making the corrections did so by crossing a single line through the error, entering the correct information, and initialing and dating the change. All corrections were initialed and dated.

D.3 Sample Storage and Disposal

The analytical laboratory retains the samples and extracts for 60 days after the laboratory issues a written report. Unless notified by the program manager, the laboratory will dispose of unused samples in an appropriate manner consistent with applicable government regulations.

APPENDIX B
SOIL BORING LOGS

ADR Environmental Group, Inc.

Log of Soil Boring: B-1	Vapor Monitoring Device: PID
Location: Lake Stevens Cleaners 303 - 91st Avenue Everett, Washington	Drilling Time Date Start: 10/21/13 Finish Drilling: 10/21/13 Finish Well:
Project Number: WWFC 01-13-258-WA (A)	Water Depth (Date): NA Casing Elevation: Completion Depth: 5' Logged By: Checked By: G. Galloway
Drilling Company: ESN Northwest Drilled By: Drilling Method: DP Sampling Method: Large Bore	

Depth In Feet	Sample Interval	Soil Description	Graphic Log	USCS Classification	Boring Construction	Blows / 6 in.	Inches Driven	Inches Recovered	Comments	Sample Number	Field OVM/OVA Reading (PPM)
		Concrete Surface									
0											
1		SAND-Light Brown, course grained, moist, medium dense.		SP							
2											
3											
4		SILTY SAND-Orange Brown, fine grained, moist, medium dense.		SM					No Odor	1	0
5											
					T.D. @ 5'				Soil Vapor Sample @ 5'		
6											
7											
8											
9											
10											
11											
12											
13											
14											
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33											
34											
35											

WWFC-259-B1 11-28-13 PYM

ADR Environmental Group, Inc.

Log of Soil Boring: B-2	Vapor Monitoring Device: PID
Location: Lake Stevens Cleaners 303 - 91st Avenue Everett, Washington	Drilling Start: Time / Date: 10/21/13
	Finish Drilling: 10/21/13 Finish Well:
Project Number: WWFC 01-13-258-WA (A)	Water Depth (Date): NA
Drilling Company: ESN Northwest	Casing Elevation:
Drilled By:	Completion Depth: 5'
Drilling Method: DP	Logged By:
Sampling Method: Large Bore	Checked By: G. Galloway

Depth In Feet	Sample Interval	Soil Description	Graphic Log	USCS Classification	Boring Construction	Blows / 6 in.	Inches Driven	Inches Recovered	Comments	Sample Number	Field OVM/OVA Reading (PPM)
		Concrete Surface									
0		SAND-Light Brown, course grained, moist, medium dense.		SP							
4		SILTY SAND-Orange Brown, fine grained, moist, medium dense.		SM					No Odor	1	0
5		T.D. @ 5'							Soil Vapor Sample @ 5'		

WWFC-259-B2 11-28-13 PYM

ADR Environmental Group, Inc.

Log of Soil Boring: B-3	Vapor Monitoring Device: PID
Location: Lake Stevens Cleaners 303 - 91st Avenue Everett, Washington	Drilling Time / Date Start: 10/21/13 Finish Drilling: 10/21/13 Finish Well:
Project Number: WWFC 01-13-258-WA (A)	Water Depth (Date): NA Casing Elevation:
Drilling Company: ESN Northwest Drilled By: Drilling Method: DP Sampling Method: Large Bore	Completion Depth: 5' Logged By: Checked By: G. Galloway

Depth In Feet	Sample Interval	Soil Description	Graphic Log	USCS Classification	Boring Construction	Blows / 6 in.	Inches Driven	Inches Recovered	Comments	Sample Number	Field OVM/OVA Reading (PPM)
0		Concrete Surface									
1		SAND-Light Brown, course grained, moist, medium dense.		SP							
2											
3											
4		SILTY SAND-Orange Brown, fine grained, moist, medium dense.		SM					No Odor	1	0
5		T.D. @ 5'							Soil Vapor Sample @ 5'		
6											
7											
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12											
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WWFC-259-B3 11-28-13 PYM

ADR Environmental Group, Inc.

Log of Soil Boring: B-4	Vapor Monitoring Device: PID
Location: Lake Stevens Cleaners 303 - 91st Avenue Everett, Washington	Drilling Time / Start: Date 10/21/13 Finish Drilling: 10/21/13 Finish Well:
Project Number: WWFC 01-13-258-WA (A)	Water Depth (Date): NA Casing Elevation:
Drilling Company: ESN Northwest Drilled By: Drilling Method: DP Sampling Method: Large Bore	Completion Depth: 5' Logged By: Checked By: G. Galloway

Depth In Feet	Sample Interval	Soil Description	Graphic Log	USCS Classification	Boring Construction	Blows / 6 In.	Inches Driven	Inches Recovered	Comments	Sample Number	Field OVM/OVA Reading (PPM)
0		Asphalt Surface									
1		SAND-Reddish Brown, course grained, moist, medium dense.		SP							
2											
3											
4		SAND-Mottled Orange & Gray, medium grained, moist, medium dense.		SP					No Odor	1	0
5					T.D. @ 5'				Soil Vapor Sample @ 5'		
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WWFC-259-B4 11-28-13 PYM

APPENDIX C

LABORATORY ANALYSIS REPORTS AND CHAIN OF CUSTODY FORMS

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

October 22, 2013

Larry Flora
ADR Environmental Group
225 30th Street, Suite 202
Sacramento, CA 95816

Re: Analytical Data for Project LAKE STEVENS DRY CL.
Laboratory Reference No. 1310-228

Dear Larry:

Enclosed are the analytical results and associated quality control data for samples submitted on October 21, 2013.

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 22, 2013
Samples Submitted: October 21, 2013
Laboratory Reference: 1310-228
Project: LAKE STEVENS DRY CL.

Case Narrative

Samples were collected on October 21, 2013 and received by the laboratory on October 21, 2013. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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.

Halogenated Volatiles EPA 8260C (soil) Analysis

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

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

Date of Report: October 22, 2013
Samples Submitted: October 21, 2013
Laboratory Reference: 1310-228
Project: LAKE STEVENS DRY CL.

HALOGENATED VOLATILES EPA 8260C

Matrix: Air
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B1 @ 5'**					
Laboratory ID:	10-228-01					
Dichlorodifluoromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chloromethane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Vinyl Chloride	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromomethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chloroethane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Trichlorofluoromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Iodomethane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Methylene Chloride	ND	5.0	EPA 8260C	10-22-13	10-22-13	
(trans) 1,2-Dichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
2,2-Dichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
(cis) 1,2-Dichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromochloromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chloroform	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1,1-Trichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Carbon Tetrachloride	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloropropene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Trichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Dibromomethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromodichloromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
2-Chloroethyl Vinyl Ether	ND	5.0	EPA 8260C	10-22-13	10-22-13	
(cis) 1,3-Dichloropropene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
(trans) 1,3-Dichloropropene	ND	1.0	EPA 8260C	10-22-13	10-22-13	

Date of Report: October 22, 2013
Samples Submitted: October 21, 2013
Laboratory Reference: 1310-228
Project: LAKE STEVENS DRY CL.

HALOGENATED VOLATILES EPA 8260C
page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B1 @ 5'**					
Laboratory ID:	10-228-01					
1,1,2-Trichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Tetrachloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,3-Dichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Dibromochloromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromoethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1,1,2-Tetrachloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromoform	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Bromobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1,2,2-Tetrachloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
2-Chlorotoluene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
4-Chlorotoluene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,3-Dichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,4-Dichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromo-3-chloropropane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Hexachlorobutadiene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*94*	*62-122*				
Toluene-d8	*97*	*70-120*				
4-Bromofluorobenzene	*97*	*71-120*				

Date of Report: October 22, 2013
Samples Submitted: October 21, 2013
Laboratory Reference: 1310-228
Project: LAKE STEVENS DRY CL.

