

November 21, 2008

Mr. Ed Jones, Project Manager Washington State Department of Ecology 3190 160<sup>th</sup> Avenue Southeast Bellevue, Washington 98008-5452

RE: PROGRESS REPORT, JULY THROUGH SEPTEMBER 2008, QUARTER 3
CAPITAL INDUSTRIES, INC., SEATTLE, WASHINGTON
AGREED ORDER NO. DE5348
FARALLON PN: 457-004

Dear Mr. Jones:

Farallon Consulting L.L.C. (Farallon) has prepared this progress report on behalf of Capital Industries Inc. (Capital) to summarize the activities conducted from July through September 2008 – Quarter 3 (Q3) at the Capital Site located at 5801 3<sup>rd</sup> Avenue South in Seattle, Washington. The progress report has been prepared in accordance with Agreed Order No. DE5348 entered into by Capital and the Washington State Department of Ecology (Ecology) dated January 24, 2008.

#### **ACTIVITIES DURING REPORTING PERIOD**

Activities completed between July and September 2008 - Q3 are summarized below.

#### REMEDIAL INVESTIGATION WORK PLAN

A revised Remedial Investigation Work Plan (RI Work Plan) was submitted to Ecology on September 16, 2008. Revisions to the RI Work Plan were made based on Ecology comments on the draft RI Work Plan dated May 28, 2008 and subsequent meetings with Ecology approval of the RI Work Plan was not received during this reporting period.

#### FIELD SAMPLING

Capital began redeveloping a vacated portion of 2<sup>nd</sup> Avenue South between South Mead Street and South Fidalgo Street located between Capital Plants 1 and 2 in June 2008. Redevelopment included removal of asphalt paving and excavation of soil. Soil samples were collected by Farallon from the exposed subgrade at the 2<sup>nd</sup> Avenue South redevelopment area for analysis of halogenated volatile organic compounds (HVOCs) in soil.

Sampling activities conducted on June 30 and July 16, 2008 included collection of soil samples from the base of an electrical vault excavation and eight test pits spaced approximately equally across the exposed subgrade. Soil samples were collected were collected at 0.5 foot below ground surface (bgs) and 1.0 foot bgs at each location. Soil samples were collected from the electrical vault excavation at 9.5 feet bgs, above the depth of groundwater at 10 feet bgs. The



soil samples were submitted for analysis for HVOCs by U.S. Environmental Protection Agency (EPA) Method 8260B. Sampling locations are presented on the attached Figure 1.

Boring identification SSR-1 was repeated from the sampling activities conducted on June 30, 2008. The identifier for the sample collected from the electrical vault excavation at 9.5 feet bgs on June 30, 2008 has been modified to SSR-1A.

Analytical results for the 16 soil samples collected from test pits and the one soil sample collected from the electrical vault excavation did not detect concentrations of HVOCs above soil screening levels or laboratory practical quantitation limits (PQLs). The analytical results are presented in Table 1. Copies of the laboratory analytical reports for the soil samples collected by Farallon are included in Attachment A.

#### INTERIM MEASURES

No interim measures were implemented during this reporting period.

# VAPOR INTRUSION ASSESSMENT WORK PLAN

A revised Vapor Intrusion Assessment Work Plan (VIA Work Plan) was submitted to Ecology on September 16, 2008. Revisions to the VIA Work Plan were made based on Ecology comments on the draft VIA Work Plan dated May 28, 2008. Ecology approval of the VIA Work Plan was not received during this reporting period.

# VAPOR INTRUSION MITIGATION - OLYMPIC MEDICAL BUILDING AT 5900 $1^{\rm ST}$ AVENUE SOUTH

Access to the Olympic Medical Building at 5900 1<sup>st</sup> Avenue South in Seattle, Washington was granted to Capital in September 2008. Diagnostic testing necessary to design the sub-slab depressurization system at the Olympic Medical Building was scheduled for October 2008.

# **GROUNDWATER MONITORING**

Groundwater level measurements were collected on August 1, 2008 and the results are presented in Table 2. Water level measurements were coordinated with Philip Service Corporation and Art Brass Plating at the request of Ecology. Groundwater samples were not collected during Q3.

# **PUBLIC COMMUNICATIONS**

A revised Public Participation Plan (PPP) was submitted to Ecology on September 16, 2008. Revisions to the PPP were made based on Ecology comments on the draft PPP dated April 29, 2008. The PPP was approved by Ecology on September 22, 2008.

# ANTICIPATED WORK IN THE UPCOMING QUARTER

Work anticipated to be performed during the next progress reporting period (October through December 2008) is summarized below.



#### REMEDIAL INVESTIGATION

Approval of the RI Work Plan is anticipated to be received from Ecology during the next reporting period. The following RI activities are anticipated to be performed during the next reporting period:

- Historical research, including a review of aerial photographs, building permits, regulatory files, insurance maps, Sanborn maps, Polk City Directories, utility maps, and other relevant information for properties relevant to Capital Site;
- Provision of reasonable notice to public and private property residents, occupants, owners, and/or other persons in custody of property where access is required to conduct Tier 1 Reconnaissance Groundwater Sampling and Analysis; and
- Tier 1 Reconnaissance Groundwater Sampling and Analysis (i.e., reconnaissance borings B6 through B18).

#### INTERIM MEASURES

No interim measures are anticipated during the next reporting period.

# VAPOR INTRUSION MITIGATION - OLYMPIC MEDICAL BUILDING AT 5900 $1^{\rm ST}$ AVENUE SOUTH

Approval of the VIA Work Plan is anticipated to be received from Ecology during the next reporting period. The following vapor intrusion activities are anticipated to be performed during the next reporting period:

- Sub-slab depressurization system diagnostic testing at the Olympic Medical Building;
- Submittal of a permit application to the City of Seattle to obtain a Mechanical Expedited (Full) Permit for the sub-slab depressurization system proposed for the Olympic Medical Building;
- Submittal of a draft Vapor Intrusion Mitigation Design Plan to Ecology for approval of the sub-slab depressurization system design at the Olympic Medical Building;
- Installation of a sub-slab depressurization system within the Olympic Medical Building;
- Post-installation negative pressure field extension monitoring at the Olympic Medical Building;
- Soil vapor intrusion modeling using the EPA Johnson & Ettinger Model for Surface Vapor Intrusion into Buildings for office areas located within Capital Plant 2; and
- Soil vapor intrusion modeling using the EPA Johnson & Ettinger Model for Surface Vapor Intrusion into Buildings for the Capital shipping area located within Capital Plant 1.



#### GROUNDWATER MONITORING

Groundwater level measurements will be collected in December 2008. Collection of water levels will be coordinated with Blaser Die Casting and Art Brass Plating at the request of Ecology. Groundwater samples are not anticipated to be collected during the upcoming quarter.

#### PUBLIC COMMUNICATIONS

No public communications are anticipated during the next reporting period.

#### CLOSING

The next progress report will summarize activities completed from October through December 2008 and will be submitted on or before February 24, 2009.

Farallon trusts that this monthly progress report provides sufficient information for Ecology. If you have any questions regarding this project, please contact either of the undersigned at (425) 295-0800.

Sincerely,

Farallon Consulting, L.L.C.

Daniel Caputo Task Manager Peter Jewett, L.G., L.E.G.

Principal

Attachments: Figure 1, Test Pit and Electrical Yault Sampling Locations

Table 1, Second Avenue South HVOC Soil Analytical Data

Table 2, Groundwater Elevation Data Summary Attachment A, Laboratory Analytical Results

ce: Ron Taylor, Capital Industries, Inc.

Don Verfurth, Gordon and Rees, L.L.P.