HALOGENATED VOLATILES EPA 8260C

Matrix: Air
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B2 @ 5'**					
Laboratory ID:	10-228-02					
Dichlorodifluoromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chloromethane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Vinyl Chloride	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromomethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chloroethane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Trichlorofluoromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Iodomethane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Methylene Chloride	ND	5.0	EPA 8260C	10-22-13	10-22-13	
(trans) 1,2-Dichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
2,2-Dichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
(cis) 1,2-Dichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromochloromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chloroform	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1,1-Trichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Carbon Tetrachloride	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloropropene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Trichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Dibromomethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromodichloromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
2-Chloroethyl Vinyl Ether	ND	5.0	EPA 8260C	10-22-13	10-22-13	
(cis) 1,3-Dichloropropene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
(trans) 1,3-Dichloropropene	ND	1.0	EPA 8260C	10-22-13	10-22-13	

Date of Report: October 22, 2013
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HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B2 @ 5'**					
Laboratory ID:	10-228-02					
1,1,2-Trichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Tetrachloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,3-Dichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Dibromochloromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromoethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1,1,2-Tetrachloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromoform	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Bromobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1,2,2-Tetrachloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
2-Chlorotoluene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
4-Chlorotoluene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,3-Dichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,4-Dichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromo-3-chloropropane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Hexachlorobutadiene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*99*	*62-122*				
Toluene-d8	*101*	*70-120*				
4-Bromofluorobenzene	*100*	*71-120*				

Date of Report: October 22, 2013
Samples Submitted: October 21, 2013
Laboratory Reference: 1310-228
Project: LAKE STEVENS DRY CL.

HALOGENATED VOLATILES EPA 8260C

Matrix: Air
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B3 @ 5'**					
Laboratory ID:	10-228-03					
Dichlorodifluoromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chloromethane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Vinyl Chloride	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromomethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chloroethane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Trichlorofluoromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Iodomethane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Methylene Chloride	ND	5.0	EPA 8260C	10-22-13	10-22-13	
(trans) 1,2-Dichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
2,2-Dichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
(cis) 1,2-Dichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromochloromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chloroform	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1,1-Trichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Carbon Tetrachloride	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloropropene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Trichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Dibromomethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromodichloromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
2-Chloroethyl Vinyl Ether	ND	5.0	EPA 8260C	10-22-13	10-22-13	
(cis) 1,3-Dichloropropene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
(trans) 1,3-Dichloropropene	ND	1.0	EPA 8260C	10-22-13	10-22-13	

Date of Report: October 22, 2013
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HALOGENATED VOLATILES EPA 8260C

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B3 @ 5'**					
Laboratory ID:	10-228-03					
1,1,2-Trichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Tetrachloroethene	3.8	1.0	EPA 8260C	10-22-13	10-22-13	
1,3-Dichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Dibromochloromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromoethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1,1,2-Tetrachloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromoform	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Bromobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1,2,2-Tetrachloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
2-Chlorotoluene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
4-Chlorotoluene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,3-Dichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,4-Dichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromo-3-chloropropane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Hexachlorobutadiene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*99*	*62-122*				
Toluene-d8	*99*	*70-120*				
4-Bromofluorobenzene	*98*	*71-120*				

Date of Report: October 22, 2013
Samples Submitted: October 21, 2013
Laboratory Reference: 1310-228
Project: LAKE STEVENS DRY CL.

HALOGENATED VOLATILES EPA 8260C

Matrix: Air
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B4 @ 5'**					
Laboratory ID:	10-228-04					
Dichlorodifluoromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chloromethane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Vinyl Chloride	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromomethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chloroethane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Trichlorofluoromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Iodomethane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Methylene Chloride	ND	5.0	EPA 8260C	10-22-13	10-22-13	
(trans) 1,2-Dichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
2,2-Dichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
(cis) 1,2-Dichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromochloromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chloroform	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1,1-Trichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Carbon Tetrachloride	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloropropene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Trichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Dibromomethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromodichloromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
2-Chloroethyl Vinyl Ether	ND	5.0	EPA 8260C	10-22-13	10-22-13	
(cis) 1,3-Dichloropropene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
(trans) 1,3-Dichloropropene	ND	1.0	EPA 8260C	10-22-13	10-22-13	

Date of Report: October 22, 2013
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HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B4 @ 5'**					
Laboratory ID:	10-228-04					
1,1,2-Trichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Tetrachloroethene	30	1.0	EPA 8260C	10-22-13	10-22-13	
1,3-Dichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Dibromochloromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromoethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1,1,2-Tetrachloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromoform	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Bromobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1,2,2-Tetrachloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
2-Chlorotoluene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
4-Chlorotoluene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,3-Dichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,4-Dichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromo-3-chloropropane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Hexachlorobutadiene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*100*	*62-122*				
Toluene-d8	*100*	*70-120*				
4-Bromofluorobenzene	*99*	*71-120*				

Date of Report: October 22, 2013
Samples Submitted: October 21, 2013
Laboratory Reference: 1310-228
Project: LAKE STEVENS DRY CL.

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Matrix: Air
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1022A1					
Dichlorodifluoromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chloromethane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Vinyl Chloride	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromomethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chloroethane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Trichlorofluoromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Iodomethane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Methylene Chloride	ND	5.0	EPA 8260C	10-22-13	10-22-13	
(trans) 1,2-Dichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
2,2-Dichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
(cis) 1,2-Dichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromochloromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chloroform	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1,1-Trichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Carbon Tetrachloride	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloropropene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Trichloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Dibromomethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromodichloromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
2-Chloroethyl Vinyl Ether	ND	5.0	EPA 8260C	10-22-13	10-22-13	
(cis) 1,3-Dichloropropene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
(trans) 1,3-Dichloropropene	ND	1.0	EPA 8260C	10-22-13	10-22-13	

Date of Report: October 22, 2013
Samples Submitted: October 21, 2013
Laboratory Reference: 1310-228
Project: LAKE STEVENS DRY CL.

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1022A1					
1,1,2-Trichloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Tetrachloroethene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,3-Dichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Dibromochloromethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromoethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Chlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1,1,2-Tetrachloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Bromoform	ND	5.0	EPA 8260C	10-22-13	10-22-13	
Bromobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,1,2,2-Tetrachloroethane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichloropropane	ND	1.0	EPA 8260C	10-22-13	10-22-13	
2-Chlorotoluene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
4-Chlorotoluene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,3-Dichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,4-Dichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromo-3-chloropropane	ND	5.0	EPA 8260C	10-22-13	10-22-13	
1,2,4-Trichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Hexachlorobutadiene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichlorobenzene	ND	1.0	EPA 8260C	10-22-13	10-22-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*99*	*62-122*				
Toluene-d8	*98*	*70-120*				
4-Bromofluorobenzene	*97*	*71-120*				

Date of Report: October 22, 2013
Samples Submitted: October 21, 2013
Laboratory Reference: 1310-228
Project: LAKE STEVENS DRY CL.

HALOGENATED VOLATILES EPA 8260C
DUPLICATE QUALITY CONTROL
Page 1 of 2

Matrix: Air
Units: ug/L

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	10-228-04						
	ORIG	DUP					
Dichlorodifluoromethane	ND	ND			NA	30	
Chloromethane	ND	ND			NA	30	
Vinyl Chloride	ND	ND			NA	30	
Bromomethane	ND	ND			NA	30	
Chloroethane	ND	ND			NA	30	
Trichlorofluoromethane	ND	ND			NA	30	
1,1-Dichloroethene	ND	ND			NA	30	
Iodomethane	ND	ND			NA	30	
Methylene Chloride	ND	ND			NA	30	
(trans) 1,2-Dichloroethene	ND	ND			NA	30	
1,1-Dichloroethane	ND	ND			NA	30	
2,2-Dichloropropane	ND	ND			NA	30	
(cis) 1,2-Dichloroethene	ND	ND			NA	30	
Bromochloromethane	ND	ND			NA	30	
Chloroform	ND	ND			NA	30	
1,1,1-Trichloroethane	ND	ND			NA	30	
Carbon Tetrachloride	ND	ND			NA	30	
1,1-Dichloropropene	ND	ND			NA	30	
1,2-Dichloroethane	ND	ND			NA	30	
Trichloroethene	ND	ND			NA	30	
1,2-Dichloropropane	ND	ND			NA	30	
Dibromomethane	ND	ND			NA	30	
Bromodichloromethane	ND	ND			NA	30	
2-Chloroethyl Vinyl Ether	ND	ND			NA	30	
(cis) 1,3-Dichloropropene	ND	ND			NA	30	
(trans) 1,3-Dichloropropene	ND	ND			NA	30	

Date of Report: October 22, 2013
Samples Submitted: October 21, 2013
Laboratory Reference: 1310-228
Project: LAKE STEVENS DRY CL.

HALOGENATED VOLATILES EPA 8260C
DUPLICATE QUALITY CONTROL
Page 2 of 2

Analyte	Result		Percent Recovery	Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE							
Laboratory ID:	10-228-04						
	ORIG	DUP					
1,1,2-Trichloroethane	ND	ND			NA	30	
Tetrachloroethene	30.5	30.7			1	30	
1,3-Dichloropropane	ND	ND			NA	30	
Dibromochloromethane	ND	ND			NA	30	
1,2-Dibromoethane	ND	ND			NA	30	
Chlorobenzene	ND	ND			NA	30	
1,1,1,2-Tetrachloroethane	ND	ND			NA	30	
Bromoform	ND	ND			NA	30	
Bromobenzene	ND	ND			NA	30	
1,1,2,2-Tetrachloroethane	ND	ND			NA	30	
1,2,3-Trichloropropane	ND	ND			NA	30	
2-Chlorotoluene	ND	ND			NA	30	
4-Chlorotoluene	ND	ND			NA	30	
1,3-Dichlorobenzene	ND	ND			NA	30	
1,4-Dichlorobenzene	ND	ND			NA	30	
1,2-Dichlorobenzene	ND	ND			NA	30	
1,2-Dibromo-3-chloropropane	ND	ND			NA	30	
1,2,4-Trichlorobenzene	ND	ND			NA	30	
Hexachlorobutadiene	ND	ND			NA	30	
1,2,3-Trichlorobenzene	ND	ND			NA	30	
Surrogate:							
Dibromofluoromethane			*100*	*102*	*62-122*		
Toluene-d8			*100*	*100*	*70-120*		
4-Bromofluorobenzene			*99*	*99*	*71-120*		

Date of Report: October 22, 2013
Samples Submitted: October 21, 2013
Laboratory Reference: 1310-228
Project: LAKE STEVENS DRY CL.

HALOGENATED VOLATILES EPA 8260C

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B1 @ 4'**					
Laboratory ID:	10-228-05					
Dichlorodifluoromethane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Chloromethane	ND	0.0061	EPA 8260C	10-22-13	10-22-13	
Vinyl Chloride	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Bromomethane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Chloroethane	ND	0.0061	EPA 8260C	10-22-13	10-22-13	
Trichlorofluoromethane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethene	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Iodomethane	ND	0.0061	EPA 8260C	10-22-13	10-22-13	
Methylene Chloride	ND	0.0061	EPA 8260C	10-22-13	10-22-13	
(trans) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
2,2-Dichloropropane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
(cis) 1,2-Dichloroethene	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Bromochloromethane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Chloroform	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
1,1,1-Trichloroethane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Carbon Tetrachloride	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloropropene	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloroethane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Trichloroethene	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloropropane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Dibromomethane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Bromodichloromethane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
2-Chloroethyl Vinyl Ether	ND	0.0061	EPA 8260C	10-22-13	10-22-13	
(cis) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
(trans) 1,3-Dichloropropene	ND	0.0012	EPA 8260C	10-22-13	10-22-13	

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HALOGENATED VOLATILES EPA 8260C

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B1 @ 4'**					
Laboratory ID:	10-228-05					
1,1,2-Trichloroethane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Tetrachloroethene	0.087	0.0012	EPA 8260C	10-22-13	10-22-13	
1,3-Dichloropropane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Dibromochloromethane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromoethane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Chlorobenzene	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
1,1,1,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Bromoform	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Bromobenzene	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
1,1,2,2-Tetrachloroethane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichloropropane	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
2-Chlorotoluene	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
4-Chlorotoluene	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
1,3-Dichlorobenzene	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
1,4-Dichlorobenzene	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
1,2-Dichlorobenzene	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromo-3-chloropropane	ND	0.0061	EPA 8260C	10-22-13	10-22-13	
1,2,4-Trichlorobenzene	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Hexachlorobutadiene	ND	0.0061	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichlorobenzene	ND	0.0012	EPA 8260C	10-22-13	10-22-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*105*	*65-129*				
Toluene-d8	*109*	*77-122*				
4-Bromofluorobenzene	*113*	*73-124*				

Date of Report: October 22, 2013
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Project: LAKE STEVENS DRY CL.

HALOGENATED VOLATILES EPA 8260C

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B2 @ 4'**					
Laboratory ID:	10-228-06					
Dichlorodifluoromethane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Chloromethane	ND	0.0055	EPA 8260C	10-22-13	10-22-13	
Vinyl Chloride	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Bromomethane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Chloroethane	ND	0.0055	EPA 8260C	10-22-13	10-22-13	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Iodomethane	ND	0.0055	EPA 8260C	10-22-13	10-22-13	
Methylene Chloride	ND	0.0055	EPA 8260C	10-22-13	10-22-13	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Bromochloromethane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Chloroform	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Trichloroethene	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Dibromomethane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Bromodichloromethane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
2-Chloroethyl Vinyl Ether	ND	0.0055	EPA 8260C	10-22-13	10-22-13	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	10-22-13	10-22-13	

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HALOGENATED VOLATILES EPA 8260C

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B2 @ 4'**					
Laboratory ID:	10-228-06					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Tetrachloroethene	0.14	0.0011	EPA 8260C	10-22-13	10-22-13	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Dibromochloromethane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Chlorobenzene	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Bromoform	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Bromobenzene	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
2-Chlorotoluene	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
4-Chlorotoluene	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromo-3-chloropropane	ND	0.0055	EPA 8260C	10-22-13	10-22-13	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Hexachlorobutadiene	ND	0.0055	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	10-22-13	10-22-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*105*	*65-129*				
Toluene-d8	*108*	*77-122*				
4-Bromofluorobenzene	*103*	*73-124*				

Date of Report: October 22, 2013
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Project: LAKE STEVENS DRY CL.