Email with link to electronic copy on project website:

Janet Knox, Pacific Groundwater Group

Doug Hillman, Aspect Consulting

Bill Carroll, Arrow Environmental

Bill Beck, PSC

DC/PJ:bw

# **FIGURE**

PROGRESS REPORT, JULY THROUGH SEPTEMBER 2008, QUARTER 3
Capital Industries, Inc.
Seattle, Washington

Farallon PN: 457-004

# SOUTH MEAD STREET



# **TABLES**

PROGRESS REPORT, JULY THROUGH SEPTEMBER 2008, QUARTER 3
Capital Industries, Inc.
Seattle, Washington

Farallon PN: 457-004

Table 1
Second Avenue South HVOC Soil Analytical Data
Capital Industries, Inc.
Seattle, Washington
Farallon PN: 457-004

Sample	Sommle Identification	Depth	2	William Co.	Soil Analy	Soil Analytical Results (milligrams per kilogram)	s per kilogram)	
Location	Sample Inchilication	(feet) <sup>1</sup>	Sample Date	PCE <sup>3</sup>	TCE	cis 1,2-DCE <sup>3</sup>	trans-1,2-DCE <sup>3</sup>	Vinyl Chloride <sup>3</sup>
SSR-1A <sup>4</sup>	SSR-1A-9.5-063008 <sup>4</sup>	9.5	80/08/9	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
SSB-14	SSR-1-0.5-071608	0.5	2/16/08	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
2000	SSR-1-1.0-071608	1.0	7/16/08	<0.00091	<0.00091	<0.00091	<0.00091	<0.00091
CCB-2	SSR-2-0.5-071608	0.5	2/16/08	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
0018-2	SSR-2-1.0-071608	1.0	2/16/08	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
SSB_3	SSR-3-0.5-071608	. 0.5	80/91/L	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
CONCO	SSR-3-1.0-071608	1.0	7/16/08	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
SSB-4	SSR-4-0.5-071608	0.5	2/16/08	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
LAIGG	SSR-4-1.0-071608	1.0	7/16/08	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
5'055	SSR-5-0.5-071608	0.5	2/16/08	0.00087	0.00087	0.00087	0.00087	0.00087
CARC	SSR-5-1.0-071608	1.0	7/16/08	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
9-855	SSR-6-0.5-071608	6.5	2/16/08	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
	SSR-6-1.0-071608	1.0	2/16/08	<0.0013	<0.0013	<0.0013	<0.0013	<0.0013
CSB-7	SSR-7-0.5-071608	0.5	2/16/08	<0.00089	<0.00089	<0.00089	68000:0>	<0.00089
) NOC	SSR-7-1.0-071608	1.0	7/16/08	<0.0011	<0.0011	<0.0011	<0.0011	<0.0011
8-855	SSR-8-0.5-071608	0.5	7/16/08	<0.0012	<0.0012	<0.0012	<0.0012	<0.0012
o Noo	SSR-8-1.0-071608	1.0	7/16/08	<0.00093	<0.00093	<0.00093	<0.00093	<0.00093
Remedial In	Remedial Investigation Work Plan Soil Screening Levels <sup>5</sup>	creening Levek	SS	0.0031	0.0028	0.00993	0.00969	0.005

NOTES:

Results in bold denote concentrations above applicable cleanup levels.

< denotes analyte not detected at or above the reporting limit listed.

DCE = dichloroethene

HVOCs = halogenated volatile organic compounds

PCE = tetrachloroethene

TCE = trichloroethene

Depth in feet below ground surface (bgs).

<sup>&</sup>lt;sup>2</sup>Samples collected by Faralion Consulting, L.L.C.

<sup>&</sup>lt;sup>3</sup>Analyzed by U.S. Environmental Protection Agency Method 8260B.

<sup>&</sup>lt;sup>4</sup>Boring identification SSR-1 was repeated during sampling activities conducted on July 16, 2008 from the sampling activities conducted on June 30, 2008. The identifier for the sample collected from the electrical vault excavation at 9.5 feet bgs on June 30, 2008 has been modified to SSR-1A.

Screening levels are presented in Table 4 of the Capital Industries Remedial Investigation Work Plan dated September 16, 2008.

# Table 2 Groundwater Elevation Data Summary Capital Industries, Inc. Seattle, Washington

Farallon PN: 457-004

Well Identification	Date Measured	Top of Casing Elevation (feet msl) <sup>1</sup>	Depth to Water (feet) <sup>2</sup>	Groundwater Elevation (feet msl)
	2/9/06	16.34	6.60	9.74
MW-1	5/15/07	16.34	7.66	8.68
	8/1/08	16.34	8.60	7.74
	2/9/06	16.48	7.25	9.23
MW-2	5/15/07	16.48	8.29	8.19
	8/1/08	16.48	9.14	7.34
	2/9/06	15.74	6.84	8.90
MW-3	5/15/07	15.74	7.85	7.89
	8/1/08	15.74	8.61	7.13
	2/9/06	15.62	6.39	9.23
MW-4	5/15/07	15.62	7.35	8.27
	8/1/08	15.62	8.17	7.45
	2/9/06	15.90	6.30	9.60
MW-5	5/15/07	15.90	7.41	8.49
	8/1/08	15.90	8.31	7.59
	2/9/06	17.43	7.72	9.71
MW-6	5/15/07	17.43	8.58	8.85
	8/1/08	17.43	9.51	7.92
	2/9/06	16.93	7.32	9.61
MW-7	5/15/07	16.93	8.19	8.74
	8/1/08	16.83	9.10	7.73
	2/9/06	16.68	6.71	9.97
MW-8	5/15/07	16.68	7.60	9.08
	8/1/08	16.68	8.57	8.11
PSC-CG-137-WT	5/15/07	15.39	7.56	7.83
13C*CG*13/*W1	8/1/08	15.39	8.40	6.99
PSC-CG-137-40	5/15/07	15.43	7.58	7.85
130-00-137-40	8/1/08	15.43	8.42	7.01
PSC-CG-141-WT	8/1/08	16.61	10.11	6.50
PSC-CG-141-40	8/1/08	16.66	10.27	6.39
PSC-CG-141-50	8/1/08	16.68	10.21	6.47

#### NOTES:

<sup>&</sup>lt;sup>1</sup>Elevations based on an arbitrary 100-foot datum established at the Site.

<sup>&</sup>lt;sup>2</sup>In feet below top of well casing.

# ATTACHMENT A LABORATORY ANALYTICAL RESULTS

PROGRESS REPORT, JULY THROUGH SEPTEMBER 2008, QUARTER 3
Capital Industries, Inc.
Seattle, Washington

Farallon PN: 457-004



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

July 1, 2008

Dan Caputo Farallon Consulting, LLC 975 5<sup>th</sup> Avenue NW Issaquah, WA 98027

Re:

Analytical Data for Project 457-004 Laboratory Reference No. 0806-224

Dear Dan:

Enclosed are the analytical results and associated quality control data for samples submitted on June 30, 2008.