HALOGENATED VOLATILES EPA 8260C

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B3 @ 4'**					
Laboratory ID:	10-228-07					
Dichlorodifluoromethane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
Chloromethane	ND	0.0066	EPA 8260C	10-22-13	10-22-13	
Vinyl Chloride	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
Bromomethane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
Chloroethane	ND	0.0066	EPA 8260C	10-22-13	10-22-13	
Trichlorofluoromethane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethene	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
Iodomethane	ND	0.0066	EPA 8260C	10-22-13	10-22-13	
Methylene Chloride	ND	0.0066	EPA 8260C	10-22-13	10-22-13	
(trans) 1,2-Dichloroethene	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
2,2-Dichloropropane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
(cis) 1,2-Dichloroethene	0.011	0.0013	EPA 8260C	10-22-13	10-22-13	
Bromochloromethane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
Chloroform	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
1,1,1-Trichloroethane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
Carbon Tetrachloride	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloropropene	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloroethane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
Trichloroethene	0.0078	0.0013	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloropropane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
Dibromomethane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
Bromodichloromethane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
2-Chloroethyl Vinyl Ether	ND	0.0066	EPA 8260C	10-22-13	10-22-13	
(cis) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
(trans) 1,3-Dichloropropene	ND	0.0013	EPA 8260C	10-22-13	10-22-13	

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HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B3 @ 4'**					
Laboratory ID:	10-228-07					
1,1,2-Trichloroethane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
Tetrachloroethene	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
1,3-Dichloropropane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
Dibromochloromethane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromoethane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
Chlorobenzene	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
1,1,1,2-Tetrachloroethane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
Bromoform	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
Bromobenzene	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
1,1,2,2-Tetrachloroethane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichloropropane	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
2-Chlorotoluene	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
4-Chlorotoluene	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
1,3-Dichlorobenzene	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
1,4-Dichlorobenzene	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
1,2-Dichlorobenzene	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromo-3-chloropropane	ND	0.0066	EPA 8260C	10-22-13	10-22-13	
1,2,4-Trichlorobenzene	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
Hexachlorobutadiene	ND	0.0066	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichlorobenzene	ND	0.0013	EPA 8260C	10-22-13	10-22-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*103*	*65-129*				
Toluene-d8	*109*	*77-122*				
4-Bromofluorobenzene	*103*	*73-124*				

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B4 @ 4'**					
Laboratory ID:	10-228-08					
Dichlorodifluoromethane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Chloromethane	ND	0.0040	EPA 8260C	10-22-13	10-22-13	
Vinyl Chloride	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Bromomethane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Chloroethane	ND	0.0040	EPA 8260C	10-22-13	10-22-13	
Trichlorofluoromethane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethene	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Iodomethane	ND	0.0040	EPA 8260C	10-22-13	10-22-13	
Methylene Chloride	ND	0.0040	EPA 8260C	10-22-13	10-22-13	
(trans) 1,2-Dichloroethene	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
2,2-Dichloropropane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
(cis) 1,2-Dichloroethene	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Bromochloromethane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Chloroform	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
1,1,1-Trichloroethane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Carbon Tetrachloride	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloropropene	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloroethane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Trichloroethene	0.0019	0.00079	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloropropane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Dibromomethane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Bromodichloromethane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
2-Chloroethyl Vinyl Ether	ND	0.0040	EPA 8260C	10-22-13	10-22-13	
(cis) 1,3-Dichloropropene	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
(trans) 1,3-Dichloropropene	ND	0.00079	EPA 8260C	10-22-13	10-22-13	

Date of Report: October 22, 2013
Samples Submitted: October 21, 2013
Laboratory Reference: 1310-228
Project: LAKE STEVENS DRY CL.

HALOGENATED VOLATILES EPA 8260C

page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**B4 @ 4'**					
Laboratory ID:	10-228-08					
1,1,2-Trichloroethane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Tetrachloroethene	0.065	0.00079	EPA 8260C	10-22-13	10-22-13	
1,3-Dichloropropane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Dibromochloromethane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromoethane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Chlorobenzene	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
1,1,1,2-Tetrachloroethane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Bromoform	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Bromobenzene	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
1,1,2,2-Tetrachloroethane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichloropropane	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
2-Chlorotoluene	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
4-Chlorotoluene	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
1,3-Dichlorobenzene	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
1,4-Dichlorobenzene	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
1,2-Dichlorobenzene	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromo-3-chloropropane	ND	0.0040	EPA 8260C	10-22-13	10-22-13	
1,2,4-Trichlorobenzene	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Hexachlorobutadiene	ND	0.0040	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichlorobenzene	ND	0.00079	EPA 8260C	10-22-13	10-22-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*101*	*65-129*				
Toluene-d8	*105*	*77-122*				
4-Bromofluorobenzene	*111*	*73-124*				

Date of Report: October 22, 2013
Samples Submitted: October 21, 2013
Laboratory Reference: 1310-228
Project: LAKE STEVENS DRY CL.

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1022S1					
Dichlorodifluoromethane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Chloromethane	ND	0.0050	EPA 8260C	10-22-13	10-22-13	
Vinyl Chloride	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Bromomethane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Chloroethane	ND	0.0050	EPA 8260C	10-22-13	10-22-13	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Iodomethane	ND	0.0050	EPA 8260C	10-22-13	10-22-13	
Methylene Chloride	ND	0.0050	EPA 8260C	10-22-13	10-22-13	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Bromochloromethane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Chloroform	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Trichloroethene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Dibromomethane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Bromodichloromethane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	10-22-13	10-22-13	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	

Date of Report: October 22, 2013
Samples Submitted: October 21, 2013
Laboratory Reference: 1310-228
Project: LAKE STEVENS DRY CL.

HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
Page 2 of 2

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1022S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Tetrachloroethene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Dibromochloromethane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Chlorobenzene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Bromoform	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Bromobenzene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
2-Chlorotoluene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
4-Chlorotoluene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	10-22-13	10-22-13	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	10-22-13	10-22-13	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	10-22-13	10-22-13	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*105*	*65-129*				
Toluene-d8	*111*	*77-122*				
4-Bromofluorobenzene	*117*	*73-124*				

Date of Report: October 22, 2013
Samples Submitted: October 21, 2013
Laboratory Reference: 1310-228
Project: LAKE STEVENS DRY CL.

HALOGENATED 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:	SB1022S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0531**	**0.0525**	0.0500	0.0500	106	105	56-141	1	15	
Benzene	**0.0525**	**0.0523**	0.0500	0.0500	105	105	70-121	0	15	
Trichloroethene	**0.0467**	**0.0465**	0.0500	0.0500	93	93	74-118	0	15	
Toluene	**0.0493**	**0.0486**	0.0500	0.0500	99	97	75-120	1	15	
Chlorobenzene	**0.0477**	**0.0480**	0.0500	0.0500	95	96	75-120	1	15	
Surrogate:										
Dibromofluoromethane					*96*	*95*	*65-129*			
Toluene-d8					*98*	*100*	*77-122*			
4-Bromofluorobenzene					*103*	*105*	*73-124*			

Date of Report: October 22, 2013
Samples Submitted: October 21, 2013
Laboratory Reference: 1310-228
Project: LAKE STEVENS DRY CL.

% MOISTURE

Date Analyzed: 10-22-13

Client ID	Lab ID	% Moisture
B1 @ 4'	10-228-05	25
B2 @ 4'	10-228-06	22
B3 @ 4'	10-228-07	9
B4 @ 4'	10-228-08	15

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

Laboratory Number: 10-228

Company: GALLOWAY ENV
Project Number: ADREG
Project Name: LAKE STEVENS DRY CL.
Project Manager: GARY GALLOWAY
Sampled by: GARY GALLOWAY

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

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	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/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	B1@5'	10/2/13	10:15	air	1						X										
2	2		11:50	air	1						X										
3	3		13:00	air	1						X										
4	4		14:30	air	1						X										
5	B1@4'		10:10	Soil	4						X										10
6	2		11:45	Soil	4						X										
7	3		12:55	Soil	4						X										
8	4		12:25	Soil	4						X										

	Signature	Company	Date	Time
Relinquished		GALLOWAY ENV	10/2/13	17:10
Received		CORE	10/4/13	1710
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
Hold glass jars for potential follow up

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

APPENDIX B

GEOPROBE SOIL BORING LOGS

GALLOWAY ENVIRONMENTAL, INC., 3102-220th PL SE, Sammamish, WA 98075, phone (425) 688-8852

Project No. 34040 **SOIL BORING LOG** Sheet 1 of 4

Project Name Lake Stevens Cleaners Boring No. P-1 Date & Time Started 10/27/2014
Project Location 303 91st Ave NE, Lake Stevens Boring Location See Figure 1-1
Drilling Contractor Cascade Drilling Co. Drilling Method GeoProbe Total Depth 20'
Client Powers & Therrien Sample Retrieval Method Liner Diameter, Wt., Drop
Site Manager Gary Galloway Logged By Gary Galloway Max Depth 20'
Closure Method Bentonite Water Depth 7' Date & Time Completed 10/27/2014

Depth (feet)	Sample No.	Blows per 6"	PID/OVA(ppm)	Sheen	Odor	Discolored	DESCRIPTION
							Asphalt 0 to 0.25 feet bgs
							0.25' to 0.75' - Brown, fine to course grained sand, damp, medium dense (md), no odors or stains
							0.75' to 2' - Light gray,, course grained sand, damp, dense pieces of broken concrete, no odors, etc.
5							2' to 5' - Brown, medium to course grained sand, damp, dense pieces of broken concrete, no odors, etc.
			0.0				5' to 7' - Till - Grayish tan, silty to fine grained sand, damp, dense
							7' to 7.5' - Grayish tan with black, well-rounded gravel & pebbles (10%), wet
							7.5' to 17' - Tan, fine grained silty sand, dense, damp, no odors, etc.
10							17' to 20' - Gray, fine grained sand, wet, dense, no odors or stains
			0.0				
							Collect soil and water samples from 18', PID = 0.0
							NOTE: Water appears to be seeping into hole from approx. 7' bgs
15							
			0.0				
20							

Signature Date October 27, 2014

GALLOWAY ENVIRONMENTAL, INC., 3102-220th PL SE, Sammamish, WA 98075, phone (425) 688-8852

Project No. 34040 **SOIL BORING LOG** Sheet 2 of 4

Project Name Lake Stevens Cleaners Boring No. P-2 Date & Time Started 10/27/2014
Project Location 303 91st Ave NE, Lake Stevens Boring Location See Figure 1-1
Drilling Contractor Cascade Drilling Co. Drilling Method GeoProbe Total Depth 20'
Client Powers & Therrien Sample Retrieval Method Liner Diameter, Wt., Drop
Site Manager Gary Galloway Logged By Gary Galloway Max Depth 20'
Closure Method Bentonite Water Depth 8' Date & Time Completed 10/27/2014

Depth (feet)	Sample No.	Blows per 6"	PID/OVA(ppm)	Sheen	Odor	Discolored	DESCRIPTION
							Asphalt 0 to 0.25 feet bgs
							0.25' to 1' - Brown, crushed rock (base), damp, dense
			0.0				1' to 3.5' - Dark brown, fine to med. grained sand, damp, md
							3.5' to 5' - Dark brown, fine to med. grained sand, damp, dense
							pieces of broken concrete, no odors, etc.
5							5' to 7.5'- Till - Dark brown, medium to course grained sand,
							damp, no odors, etc.
			0.0				7.5' to 8.2' - Till - Grayish brown, fine grained sand, moist to wet,
							dense Grayish tan with black, well-rounded gravel & pebbles
			0.0				8.2' to 17' - Gray, fine grained silty sand, very dense, (10%), damp
10							
			0.0				
							Collect soil and water samples from 20', PID = 0.0
							NOTE: Water appears to be seeping into hole from approx.
15			0.0				8' bgs
			0.0				
20							

Signature Mary McCamy Date October 27, 2014

GALLOWAY ENVIRONMENTAL, INC., 3102-220th PL SE, Sammamish, WA 98075, phone (425) 688-8852

Project No. 34040 **SOIL BORING LOG** Sheet 3 of 4

Project Name Lake Stevens Cleaners Boring No. P-3 Date & Time Started 10/27/2014
Project Location 303 91st Ave NE, Lake Stevens Boring Location See Figure 1-1
Drilling Contractor Cascade Drilling Co. Drilling Method GeoProbe Total Depth 10'
Client Powers & Therrien Sample Retrieval Method Liner Diameter, Wt., Drop
Site Manager Gary Galloway Logged By Gary Galloway Max Depth 10'
Closure Method Bentonite Water Depth 4.5' Date & Time Completed 10/27/2014

Depth (feet)	Sample No.	Blows per 6"	PID/OVA(ppm)	Sheen	Odor	Discolored	DESCRIPTION
							Asphalt 0 to 0.25 feet bgs
							0.25' to 1' - Dark brown, top soil damp, medium dense (md)
			0.0				1' to 4' - Tan, fine grained silty sand, moist at bottom, md, no odors or stains
			5.6				4' to 5' - Dark brown, fine to med. grained sand, damp, dense.
5							5' to 10'- Till - Tan to light brown, fine grained silty sand, water at 4.5' bgs,, no odors, etc.
			1.2				
			0.0				
10			0.0				
							Collect soil and water samples from 4', PID = 0.0
15							
20							

Signature Mary McCamy Date October 27, 2014

GALLOWAY ENVIRONMENTAL, INC., 3102-220th PL SE, Sammamish, WA 98075, phone (425) 688-8852

Project No. 34040

SOIL BORING LOG

Project Name Lake Stevens Cleaners Boring No. P-4 Date & Time Started 10/27/2014
Project Location 303 91st Ave NE, Lake Stevens Boring Location See Figure 1-1
Drilling Contractor Cascade Drilling Co. Drilling Method GeoProbe Total Depth 12'
Client Powers & Therrien Sample Retrieval Method Liner Diameter, Wt., Drop
Site Manager Gary Galloway Logged By Gary Galloway Max Depth 12'
Closure Method Bentonite Water Depth no water Date & Time Completed 10/27/2014

Depth (feet)	Sample No.	Blows per 6"	PID/OVA(ppm)	Sheen	Odor	Discolored	DESCRIPTION
							Asphalt 0 to 0.25 feet bgs
							0.25' to 1.25' - Grayish brown, crushed rock (base), dense, damp
			0.0				1.25' to 4' - Greenish gray, fine to course grained sand, damp, no
							odors or stains
			0.0				4' to 5' - Dark brown, fine to med. grained sand (top soil), damp,
5							medium dense to dense
			0.0				5' to 7.5'- Till - Tan to light brown, fine grained silty sand, damp
							very dense, no odors or stains
			0.0				7.5' to 12' - Tan, fine grained silty sand, damp, very dense, no
							odors or stains, minor water seeping from approximately 7'
							below the ground surface (not enough water to sample)
10			0.0				
							Collect soil and water samples from 7', PID = 0.0
15							
20							

Signature [signature] Date October 27, 2014

APPENDIX C

LABORATORY ANALYTICAL RESULTS

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

November 5, 2014

Gary Galloway
Galloway Environmental, Inc.
3102 220th Place SE
Sammamish, WA 98075

Re: Analytical Data for Project 34040
Laboratory Reference No. 1410-330

Dear Gary:

Enclosed are the analytical results and associated quality control data for samples submitted on October 28, 2014.

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: November 5, 2014
Samples Submitted: October 28, 2014
Laboratory Reference: 1410-330
Project: 34040

Case Narrative

Samples were collected on October 27, 2014 and received by the laboratory on October 28, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

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.