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: July 1, 2008

Samples Submitted: June 30, 2008 Laboratory Reference: 0806-224

Project: 457-004

#### **Case Narrative**

Samples were collected on June 30, 2008 and received by the laboratory on June 30, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

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

#### Halogenated Volatiles EPA 8260B Analysis

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

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

Date of Report: July 1, 2008

Samples Submitted: June 30, 2008 Laboratory Reference: 0806-224

Project: 457-004

# **HALOGENATED VOLATILES by EPA 8260B**

Page 1 of 2

Date Extracted:

6-30-08

Date Analyzed:

6-30-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

06-224-01

Client ID:

SSR-1-SP-063008

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND	•	0.0010
Chloromethane	ND		0.0051
Vinyl Chloride	ND		0.0010
Bromomethane	ND		0.0010
Chloroethane	ND		0.0051
Trichlorofluoromethane	ND		0.0010
1,1-Dichloroethene	ND		0.0010
lodomethane	ND		0.0051
Methylene Chloride	ND		0.0051
(trans) 1,2-Dichloroethene	ND		0.0010
1,1-Dichloroethane	ND .		0.0010
2,2-Dichloropropane	ND		0.0010
(cis) 1,2-Dichloroethene	ND		0.0010
Bromochloromethane	ND		0.0010
Chloroform	ND		0.0010
1,1,1-Trichloroethane	ND		0.0010
Carbon Tetrachloride	ND		0.0010
1,1-Dichloropropene	ND		0.0010
1,2-Dichloroethane	ND		0.0010
Trichloroethene	ND		0.0010
1,2-Dichloropropane	ND		0.0010
Dibromomethane	ND		0.0010
Bromodichloromethane	ND		0.0010
2-Chloroethyl Vinyl Ether	ND		0.0051
(cis) 1,3-Dichloropropene	ND		0.0010
(trans) 1,3-Dichloropropene	ND		0.0010

Project: 457-004

# **HALOGENATED VOLATILES by EPA 8260B**

Page 2 of 2

Lab ID: Client ID:

06-224-01

SSR-1-SP-063008

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND	· ·	0.0010
Tetrachloroethene	ND		0.0010
1,3-Dichloropropane	ND		0.0010
Dibromochloromethane	ND		0.0010
1,2-Dibromoethane	ND		0.0010
Chlorobenzene	ND		0.0010
1,1,1,2-Tetrachloroethane	ND	1 cens as 1	0.0010
Bromoform	ND		0.0010
Bromobenzene	ND		0.0010
1,1,2,2-Tetrachloroethane	ND		0.0010
1,2,3-Trichloropropane	ND		0.0010
2-Chlorotoluene	ND		0.0010
4-Chlorotoluene	ND		0.0010
1,3-Dichlorobenzene	ND		0.0010
1,4-Dichlorobenzene	ND		0.0010
1,2-Dichlorobenzene	ND		0.0010
1,2-Dibromo-3-chloropropane	ND		0.0051
1,2,4-Trichlorobenzene	ND		0.0010
Hexachlorobutadiene	ND		0.0051
1,2,3-Trichlorobenzene	ND		0.0010

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	85	70-118
Toluene-d8	89	70-121
4-Bromofluorobenzene	94	70-130

Date of Report: July 1, 2008 Samples Submitted: June 30, 2008

Laboratory Reference: 0806-224

Project: 457-004

# HALOGENATED VOLATILES by EPA 8260B

Page 1 of 2

Date Extracted:

6-30-08

Date Analyzed:

6-30-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

06-224-02

Client ID:

SSR-1-9.5-063008

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND	_	0.0013
Chloromethane	ND		0.0063
Vinyl Chloride	ND		0.0013
Bromomethane	ND		0.0013
Chloroethane	ND		0.0063
Trichlorofluoromethane	ND		0.0013
1,1-Dichloroethene	ND		0.0013
lodomethane	ND	•	0.0063
Methylene Chloride	ND		0.0063
(trans) 1,2-Dichloroethene	ND		0.0013
1,1-Dichloroethane	ND		0.0013
2,2-Dichloropropane	ND		0.0013
(cis) 1,2-Dichloroethene	ND		0.0013
Bromochloromethane	ND		0.0013
Chloroform	ND		0.0013
1,1,1-Trichloroethane	ND		0.0013
Carbon Tetrachloride	ND		0.0013
1,1-Dichloropropene	ND		0.0013
1,2-Dichloroethane	ND		0.0013
Trichloroethene	ND		0.0013
1,2-Dichloropropane	ND		0.0013
Dibromomethane	ND		0.0013
Bromodichloromethane	ND		0.0013
2-Chloroethyl Vinyl Ether	ND		0.0063
(cis) 1,3-Dichloropropene	ND		0.0013
(trans) 1,3-Dichloropropene	ND		0.0013

Project: 457-004

# **HALOGENATED VOLATILES by EPA 8260B**

Page 2 of 2

Lab ID:

06-224-02

Client ID:

SSR-1-9.5-063008

Compound 1,1,2-Trichloroethane Tetrachloroethene	Results ND	Flags	<b>PQL</b> 0.0013
1,3-Dichloropropane	ND ND		0.0013
Dibromochloromethane	ND ND		0.0013
1,2-Dibromoethane	ND		0.0013
Chlorobenzene	ND		0.0013
1,1,1,2-Tetrachloroethane	ND	e in a registration of the	0.0013
Bromoform	ND		0.0013
Bromobenzene	ND		0.0013
1,1,2,2-Tetrachloroethane	ND		0.0013
1,2,3-Trichloropropane	ND		0.0013
2-Chlorotoluene	ND		0.0013
4-Chlorotoluene	ND		0.0013
1,3-Dichlorobenzene	ND		0.0013
1,4-Dichlorobenzene	ND		0.0013
1,2-Dichlorobenzene	ND		0.0013
1,2-Dibromo-3-chloropropane	ND		0.0063
1,2,4-Trichlorobenzene	ND		0.0013
Hexachlorobutadiene	ND		0.0063
1,2,3-Trichlorobenzene	ND		0.0013

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	85	70-118
Toluene-d8	89	70-121
4-Bromofluorobenzene	102	70-130

Project: 457-004

# HALOGENATED VOLATILES by EPA 8260B METHOD BLANK QUALITY CONTROL

Page 1 of 2

Date Extracted:

6-30-08

Date Analyzed:

6-30-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

MB0630S1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND	_	0.0010
Chloromethane	ND		0.0050
Vinyl Chloride	ND		0.0010
Bromomethane	ND		0.0010
Chloroethane	ND		0.0050
Trichlorofluoromethane	ND		0.0010
1,1-Dichloroethene	ND		0.0010
lodomethane	ND		0.0050
Methylene Chloride	0.0082		0.0050
(trans) 1,2-Dichloroethene	ND		0.0010
1,1-Dichloroethane	ND		0.0010
2,2-Dichloropropane	ND		0.0010
(cis) 1,2-Dichloroethene	ND		0.0010
Bromochloromethane	ND		0.0010
Chloroform	ND		0.0010
1,1,1-Trichloroethane	ND		0.0010
Carbon Tetrachloride	ND		0.0010
1,1-Dichloropropene	ND		0.0010
1,2-Dichloroethane	ND		0.0010
Trichloroethene	ND		0.0010
1,2-Dichloropropane	ND		0.0010
Dibromomethane	ND		0.0010
Bromodichloromethane	ND		0.0010
2-Chloroethyl Vinyl Ether	ND		0.0050
(cis) 1,3-Dichloropropene	ND		0.0010
(trans) 1,3-Dichloropropene	ND		0.0010

Date of Report: July 1, 2008 Samples Submitted: June 30, 2008 Laboratory Reference: 0806-224 Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B** METHOD BLANK QUALITY CONTROL

Page 2 of 2

Lab ID:

MB0630S1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0010
Tetrachloroethene	ND		0.0010
1,3-Dichloropropane	ND		0.0010
Dibromochloromethane	ND		0.0010
1,2-Dibromoethane	ND		0.0010
Chlorobenzene	ND		0.0010
1,1,1,2-Tetrachloroethane	ND		0.0010
Bromoform	ND		0.0010
Bromobenzene	ND		0.0010
1,1,2,2-Tetrachloroethane	ND		0.0010
1,2,3-Trichloropropane	ND		0.0010
2-Chlorotoluene	ND		0.0010
4-Chlorotoluene	ND		0.0010
1,3-Dichlorobenzene	ND		0.0010
1,4-Dichlorobenzene	ND		0.0010
1,2-Dichlorobenzene	ND		0.0010
1,2-Dibromo-3-chloropropane	ND		0.0050
1,2,4-Trichlorobenzene	ND		0.0010
Hexachlorobutadiene	ND		0.0050
1,2,3-Trichlorobenzene	ND		0.0010