Halogenated Volatiles EPA 8260C (soil) Analysis

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

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

Date of Report: November 5, 2014
Samples Submitted: October 28, 2014
Laboratory Reference: 1410-330
Project: 34040

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**P1 @ 18'**					
Laboratory ID:	10-330-01					
Dichlorodifluoromethane	ND	0.0020	EPA 8260C	11-4-14	11-4-14	
Chloromethane	ND	0.0065	EPA 8260C	11-4-14	11-4-14	
Vinyl Chloride	ND	0.0012	EPA 8260C	11-4-14	11-4-14	
Bromomethane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
Chloroethane	ND	0.0040	EPA 8260C	11-4-14	11-4-14	
Trichlorofluoromethane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
1,1-Dichloroethene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
Iodomethane	ND	0.0040	EPA 8260C	11-4-14	11-4-14	
Methylene Chloride	ND	0.0040	EPA 8260C	11-4-14	11-4-14	
(trans) 1,2-Dichloroethene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
1,1-Dichloroethane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
2,2-Dichloropropane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
(cis) 1,2-Dichloroethene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
Bromochloromethane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
Chloroform	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
1,1,1-Trichloroethane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
Carbon Tetrachloride	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
1,1-Dichloropropene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
1,2-Dichloroethane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
Trichloroethene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
1,2-Dichloropropane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
Dibromomethane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
Bromodichloromethane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
2-Chloroethyl Vinyl Ether	ND	0.0040	EPA 8260C	11-4-14	11-4-14	
(cis) 1,3-Dichloropropene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
(trans) 1,3-Dichloropropene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**P1 @ 18'**					
Laboratory ID:	10-330-01					
1,1,2-Trichloroethane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
Tetrachloroethene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
1,3-Dichloropropane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
Dibromochloromethane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
1,2-Dibromoethane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
Chlorobenzene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
1,1,1,2-Tetrachloroethane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
Bromoform	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
Bromobenzene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
1,1,2,2-Tetrachloroethane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
1,2,3-Trichloropropane	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
2-Chlorotoluene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
4-Chlorotoluene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
1,3-Dichlorobenzene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
1,4-Dichlorobenzene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
1,2-Dichlorobenzene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
1,2-Dibromo-3-chloropropane	ND	0.0040	EPA 8260C	11-4-14	11-4-14	
1,2,4-Trichlorobenzene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
Hexachlorobutadiene	ND	0.0040	EPA 8260C	11-4-14	11-4-14	
1,2,3-Trichlorobenzene	ND	0.00080	EPA 8260C	11-4-14	11-4-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*113*	*76-131*				
Toluene-d8	*111*	*82-129*				
4-Bromofluorobenzene	*103*	*79-126*				

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**P2 @ 20'**					
Laboratory ID:	10-330-02					
Dichlorodifluoromethane	ND	0.0022	EPA 8260C	11-4-14	11-4-14	
Chloromethane	ND	0.0071	EPA 8260C	11-4-14	11-4-14	
Vinyl Chloride	ND	0.0013	EPA 8260C	11-4-14	11-4-14	
Bromomethane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
Chloroethane	ND	0.0044	EPA 8260C	11-4-14	11-4-14	
Trichlorofluoromethane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
1,1-Dichloroethene	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
Iodomethane	ND	0.0044	EPA 8260C	11-4-14	11-4-14	
Methylene Chloride	ND	0.0044	EPA 8260C	11-4-14	11-4-14	
(trans) 1,2-Dichloroethene	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
1,1-Dichloroethane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
2,2-Dichloropropane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
(cis) 1,2-Dichloroethene	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
Bromochloromethane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
Chloroform	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
1,1,1-Trichloroethane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
Carbon Tetrachloride	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
1,1-Dichloropropene	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
1,2-Dichloroethane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
Trichloroethene	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
1,2-Dichloropropane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
Dibromomethane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
Bromodichloromethane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
2-Chloroethyl Vinyl Ether	ND	0.0044	EPA 8260C	11-4-14	11-4-14	
(cis) 1,3-Dichloropropene	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
(trans) 1,3-Dichloropropene	ND	0.00087	EPA 8260C	11-4-14	11-4-14	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**P2 @ 20'**					
Laboratory ID:	10-330-02					
1,1,2-Trichloroethane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
Tetrachloroethene	0.025	0.00087	EPA 8260C	11-4-14	11-4-14	
1,3-Dichloropropane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
Dibromochloromethane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
1,2-Dibromoethane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
Chlorobenzene	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
1,1,1,2-Tetrachloroethane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
Bromoform	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
Bromobenzene	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
1,1,2,2-Tetrachloroethane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
1,2,3-Trichloropropane	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
2-Chlorotoluene	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
4-Chlorotoluene	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
1,3-Dichlorobenzene	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
1,4-Dichlorobenzene	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
1,2-Dichlorobenzene	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
1,2-Dibromo-3-chloropropane	ND	0.0044	EPA 8260C	11-4-14	11-4-14	
1,2,4-Trichlorobenzene	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
Hexachlorobutadiene	ND	0.0044	EPA 8260C	11-4-14	11-4-14	
1,2,3-Trichlorobenzene	ND	0.00087	EPA 8260C	11-4-14	11-4-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*112*	*76-131*				
Toluene-d8	*112*	*82-129*				
4-Bromofluorobenzene	*106*	*79-126*				

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**P3 @ 4'**					
Laboratory ID:	10-330-03					
Dichlorodifluoromethane	ND	0.0025	EPA 8260C	11-4-14	11-4-14	
Chloromethane	ND	0.0081	EPA 8260C	11-4-14	11-4-14	
Vinyl Chloride	ND	0.0015	EPA 8260C	11-4-14	11-4-14	
Bromomethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Chloroethane	ND	0.0050	EPA 8260C	11-4-14	11-4-14	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Iodomethane	ND	0.0050	EPA 8260C	11-4-14	11-4-14	
Methylene Chloride	ND	0.0050	EPA 8260C	11-4-14	11-4-14	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Bromochloromethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Chloroform	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Trichloroethene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Dibromomethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Bromodichloromethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	11-4-14	11-4-14	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**P3 @ 4'**					
Laboratory ID:	10-330-03					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Tetrachloroethene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Dibromochloromethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Chlorobenzene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Bromoform	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Bromobenzene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
2-Chlorotoluene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
4-Chlorotoluene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	11-4-14	11-4-14	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	11-4-14	11-4-14	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*113*	*76-131*				
Toluene-d8	*109*	*82-129*				
4-Bromofluorobenzene	*103*	*79-126*				

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Matrix: Soil
Units: mg/kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**P4 @ 7'**					
Laboratory ID:	10-330-04					
Dichlorodifluoromethane	ND	0.0027	EPA 8260C	11-4-14	11-4-14	
Chloromethane	ND	0.0087	EPA 8260C	11-4-14	11-4-14	
Vinyl Chloride	ND	0.0016	EPA 8260C	11-4-14	11-4-14	
Bromomethane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
Chloroethane	ND	0.0054	EPA 8260C	11-4-14	11-4-14	
Trichlorofluoromethane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
1,1-Dichloroethene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
Iodomethane	ND	0.0054	EPA 8260C	11-4-14	11-4-14	
Methylene Chloride	ND	0.0054	EPA 8260C	11-4-14	11-4-14	
(trans) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
1,1-Dichloroethane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
2,2-Dichloropropane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
(cis) 1,2-Dichloroethene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
Bromochloromethane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
Chloroform	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
1,1,1-Trichloroethane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
Carbon Tetrachloride	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
1,1-Dichloropropene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
1,2-Dichloroethane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
Trichloroethene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
1,2-Dichloropropane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
Dibromomethane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
Bromodichloromethane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
2-Chloroethyl Vinyl Ether	ND	0.0054	EPA 8260C	11-4-14	11-4-14	
(cis) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
(trans) 1,3-Dichloropropene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	

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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**P4 @ 7'**					
Laboratory ID:	10-330-04					
1,1,2-Trichloroethane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
Tetrachloroethene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
1,3-Dichloropropane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
Dibromochloromethane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
1,2-Dibromoethane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
Chlorobenzene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
1,1,1,2-Tetrachloroethane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
Bromoform	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
Bromobenzene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
1,1,2,2-Tetrachloroethane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
1,2,3-Trichloropropane	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
2-Chlorotoluene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
4-Chlorotoluene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
1,3-Dichlorobenzene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
1,4-Dichlorobenzene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
1,2-Dichlorobenzene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
1,2-Dibromo-3-chloropropane	ND	0.0054	EPA 8260C	11-4-14	11-4-14	
1,2,4-Trichlorobenzene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
Hexachlorobutadiene	ND	0.0054	EPA 8260C	11-4-14	11-4-14	
1,2,3-Trichlorobenzene	ND	0.0011	EPA 8260C	11-4-14	11-4-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*110*	*76-131*				
Toluene-d8	*112*	*82-129*				
4-Bromofluorobenzene	*107*	*79-126*				