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	86	70-118
Toluene-d8	88	70-121
4-Bromofluorobenzene	103	70-130

Project: 457-004

#### HALOGENATED VOLATILES by EPA 8260B SB/SBD QUALITY CONTROL

Date Extracted:

6-30-08

Date Analyzed:

6-30-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

SB0630S1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	0.0500	0.0371	74	0.0404	81	70-130	
Benzene	0.0500	0.0395	79	0.0397	79	70-127	
Trichloroethene	0.0500	0.0416	83	0.0458	92	73-117	
Toluene	0.0500	0.0446	89	0.0460	92	78-115	
Chlorobenzene	0.0500	0.0448	90	0.0479	96	80-117	
	RPD	RPD Limit	Flags				

	RPD		
	RPD	Limit	Flags
1,1-Dichloroethene	9	10	
Benzene	1	11	
Trichloroethene	10	13	
Toluene	3	12	
Chlorobenzene	7	10	

Date of Report: July 1, 2008

Samples Submitted: June 30, 2008 Laboratory Reference: 0806-224

Project: 457-004

#### % MOISTURE

Date Analyzed:

6-30-08

Client ID	Lab ID	% Moisture
SSR-1-SP-063008	06-224-01	17
SSR-1-9.5-063008	06-224-02	24



#### **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.
- 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.
- Y Sample extract treated with an acid/silica gel cleanup procedure.

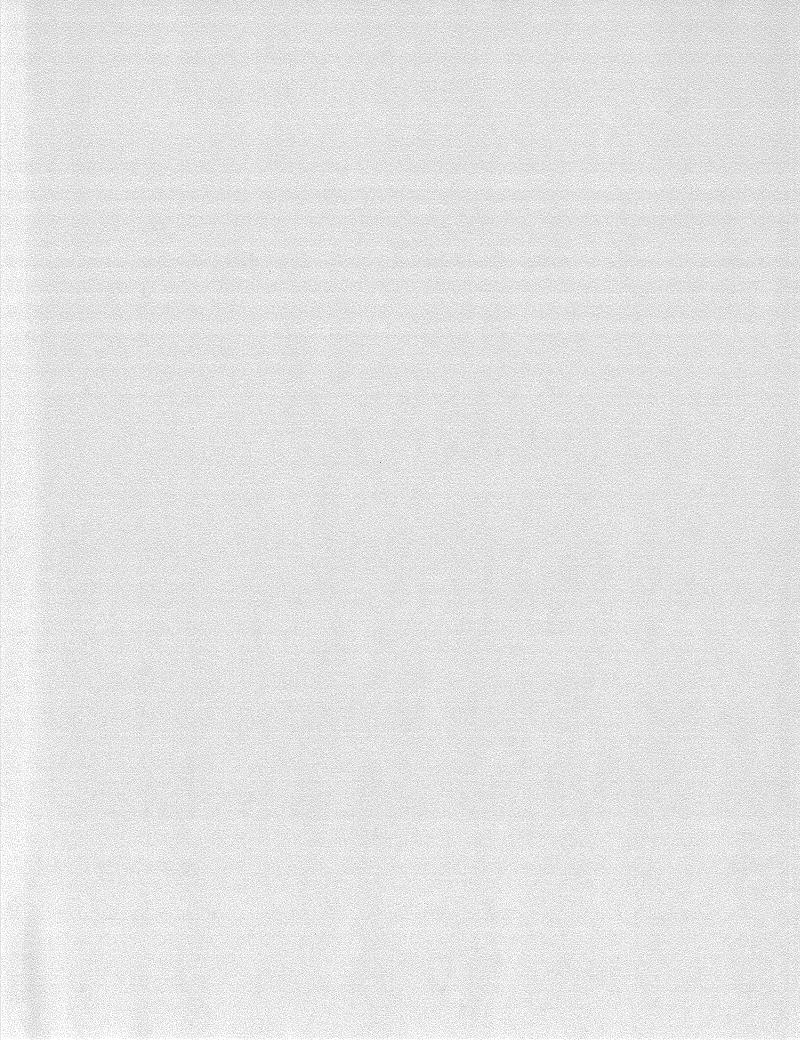
Z -

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

Chain of Custody

% Moisture 8 ō Yample 55R-1-9.5-053008 55A-1-59-063008 -340CA 226 X standard turnstand 24 hoor ton around Chromatograms with final report Comments/Special Instructions: Requested Analysis HEM DY 1664 06-224 TCLP Metals Total RCRA Metals (8) Sample Herbicides by 8151A Pesticides by 8081A PCBs by 8082 Laboratory Number: MIS \ G0YS8 vd eHA9 6/30/0K 11:30 Gemivolatiles by 8270D × Halogenated Volatiles by 8260B 40928 yd selitelov **XO-H9TWN** Date NWTPH-Gx/BTEX имтрн-нсір (TPH analysis 5 working days) 🔏 1 Day ☐ 3 Day # of Cont. す J Standard (7 working days) Turnaround Request (in working days) (Check One) S S Reviewed by/Date (other) Company 02/34/08 1020 5001 80/05/30 Time Same Day ☐ 2 Day A Onsite Environmental Inc. Phone: (425) 883-3881 • Fax: (425) 885-4603 Sample Identification - 0630c8 55R-1-5P-063008 Tradostrica Dan Capalto 55R-1-9.5 HE4-004 Reviewed by/Date Project Manager: Relimquished by Relimentation by Relinequished by Project Name: Received by Received by Received by r C Company: Lab 10

DISTRIBUTION LEGEND: White - OnSite Copy Yellow - Report Copy Pink - Client Copy





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

July 24, 2008

Dan Caputo Farallon Consulting, LLC 975 5<sup>th</sup> Avenue NW Issaquah, WA 98027

Re:

Analytical Data for Project 457-004 Laboratory Reference No. 0807-119

Dear Dan:

Enclosed are the analytical results and associated quality control data for samples submitted on July 16, 2008.

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** 

Project: 457-004

#### **Case Narrative**

Samples were collected on July 16, 2008 and received by the laboratory on July 16, 2008. They were maintained at the laboratory at a temperature of 2°C to 6°C except as noted below.

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

#### Halogenated Volatiles EPA 8260B 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.

Internal Standard 1,4-Dichlorobenzene-d4 does not meet acceptance criteria and Surrogate Standard 4-Bromofluorobenzene is outside of control limits for samples SSR-6-0.5-071608, SSR-6-1.0-071608, SSR-4-0.5-071608, and SSR-1-1.0-071608 due to sample matrix effects. The samples were reanalyzed with similar results. All results, including Practical Quantitation Limits, from Bromobenzene onward should be considered estimates.

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.

Project: 457-004

# **HALOGENATED VOLATILES by EPA 8260B**

page 1 of 2

Date Extracted:

7-17-08

Date Analyzed:

7-17-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

07-119-01

**Client ID:** 

SSR-8-0.5-071608

Compound	Result	s Flags	PQL
Dichlorodifluoromethane	ND.	_	0.0012
Chloromethane	ND		0.0058
Vinyl Chloride	ND		0.0012
Bromomethane	ND		0.0012
Chloroethane	ND		0.0058
Trichlorofluoromethane	ND		0.0012
1,1-Dichloroethene	ND		0.0012
lodomethane	ND		0.0058
Methylene Chloride	ND		0.0058
(trans) 1,2-Dichloroethene	ND		0.0012
1,1-Dichloroethane	ND		0.0012
2,2-Dichloropropane	ND		0.0012
(cis) 1,2-Dichloroethene	ND		0.0012
Bromochloromethane	ND		0.0012
Chloroform	ND		0.0012
1,1,1-Trichloroethane	ND		0.0012
Carbon Tetrachloride	ND		0.0012
1,1-Dichloropropene	ND		0.0012
1,2-Dichloroethane	ND		0.0012
Trichloroethene	ND		0.0012
1,2-Dichloropropane	ND		0.0012
Dibromomethane	ND		0.0012
Bromodichloromethane	ND		0.0012
2-Chloroethyl Vinyl Ether	ND		0.0058
(cis) 1,3-Dichloropropene	ND		0.0012
(trans) 1,3-Dichloropropene	ND		0.0012

Project: 457-004

# **HALOGENATED VOLATILES by EPA 8260B**

page 2 of 2

Lab ID:

07-119-01

Client ID:

SSR-8-0.5-071608

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND	J	0.0012
Tetrachloroethene	ND		0.0012
1,3-Dichloropropane	ND		0.0012
Dibromochloromethane	ND		0.0012
1,2-Dibromoethane	ND	•	0.0012
Chlorobenzene	ND		0.0012
1,1,1,2-Tetrachloroethane	ND		0.0012
Bromoform	ND		0.0012
Bromobenzene	ND		0.0012
1,1,2,2-Tetrachloroethane	ND		0.0012
1,2,3-Trichloropropane	ND ·		0.0012
2-Chlorotoluene	ND		0.0012
4-Chlorotoluene	ND		0.0012
1,3-Dichlorobenzene	ND		0.0012
1,4-Dichlorobenzene	ND		0.0012
1,2-Dichlorobenzene	ND		0.0012
1,2-Dibromo-3-chloropropane	ND		0.0058
1,2,4-Trichlorobenzene	ND		0.0012
Hexachlorobutadiene	ND		0.0058
1,2,3-Trichlorobenzene	ND		0.0012

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	100	70-118
Toluene-d8	86	70-121
4-Bromofluorobenzene	86	70-130

Project: 457-004

# **HALOGENATED VOLATILES by EPA 8260B**

page 1 of 2

Date Extracted:

7-17-08

Date Analyzed:

7-17-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

07-119-02

Client ID:

SSR-8-1-071608

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND	9-	0.00093
Chloromethane	ND		0.0047
Vinyl Chloride	ND		0.00093
Bromomethane	ND		0.00093
Chloroethane	ND		0.0047
Trichlorofluoromethane	ND		0.00093
1,1-Dichloroethene	ND		0.00093
Iodomethane	ND		0.0047
Methylene Chloride	ND		0.0047
(trans) 1,2-Dichloroethene	ND .		0.00093
1,1-Dichloroethane	ND		0.00093
2,2-Dichloropropane	ND		0.00093
(cis) 1,2-Dichloroethene	ND		0.00093
Bromochloromethane	ND		0.00093
Chloroform	ND		0.00093
1,1,1-Trichloroethane	ND		0.00093
Carbon Tetrachloride	ND		0.00093
1,1-Dichloropropene	ND		0.00093
1,2-Dichloroethane	ND		0.00093
Trichloroethene	ND		0.00093
1,2-Dichloropropane	ND		0.00093
Dibromomethane	ND		0.00093
Bromodichloromethane	ND		0.00093
2-Chloroethyl Vinyl Ether	ND		0.0047
(cis) 1,3-Dichloropropene	ND		0.00093
(trans) 1,3-Dichloropropene	ND		0.00093

Project: 457-004

# **HALOGENATED VOLATILES by EPA 8260B**

page 2 of 2

Lab ID: Client ID:

07-119-02

SSR-8-1-071608

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND	_	0.00093
Tetrachloroethene	ND		0.00093
1,3-Dichloropropane	ND		0.00093
Dibromochloromethane	ND		0.00093
1,2-Dibromoethane	ND		0.00093
Chlorobenzene	ND		0.00093
1,1,1,2-Tetrachloroethane	ND		0.00093
Bromoform	ND		0.00093
Bromobenzene	ND		0.00093
1,1,2,2-Tetrachloroethane	ND		0.00093
1,2,3-Trichloropropane	ND		0.00093
2-Chlorotoluene	ND		0.00093
4-Chlorotoluene	ND		0.00093
1,3-Dichlorobenzene	ND		0.00093
1,4-Dichlorobenzene	ND		0.00093
1,2-Dichlorobenzene	ND		0.00093
1,2-Dibromo-3-chloropropane	ND		0.0047
1,2,4-Trichlorobenzene	ND		0.00093
Hexachlorobutadiene	ND		0.0047
1,2,3-Trichlorobenzene	ND		0.00093

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	93	70-118
Toluene-d8	85	70-121
4-Bromofluorobenzene	85	70-130

Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B**

page 1 of 2

Date Extracted:

7-17-08

Date Analyzed:

7-17-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

07-119-03

Client ID:

SSR-7-0.5-071608

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND	J	0.00089
Chloromethane	ND		0.0044
Vinyl Chloride	ND		0.00089
Bromomethane	ND		0.00089
Chloroethane	ND		0.0044
Trichlorofluoromethane	ND		0.00089
1,1-Dichloroethene	ND		0.00089
lodomethane	ND		0.0044
Methylene Chloride	ND		0.0044
(trans) 1,2-Dichloroethene	ND		0.00089
1,1-Dichloroethane	ND		0.00089
2,2-Dichloropropane	ND		0.00089
(cis) 1,2-Dichloroethene	ND		0.00089
Bromochloromethane	ND		0.00089
Chloroform	ND		0.00089
1,1,1-Trichloroethane	ND		0.00089
Carbon Tetrachloride	ND		0.00089
1,1-Dichloropropene	ND		0.00089
1,2-Dichloroethane	ND		0.00089
Trichloroethene	ND		0.00089
1,2-Dichloropropane	ND		0.00089
Dibromomethane	ND		0.00089
Bromodichloromethane	ND		0.00089
2-Chloroethyl Vinyl Ether	ND		0.0044
(cis) 1,3-Dichloropropene	ND		0.00089
(trans) 1,3-Dichloropropene	ND		0.00089

Project: 457-004

# **HALOGENATED VOLATILES by EPA 8260B**

page 2 of 2

Lab ID:

07-119-03

Client ID: SSR-7-0.5-071608

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.00089
Tetrachloroethene	ND		0.00089
1,3-Dichloropropane	ND		0.00089
Dibromochloromethane	ND		0.00089
1,2-Dibromoethane	ND		0.00089
Chlorobenzene	ND		0.00089
1,1,1,2-Tetrachloroethane	ND		0.00089
Bromoform	ND		0.00089
Bromobenzene	ND		0.00089
1,1,2,2-Tetrachloroethane	ND		0.00089
1,2,3-Trichloropropane	ND		0.00089
2-Chlorotoluene	ND		0.00089
4-Chlorotoluene	ND		0.00089
1,3-Dichlorobenzene	ND		0.00089
1,4-Dichlorobenzene	ND		0.00089
1,2-Dichlorobenzene	ND		0.00089
1,2-Dibromo-3-chloropropane	ND		0.0044
1,2,4-Trichlorobenzene	ND		0.00089
Hexachlorobutadiene	ND		0.0044
1,2,3-Trichlorobenzene	ND		0.00089

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	96	70-118
Toluene-d8	86	70-121
4-Bromofluorobenzene	74	70-130

Project: 457-004

# **HALOGENATED VOLATILES by EPA 8260B**

page 1 of 2

Date Extracted:

7-18-08

Date Analyzed:

7-18-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

07-119-04

Client ID:

SSR-7-1.0-071608

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0011
Chloromethane	ND		0.0053
Vinyl Chloride	ND		0.0011
Bromomethane	ND		0.0011
Chloroethane	ND		0.0053
Trichlorofluoromethane	ND		0.0011
1,1-Dichloroethene	ND		0.0011
lodomethane	ND		0.0053
Methylene Chloride	ND		0.0053
(trans) 1,2-Dichloroethene	ND		0.0011
1,1-Dichloroethane	ND		0.0011
2,2-Dichloropropane	ND		0.0011
(cis) 1,2-Dichloroethene	ND		0.0011
Bromochloromethane	ND		0.0011
Chloroform	ND		0.0011
1,1,1-Trichloroethane	ND		0.0011
Carbon Tetrachloride	ND		0.0011
1,1-Dichloropropene	ND		0.0011
1,2-Dichloroethane	ND		0.0011
Trichloroethene	ND		0.0011
1,2-Dichloropropane	ND		0.0011
Dibromomethane	ND		0.0011
Bromodichloromethane	ND		0.0011
2-Chloroethyl Vinyl Ether	ND		0.0053
(cis) 1,3-Dichloropropene	ND		0.0011
(trans) 1,3-Dichloropropene	ND		0.0011

Project: 457-004

# **HALOGENATED VOLATILES by EPA 8260B**

page 2 of 2

Lab ID:

07-119-04

Client ID:

SSR-7-1.0-071608

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND	_	0.0011
Tetrachloroethene	ND		0.0011
1,3-Dichloropropane	ND		0.0011
Dibromochloromethane	ND		0.0011
1,2-Dibromoethane	ND		0.0011
Chlorobenzene	ND		0.0011
1,1,1,2-Tetrachloroethane	ND		0.0011
Bromoform	ND		0.0011
Bromobenzene	ND		0.0011
1,1,2,2-Tetrachloroethane	ND		0.0011
1,2,3-Trichloropropane	ND		0.0011
2-Chlorotoluene	ND		0.0011
4-Chlorotoluene	ND		0.0011
1,3-Dichlorobenzene	ND		0.0011
1,4-Dichlorobenzene	ND		0.0011
1,2-Dichlorobenzene	ND		0.0011
1,2-Dibromo-3-chloropropane	ND		0.0053
1,2,4-Trichlorobenzene	ND		0.0011
Hexachlorobutadiene	ND		0.0053
1,2,3-Trichlorobenzene	ND		0.0011

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	100	70-118
Toluene-d8	87	70-121
4-Bromofluorobenzene	75	70-130

Project: 457-004

# **HALOGENATED VOLATILES by EPA 8260B**

page 1 of 2

Date Extracted:

7-18-08

Date Analyzed:

7-18-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

07-119-05

Client ID:

SSR-5-0.5-071608

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.00087
Chloromethane	ND		0.0043
Vinyl Chloride	ND		0.00087
Bromomethane	ND		0.00087
Chloroethane	ND		0.0043
Trichlorofluoromethane	ND		0.00087
1,1-Dichloroethene	ND		0.00087
lodomethane	ND		0.0043
Methylene Chloride	0.0073	Н	0.0043
(trans) 1,2-Dichloroethene	ND		0.00087
1,1-Dichloroethane	ND		0.00087
2,2-Dichloropropane	ND		0.00087
(cis) 1,2-Dichloroethene	ND		0.00087
Bromochloromethane	ND		0.00087
Chloroform	ND		0.00087
1,1,1-Trichloroethane	ND		0.00087
Carbon Tetrachloride	ND		0.00087
1,1-Dichloropropene	ND		0.00087
1,2-Dichloroethane	ND		0.00087
Trichloroethene	ND		0.00087
1,2-Dichloropropane	ND		0.00087
Dibromomethane	ND		0.00087
Bromodichloromethane	ND		0.00087
2-Chloroethyl Vinyl Ether	ND		0.0043
(cis) 1,3-Dichloropropene	ND		0.00087
(trans) 1,3-Dichloropropene	ND		0.00087

Project: 457-004

# **HALOGENATED VOLATILES by EPA 8260B**

page 2 of 2

Lab ID:

07-119-05

Client ID:

SSR-5-0.5-071608

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND	_	0.00087
Tetrachloroethene	ND		0.00087
1,3-Dichloropropane	ND		0.00087
Dibromochloromethane	ND		0.00087
1,2-Dibromoethane	ND		0.00087
Chlorobenzene	ND		0.00087
1,1,1,2-Tetrachloroethane	ND		0.00087
Bromoform	ND		0.00087
Bromobenzene	ND		0.00087
1,1,2,2-Tetrachloroethane	ND		0.00087
1,2,3-Trichloropropane	ND		0.00087
2-Chlorotoluene	ND		0.00087
4-Chlorotoluene	ND		0.00087
1,3-Dichlorobenzene	ND		0.00087
1,4-Dichlorobenzene	ND		0.00087
1,2-Dichlorobenzene	ND		0.00087
1,2-Dibromo-3-chloropropane	ND		0.0043
1,2,4-Trichlorobenzene	ND		0.00087
Hexachlorobutadiene	ND		0.0043
1,2,3-Trichlorobenzene	ND		0.00087

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	99	70-118
Toluene-d8	85	70-121
4-Bromofluorobenzene	79	70-130

Project: 457-004

# HALOGENATED VOLATILES by EPA 8260B

page 1 of 2

Date Extracted:

7-18-08

Date Analyzed:

7-18-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

07-119-06

Client ID:

SSR-5-1.0-071608

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0012
Chloromethane	ND		0.0059
Vinyl Chloride	ND		0.0012
Bromomethane	ND		0.0012
Chloroethane	ND		0.0059
Trichlorofluoromethane	ND		0.0012
1,1-Dichloroethene	ND		0.0012
lodomethane	ND		0.0059
Methylene Chloride	ND		0.0059
(trans) 1,2-Dichloroethene	ND		0.0012
1,1-Dichloroethane	ND		0.0012
2,2-Dichloropropane	ND		0.0012
(cis) 1,2-Dichloroethene	ND		0.0012
Bromochloromethane	ND		0.0012
Chloroform	ND		0.0012
1,1,1-Trichloroethane	ND		0.0012
Carbon Tetrachloride	ND		0.0012
1,1-Dichloropropene	ND		0.0012
1,2-Dichloroethane	ND		0.0012
Trichloroethene	ND		0.0012
1,2-Dichloropropane	ND		0.0012
Dibromomethane	ND		0.0012
Bromodichloromethane	ND		0.0012
2-Chloroethyl Vinyl Ether	ND		0.0059
(cis) 1,3-Dichloropropene	ND		0.0012
(trans) 1,3-Dichloropropene	ND		0.0012

Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B**

page 2 of 2

Lab ID:

07-119-06

Client ID:

SSR-5-1.0-071608

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND	_	0.0012
Tetrachloroethene	ND		0.0012
1,3-Dichloropropane	ND		0.0012
Dibromochloromethane	ND		0.0012
1,2-Dibromoethane	ND		0.0012
Chlorobenzene	ND		0.0012
1,1,1,2-Tetrachloroethane	ND		0.0012
Bromoform	ND		0.0012
Bromobenzene	ND		0.0012
1,1,2,2-Tetrachloroethane	ND		0.0012
1,2,3-Trichloropropane	ND		0.0012
2-Chlorotoluene	ND		0.0012
4-Chlorotoluene	ND		0.0012
1,3-Dichlorobenzene	ND		0.0012
1,4-Dichlorobenzene	ND		0.0012
1,2-Dichlorobenzene	ND		0.0012
1,2-Dibromo-3-chloropropane	ND		0.0059
1,2,4-Trichlorobenzene	ND		0.0012
Hexachlorobutadiene	ND		0.0059
1,2,3-Trichlorobenzene	ND		0.0012

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	91	70-118
Toluene-d8	84	70-121
4-Bromofluorobenzene	74	70-130

Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B**

page 1 of 2

Date Extracted:

7-17-08

Date Analyzed:

7-17-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

07-119-07

Client ID:

SSR-6-0.5-071608

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0013
Chloromethane	ND		0.0066
Vinyl Chloride	ND		0.0013
Bromomethane	ND		0.0013
Chloroethane	ND		0.0066
Trichlorofluoromethane	ND		0.0013
1,1-Dichloroethene	ND		0.0013
lodomethane	ND		0.0066
Methylene Chloride	ND		0.0066
(trans) 1,2-Dichloroethene	ND		0.0013
1,1-Dichloroethane	ND		0.0013
2,2-Dichloropropane	ND		0.0013
(cis) 1,2-Dichloroethene	ND		0.0013
Bromochloromethane	ND		0.0013
Chloroform	ND		0.0013
1,1,1-Trichloroethane	ND		0.0013
Carbon Tetrachloride	ND		0.0013
1,1-Dichloropropene	ND		0.0013
1,2-Dichloroethane	ND		0.0013
Trichloroethene	ND		0.0013
1,2-Dichloropropane	ND		0.0013
Dibromomethane	ND		0.0013
Bromodichloromethane	ND		0.0013
2-Chloroethyl Vinyl Ether	ND		0.0066
(cis) 1,3-Dichloropropene	ND		0.0013
(trans) 1,3-Dichloropropene	ND		0.0013

Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B**

page 2 of 2

Lab ID:

07-119-07

Client ID: SSR-6-0.5-071608

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND	_	0.0013
Tetrachloroethene	ND		0.0013
1,3-Dichloropropane	ND		0.0013
Dibromochloromethane	ND		0.0013
1,2-Dibromoethane	ND		0.0013
Chlorobenzene	ND		0.0013
1,1,1,2-Tetrachloroethane	ND		0.0013
Bromoform	ND		0.0013
Bromobenzene	ND		0.0013
1,1,2,2-Tetrachloroethane	ND		0.0013
1,2,3-Trichloropropane	ND		0.0013
2-Chlorotoluene	ND		0.0013
4-Chlorotoluene	ND		0.0013
1,3-Dichlorobenzene	ND		0.0013
1,4-Dichlorobenzene	ND		0.0013
1,2-Dichlorobenzene	ND		0.0013
1,2-Dibromo-3-chloropropane	ND		0.0066
1,2,4-Trichlorobenzene	ND		0.0013
Hexachlorobutadiene	ND		0.0066
1,2,3-Trichlorobenzene	ND		0.0013

	Percent		Control
Surrogate	Recovery		Limits
Dibromofluoromethane	102		70-118
Toluene-d8	86		70-121
4-Bromofluorobenzene	65	Q	70-130

Project: 457-004

#### HALOGENATED VOLATILES by EPA 8260B

page 1 of 2

Date Extracted:

7-17-08

Date Analyzed:

7-17-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

07-119-08

Client ID:

SSR-6-1.0-071608

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0013
Chloromethane	ND		0.0064
Vinyl Chloride	ND		0.0013
Bromomethane	ND		0.0013
Chloroethane	ND		0.0064
Trichlorofluoromethane	ND		0.0013
1,1-Dichloroethene	ND		0.0013
lodomethane	ND		0.0064
Methylene Chloride	ND		0.0064
(trans) 1,2-Dichloroethene	ND		0.0013
1,1-Dichloroethane	ND		0.0013
2,2-Dichloropropane	ND		0.0013
(cis) 1,2-Dichloroethene	ND		0.0013
Bromochloromethane	ND		0.0013
Chloroform	ND ·		0.0013
1,1,1-Trichloroethane	ND		0.0013
Carbon Tetrachloride	ND		0.0013
1,1-Dichloropropene	ND		0.0013
1,2-Dichloroethane	ND		0.0013
Trichloroethene	ND		0.0013
1,2-Dichloropropane	ND		0.0013
Dibromomethane	ND		0.0013
Bromodichloromethane	ND		0.0013
2-Chloroethyl Vinyl Ether	ND		0.0064
(cis) 1,3-Dichloropropene	ND		0.0013
(trans) 1,3-Dichloropropene	ND		0.0013

Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B**

page 2 of 2

Lab ID:

07-119-08

Client ID:

SSR-6-1.0-071608

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0013
Tetrachloroethene	ND		0.0013
1,3-Dichloropropane	ND		0.0013
Dibromochloromethane	ND		0.0013
1,2-Dibromoethane	ND		0.0013
Chlorobenzene	ND		0.0013
1,1,1,2-Tetrachloroethane	ND		0.0013
Bromoform	ND		0.0013
Bromobenzene	ND		0.0013
1,1,2,2-Tetrachloroethane	ND		0.0013
1,2,3-Trichloropropane	ND		0.0013
2-Chlorotoluene	ND		0.0013
4-Chlorotoluene	ND		0.0013
1,3-Dichlorobenzene	ND		0.0013
1,4-Dichlorobenzene	ND		0.0013
1,2-Dichlorobenzene	ND		0.0013
1,2-Dibromo-3-chloropropane	ND		0.0064
1,2,4-Trichlorobenzene	ND		0.0013
Hexachlorobutadiene	ND		0.0064
1,2,3-Trichlorobenzene	ND		0.0013

	Percent		Control
Surrogate	Recovery		Limits
Dibromofluoromethane	95		70-118
Toluene-d8	82		70-121
4-Bromofluorobenzene	56	Q	70-130

Project: 457-004

### HALOGENATED VOLATILES by EPA 8260B

page 1 of 2

Date Extracted:

7-18-08

Date Analyzed:

7-18-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

07-119-09

Client ID:

SSR-3-0.5-071608

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0011
Chloromethane	ND		0.0054
Vinyl Chloride	ND		0.0011
Bromomethane	ND		0.0011
Chloroethane	ND		0.0054
Trichlorofluoromethane	ND		0.0011
1,1-Dichloroethene	ND		0.0011
lodomethane	ND		0.0054
Methylene Chloride	ND		0.0054
(trans) 1,2-Dichloroethene	ND		0.0011
1,1-Dichloroethane	ND		0.0011
2,2-Dichloropropane	ND		0.0011
(cis) 1,2-Dichloroethene	ND		0.0011
Bromochloromethane	ND		0.0011
Chloroform	ND		0.0011
1,1,1-Trichloroethane	ND		0.0011
Carbon Tetrachloride	ND		0.0011
1,1-Dichloropropene	ND		0.0011
1,2-Dichloroethane	ND		0.0011
Trichloroethene	ND		0.0011
1,2-Dichloropropane	ND		0.0011
Dibromomethane	ND		0.0011
Bromodichloromethane	ND		0.0011
2-Chloroethyl Vinyl Ether	ND		0.0054
(cis) 1,3-Dichloropropene	ND		0.0011
(trans) 1,3-Dichloropropene	ND		0.0011

Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B**

page 2 of 2

Lab ID:

07-119-09

Client ID:

SSR-3-0.5-071608

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND	_	0.0011
Tetrachloroethene	ND		0.0011
1,3-Dichloropropane	ND		0.0011
Dibromochloromethane	ND		0.0011
1,2-Dibromoethane	ND		0.0011
Chlorobenzene	ND		0.0011
1,1,1,2-Tetrachloroethane	ND		0.0011
Bromoform	ND		0.0011
Bromobenzene	ND		0.0011
1,1,2,2-Tetrachloroethane	ND		0.0011
1,2,3-Trichloropropane	ND		0.0011
2-Chlorotoluene	ND		0.0011
4-Chlorotoluene	ND		0.0011
1,3-Dichlorobenzene	ND		0.0011
1,4-Dichlorobenzene	ND		0.0011
1,2-Dichlorobenzene	ND		0.0011
1,2-Dibromo-3-chloropropane	ND		0.0054
1,2,4-Trichlorobenzene	ND		0.0011
Hexachlorobutadiene	ND		0.0054
1,2,3-Trichlorobenzene	ND		0.0011