Date of Report: November 5, 2014
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HALOGENATED 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:	MB1104S1					
Dichlorodifluoromethane	ND	0.0025	EPA 8260C	11-4-14	11-4-14	
Chloromethane	ND	0.0081	EPA 8260C	11-4-14	11-4-14	
Vinyl Chloride	ND	0.0015	EPA 8260C	11-4-14	11-4-14	
Bromomethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Chloroethane	ND	0.0050	EPA 8260C	11-4-14	11-4-14	
Trichlorofluoromethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,1-Dichloroethene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Iodomethane	ND	0.0050	EPA 8260C	11-4-14	11-4-14	
Methylene Chloride	ND	0.0050	EPA 8260C	11-4-14	11-4-14	
(trans) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,1-Dichloroethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
2,2-Dichloropropane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
(cis) 1,2-Dichloroethene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Bromochloromethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Chloroform	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,1,1-Trichloroethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Carbon Tetrachloride	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,1-Dichloropropene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,2-Dichloroethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Trichloroethene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,2-Dichloropropane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Dibromomethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Bromodichloromethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
2-Chloroethyl Vinyl Ether	ND	0.0050	EPA 8260C	11-4-14	11-4-14	
(cis) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
(trans) 1,3-Dichloropropene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	

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HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1104S1					
1,1,2-Trichloroethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Tetrachloroethene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,3-Dichloropropane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Dibromochloromethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,2-Dibromoethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Chlorobenzene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,1,1,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Bromoform	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Bromobenzene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,1,2,2-Tetrachloroethane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,2,3-Trichloropropane	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
2-Chlorotoluene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
4-Chlorotoluene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,3-Dichlorobenzene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,4-Dichlorobenzene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,2-Dichlorobenzene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
1,2-Dibromo-3-chloropropane	ND	0.0050	EPA 8260C	11-4-14	11-4-14	
1,2,4-Trichlorobenzene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Hexachlorobutadiene	ND	0.0050	EPA 8260C	11-4-14	11-4-14	
1,2,3-Trichlorobenzene	ND	0.0010	EPA 8260C	11-4-14	11-4-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*114*	*76-131*				
Toluene-d8	*112*	*82-129*				
4-Bromofluorobenzene	*108*	*79-126*				

Date of Report: November 5, 2014
Samples Submitted: October 28, 2014
Laboratory Reference: 1410-330
Project: 34040

HALOGENATED 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:	SB1104S1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**0.0412**	**0.0415**	0.0500	0.0500	82	83	66-129	1	15	
Benzene	**0.0487**	**0.0481**	0.0500	0.0500	97	96	71-123	1	15	
Trichloroethene	**0.0503**	**0.0479**	0.0500	0.0500	101	96	75-115	5	15	
Toluene	**0.0497**	**0.0475**	0.0500	0.0500	99	95	75-120	5	15	
Chlorobenzene	**0.0476**	**0.0456**	0.0500	0.0500	95	91	75-121	4	15	
Surrogate:										
Dibromofluoromethane					*101*	*102*	*76-131*			
Toluene-d8					*103*	*101*	*82-129*			
4-Bromofluorobenzene					*99*	*98*	*79-126*			

Date of Report: November 5, 2014
Samples Submitted: October 28, 2014
Laboratory Reference: 1410-330
Project: 34040

HALOGENATED VOLATILES EPA 8260C
page 1 of 2

Matrix: Water
Units: ug/L

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**P1**					
Laboratory ID:	10-330-05					
Dichlorodifluoromethane	ND	0.42	EPA 8260C	10-31-14	10-31-14	
Chloromethane	ND	1.0	EPA 8260C	10-31-14	10-31-14	
Vinyl Chloride	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Bromomethane	ND	0.30	EPA 8260C	10-31-14	10-31-14	
Chloroethane	ND	1.0	EPA 8260C	10-31-14	10-31-14	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Iodomethane	ND	1.6	EPA 8260C	10-31-14	10-31-14	
Methylene Chloride	ND	1.0	EPA 8260C	10-31-14	10-31-14	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Bromochloromethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Chloroform	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Trichloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Dibromomethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Bromodichloromethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	10-31-14	10-31-14	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-31-14	10-31-14	

Date of Report: November 5, 2014
Samples Submitted: October 28, 2014
Laboratory Reference: 1410-330
Project: 34040

HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**P1**					
Laboratory ID:	10-330-05					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Tetrachloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Dibromochloromethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Chlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Bromoform	ND	1.0	EPA 8260C	10-31-14	10-31-14	
Bromobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-31-14	10-31-14	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*107*	*79-122*				
Toluene-d8	*106*	*80-120*				
4-Bromofluorobenzene	*105*	*80-120*				

Date of Report: November 5, 2014
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Project: 34040

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**P2**					
Laboratory ID:	10-330-06					
Dichlorodifluoromethane	ND	0.42	EPA 8260C	10-31-14	10-31-14	
Chloromethane	ND	1.0	EPA 8260C	10-31-14	10-31-14	
Vinyl Chloride	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Bromomethane	ND	0.30	EPA 8260C	10-31-14	10-31-14	
Chloroethane	ND	1.0	EPA 8260C	10-31-14	10-31-14	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Iodomethane	ND	1.6	EPA 8260C	10-31-14	10-31-14	
Methylene Chloride	ND	1.0	EPA 8260C	10-31-14	10-31-14	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Bromochloromethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Chloroform	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Trichloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Dibromomethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Bromodichloromethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	10-31-14	10-31-14	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-31-14	10-31-14	

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HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**P2**					
Laboratory ID:	10-330-06					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Tetrachloroethene	40	0.20	EPA 8260C	10-31-14	10-31-14	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Dibromochloromethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Chlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Bromoform	ND	1.0	EPA 8260C	10-31-14	10-31-14	
Bromobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-31-14	10-31-14	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*118*	*79-122*				
Toluene-d8	*111*	*80-120*				
4-Bromofluorobenzene	*108*	*80-120*				

Date of Report: November 5, 2014
Samples Submitted: October 28, 2014
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Project: 34040

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

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**P3**					
Laboratory ID:	10-330-07					
Dichlorodifluoromethane	3.5	0.42	EPA 8260C	10-31-14	10-31-14	Y
Chloromethane	ND	1.0	EPA 8260C	10-31-14	10-31-14	
Vinyl Chloride	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Bromomethane	ND	0.30	EPA 8260C	10-31-14	10-31-14	
Chloroethane	ND	1.0	EPA 8260C	10-31-14	10-31-14	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Iodomethane	ND	1.6	EPA 8260C	10-31-14	10-31-14	
Methylene Chloride	ND	1.0	EPA 8260C	10-31-14	10-31-14	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Bromochloromethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Chloroform	1.5	0.20	EPA 8260C	10-31-14	10-31-14	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Trichloroethene	0.78	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Dibromomethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Bromodichloromethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	10-31-14	10-31-14	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-31-14	10-31-14	

Date of Report: November 5, 2014
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HALOGENATED VOLATILES EPA 8260C
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**P3**					
Laboratory ID:	10-330-07					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Tetrachloroethene	31	0.20	EPA 8260C	10-31-14	10-31-14	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Dibromochloromethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Chlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Bromoform	ND	1.0	EPA 8260C	10-31-14	10-31-14	
Bromobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-31-14	10-31-14	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*112*	*79-122*				
Toluene-d8	*107*	*80-120*				
4-Bromofluorobenzene	*105*	*80-120*				

Date of Report: November 5, 2014
Samples Submitted: October 28, 2014
Laboratory Reference: 1410-330
Project: 34040

HALOGENATED VOLATILES 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:	MB1031W1					
Dichlorodifluoromethane	ND	0.42	EPA 8260C	10-31-14	10-31-14	
Chloromethane	ND	1.0	EPA 8260C	10-31-14	10-31-14	
Vinyl Chloride	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Bromomethane	ND	0.30	EPA 8260C	10-31-14	10-31-14	
Chloroethane	ND	1.0	EPA 8260C	10-31-14	10-31-14	
Trichlorofluoromethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1-Dichloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Iodomethane	ND	1.6	EPA 8260C	10-31-14	10-31-14	
Methylene Chloride	ND	1.0	EPA 8260C	10-31-14	10-31-14	
(trans) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1-Dichloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
2,2-Dichloropropane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
(cis) 1,2-Dichloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Bromochloromethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Chloroform	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1,1-Trichloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Carbon Tetrachloride	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1-Dichloropropene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dichloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Trichloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dichloropropane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Dibromomethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Bromodichloromethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
2-Chloroethyl Vinyl Ether	ND	2.0	EPA 8260C	10-31-14	10-31-14	
(cis) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
(trans) 1,3-Dichloropropene	ND	0.20	EPA 8260C	10-31-14	10-31-14	

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HALOGENATED VOLATILES EPA 8260C
METHOD BLANK QUALITY CONTROL
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Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1031W1					
1,1,2-Trichloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Tetrachloroethene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,3-Dichloropropane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Dibromochloromethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dibromoethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Chlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1,1,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Bromoform	ND	1.0	EPA 8260C	10-31-14	10-31-14	
Bromobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,1,2,2-Tetrachloroethane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2,3-Trichloropropane	ND	0.20	EPA 8260C	10-31-14	10-31-14	
2-Chlorotoluene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
4-Chlorotoluene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,3-Dichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,4-Dichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2-Dibromo-3-chloropropane	ND	1.0	EPA 8260C	10-31-14	10-31-14	
1,2,4-Trichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Hexachlorobutadiene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
1,2,3-Trichlorobenzene	ND	0.20	EPA 8260C	10-31-14	10-31-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
Dibromofluoromethane	*99*	*79-122*				
Toluene-d8	*105*	*80-120*				
4-Bromofluorobenzene	*95*	*80-120*				

Date of Report: November 5, 2014
Samples Submitted: October 28, 2014
Laboratory Reference: 1410-330
Project: 34040

HALOGENATED VOLATILES 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:	SB1031W1									
	SB	SBD	SB	SBD	SB	SBD				
1,1-Dichloroethene	**10.8**	**9.16**	10.0	10.0	108	92	64-138	16	16	
Benzene	**11.2**	**10.3**	10.0	10.0	112	103	76-125	8	14	
Trichloroethene	**9.96**	**9.07**	10.0	10.0	100	91	75-125	9	16	
Toluene	**11.5**	**10.7**	10.0	10.0	115	107	75-125	7	15	
Chlorobenzene	**9.86**	**9.10**	10.0	10.0	99	91	80-140	8	15	
Surrogate:										
Dibromofluoromethane					*107*	*103*	*79-122*			
Toluene-d8					*104*	*104*	*80-120*			
4-Bromofluorobenzene					*100*	*99*	*80-120*			

Date of Report: November 5, 2014
Samples Submitted: October 28, 2014
Laboratory Reference: 1410-330
Project: 34040

% MOISTURE

Date Analyzed: 11-4-14

Client ID	Lab ID	% Moisture
P1 @ 18'	10-330-01	9
P2 @ 20'	10-330-02	7
P3 @ 4'	10-330-03	6
P4 @ 7'	10-330-04	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

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

Laboratory Number: 10-330

Company: Galloway Env.
Project Number: 34040
Project Name: LK Stevens
Project Manager: Gary Galloway
Sampled by: Gary Galloway

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

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	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/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	P1@18'	10/27/14	11:30	S	4						X										X
2	P2@20'		12:20		4						X										
3	P3@4'		13:30		4						X										
4	P4@7'		14:30		4						X										
5	P2		11:30	W	2						X										
6	P2		12:20	W	2						X										
7	P3		13:30	W	2						X										

	Signature	Company	Date	Time
Relinquished		Galloway Env.	10/28/14	12:42
Received		OSE	10/28/14	1242
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Level III ☐ Level IV ☐ Electronic Data Deliverables (EDDs) ☐ _____

APPENDIX D

SAMPLING AND ANALYTICAL PROCEDURES

SAMPLING PROTOCOLS

The objective of the sampling program was to collect continuous soil samples from the ground surface to the bottom of the GeoProbe locations for field screening and confirmatory laboratory chemical analysis Freidman & Bruya, Inc.'s Laboratory's facility in Seattle, Washington. Figure 2-1 shows the sample locations.

The sampling protocols and procedures followed appropriate state and federal guidance documents, primarily EPA SW-846 and Washington State guidance documents (including EPA Method 5035A). GEI selected the Laboratory Preservation option for soil sampling for volatiles under EPA Method 5035A.

Sampling Procedures

Soil Sampling

Soil sampling was the primary method of site contaminant characterization. To investigate for the presence of soil contamination, GEI collected discrete soil samples from the GeoProbes for field-testing and chemical analyses. The soil samples were recovered at each sample location using procedures designed to minimize the risk of cross contamination of the samples. Laboratory-supplied glass jars, VOA vials, and Teflon tubes were provided by the laboratory to be used at each sample location. The sampling equipment was thoroughly decontaminated prior to its use and between sampling locations using a Liquinox wash (or equivalent) solution followed by a distilled water rinse.

Soil was field screened for obvious signs of adverse impacts (discolored soil, obvious odors, etc.). The following summary describes the sampling and field-testing of the soil samples.

At each sample location, GEI collected approximately 5 grams of soil in pre-weighed 40-mil VOA vials and 4-ounce glass jars. Soil samples were collected and preserved in the 40-mil VOA vials using the laboratory-supplied Teflon coring device per EPA Method 5035A. Soil samples in the 4-ounce glass jar were collected with a decontaminated stainless steel spoon or were placed directly into the glass container without the use of the spoon.

Water Sampling

Water sampling was performed at three GeoProbe locations. To investigate for the presence of water contamination, GEI collected water samples from the GeoProbes penetrations. At each location GEI asked the driller to pull back the probe approximately and let the solids in the water settle for approximately 10 minutes prior to sampling. The driller used a peristaltic pump to pump the water from each boring through a 0.45 micron filter and then directly into 40 ml vials and a 500 millimeter amber, glass jar.

The water samples were recovered at each sample location using procedures designed to minimize the risk of cross contamination of the samples. Laboratory-supplied glass jars, VOA vials, and dedicated Teflon tubing (single-use tubing) were used at each sample location. The sampling equipment was thoroughly decontaminated prior to its use and between sampling locations using a Liquinox wash (or equivalent) solution followed by a distilled water rinse.

Handling, storage, and shipment

All of the samples were properly labeled, stored in a chilled container (preserved with ice to approximately 4 degrees Centigrade), and hand-delivered to a local Washington State-Certified laboratory on their collection date, under proper chain-of-custody protocols. A field logbook documented all of the field activities, problems encountered, and other relevant information regarding the sampling. The samples were hand-delivered to OnSite Laboratory in Redmond, Washington for chemical analysis *(see Appendix B – Laboratory Analytical Data Sheets).*

Laboratory Analysis

Chemical Analysis

GEI submitted representative soil samples from each sample location to a Washington State Certified laboratory (OnSite Environmental Laboratory) to test for petroleum hydrocarbons in the soil using NWTPH Hydrocarbon Identification (HCID) Method and Halogenated Volatiles (solvents) using EPA 8260B method.

Quality Assurance/Quality Control

Ecology- and EPA-recommended Quality Assurance/Quality Control Procedures (QA/QC) field sampling, decontamination of equipment, and shipping and handling procedures were followed throughout the field investigation. The analytical results indicate that the sampling equipment was properly decontaminated and that no cross-contamination occurred between samples and laboratory results are within method-specified QA/QC limits.

Health and Safety

The field investigation activities at this site were conducted in accordance with GEI's Corporate Health and Safety Program. The health and safety program was successfully implemented and no adverse health and safety incidents were observed or reported.