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	97	70-118
Toluene-d8	88	70-121
4-Bromofluorobenzene	77	70-130

Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B**

page 1 of 2

Date Extracted:

7-18-08

Date Analyzed:

7-18-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

07-119-10

Client ID:

SSR-3-1.0-071608

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND	J	0.0012
Chloromethane	ND		0.0060
Vinyl Chloride	ND		0.0012
Bromomethane	ND		0.0012
Chloroethane	ND		0.0060
Trichlorofluoromethane	ND		0.0012
1,1-Dichloroethene	ND		0.0012
lodomethane	ND .		0.0060
Methylene Chloride	ND		0.0060
(trans) 1,2-Dichloroethene	ND		0.0012
1,1-Dichloroethane	ND		0.0012
2,2-Dichloropropane	ND		0.0012
(cis) 1,2-Dichloroethene	ND		0.0012
Bromochloromethane	ND		0.0012
Chloroform	ND		0.0012
1,1,1-Trichloroethane	ND		0.0012
Carbon Tetrachloride	ND		0.0012
1,1-Dichloropropene	ND		0.0012
1,2-Dichloroethane	ND		0.0012
Trichloroethene	ND		0.0012
1,2-Dichloropropane	ND		0.0012
Dibromomethane	ND		0.0012
Bromodichloromethane	ND		0.0012
2-Chloroethyl Vinyl Ether	ND		0.0060
(cis) 1,3-Dichloropropene	ND		0.0012
(trans) 1,3-Dichloropropene	ND		0.0012

Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B**

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Lab ID: Client ID:

07-119-10

SSR-3-1.0-071608

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND	<del></del>	0.0012
Tetrachloroethene	ND		0.0012
1,3-Dichloropropane	ND		0.0012
Dibromochloromethane	ND		0.0012
1,2-Dibromoethane	ND		0.0012
Chlorobenzene	ND		0.0012
1,1,1,2-Tetrachloroethane	ND		0.0012
Bromoform	ND		0.0012
Bromobenzene	ND		0.0012
1,1,2,2-Tetrachloroethane	ND		0.0012
1,2,3-Trichloropropane	ND		0.0012
2-Chlorotoluene	ND		0.0012
4-Chlorotoluene	ND		0.0012
1,3-Dichlorobenzene	ND		0.0012
1,4-Dichlorobenzene	ND		0.0012
1,2-Dichlorobenzene	ND		0.0012
1,2-Dibromo-3-chloropropane	ND		0.0060
1,2,4-Trichlorobenzene	ND		0.0012
Hexachlorobutadiene	ND		0.0060
1,2,3-Trichlorobenzene	ND		0.0012

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	94	70-118
Toluene-d8	87	70-121
4-Bromofluorobenzene	83	70-130

Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B**

page 1 of 2

Date Extracted:

7-18-08

Date Analyzed:

7-18-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

07-119-11

Client ID:

SSR-4-0.5-071608

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND	_	0.0013
Chloromethane	ND		0.0063
Vinyl Chloride	ND		0.0013
Bromomethane	ND		0.0013
Chloroethane	ND		0.0063
Trichlorofluoromethane	ND		0.0013
1,1-Dichloroethene	ND		0.0013
lodomethane	ND		0.0063
Methylene Chloride	ND		0.0063
(trans) 1,2-Dichloroethene	ND		0.0013
1,1-Dichloroethane	ND		0.0013
2,2-Dichloropropane	ND		0.0013
(cis) 1,2-Dichloroethene	ND		0.0013
Bromochloromethane	ND		0.0013
Chloroform	ND		0.0013
1,1,1-Trichloroethane	ND		0.0013
Carbon Tetrachloride	ND		0.0013
1,1-Dichloropropene	ND		0.0013
1,2-Dichloroethane	ND		0.0013
Trichloroethene	ND		0.0013
1,2-Dichloropropane	ND		0.0013
Dibromomethane	ND		0.0013
Bromodichloromethane	ND.		0.0013
2-Chloroethyl Vinyl Ether	ND		0.0063
(cis) 1,3-Dichloropropene	ND		0.0013
(trans) 1,3-Dichloropropene	ND		0.0013

Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B**

page 2 of 2

Lab ID: Client ID:

07-119-11

SSR-4-0.5-071608

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0013
Tetrachloroethene	ND		0.0013
1,3-Dichloropropane	ND		0.0013
Dibromochloromethane	ND		0.0013
1,2-Dibromoethane	ND		0.0013
Chlorobenzene	ND		0.0013
1,1,1,2-Tetrachloroethane	ND		0.0013
Bromoform	ND		0.0013
Bromobenzene	ND		0.0013
1,1,2,2-Tetrachloroethane	ND		0.0013
1,2,3-Trichloropropane	ND		0.0013
2-Chlorotoluene	ND		0.0013
4-Chlorotoluene	ND		0.0013
1,3-Dichlorobenzene	ND		0.0013
1,4-Dichlorobenzene	ND		0.0013
1,2-Dichlorobenzene	ND		0.0013
1,2-Dibromo-3-chloropropane	ND		0.0063
1,2,4-Trichlorobenzene	ND		0.0013
Hexachlorobutadiene	ND		0.0063
1,2,3-Trichlorobenzene	ND		0.0013

	Percent		Control
Surrogate	Recovery		Limits
Dibromofluoromethane	98		70-118
Toluene-d8	87		70-121
4-Bromofluorobenzene	67	Q	70-130

### **HALOGENATED VOLATILES by EPA 8260B**

page 1 of 2

Date Extracted:

7-18-08

Date Analyzed:

7-18-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

07-119-12

Client ID:

SSR-4-1.0-071608

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND	Ū	0.0012
Chloromethane	ND		0.0059
Vinyl Chloride	ND		0.0012
Bromomethane	ND		0.0012
Chloroethane	ND		0.0059
Trichlorofluoromethane	ND		0.0012
1,1-Dichloroethene	ND		0.0012
lodomethane	ND		0.0059
Methylene Chloride	ND		0.0059
(trans) 1,2-Dichloroethene	ND		0.0012
1,1-Dichloroethane	ND		0.0012
2,2-Dichloropropane	ND		0.0012
(cis) 1,2-Dichloroethene	ND		0.0012
Bromochloromethane	ND		0.0012
Chloroform	ND		0.0012
1,1,1-Trichloroethane	ND		0.0012
Carbon Tetrachloride	ND		0.0012
1,1-Dichloropropene	ND		0.0012
1,2-Dichloroethane	ND		0.0012
Trichloroethene	ND		0.0012
1,2-Dichloropropane	ND		0.0012
Dibromomethane	ND		0.0012
Bromodichloromethane	ND		0.0012
2-Chloroethyl Vinyl Ether	ND		0.0059
(cis) 1,3-Dichloropropene	ND		0.0012
(trans) 1,3-Dichloropropene	ND		0.0012

Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B**

page 2 of 2

Lab ID:

07-119-12

Client ID: SSR-4-1.0-071608

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0012
Tetrachloroethene	ND		0.0012
1,3-Dichloropropane	ND		0.0012
Dibromochloromethane	ND		0.0012
1,2-Dibromoethane	ND		0.0012
Chlorobenzene	ND		0.0012
1,1,1,2-Tetrachloroethane	ND		0.0012
Bromoform	ND		0.0012
Bromobenzene	ND		0.0012
1,1,2,2-Tetrachloroethane	ND		0.0012
1,2,3-Trichloropropane	ND		0.0012
2-Chlorotoluene	ND		0.0012
4-Chlorotoluene	ND		0.0012
1,3-Dichlorobenzene	ND		0.0012
1,4-Dichlorobenzene	ND		0.0012
1,2-Dichlorobenzene	ND		0.0012
1,2-Dibromo-3-chloropropane	ND		0.0059
1,2,4-Trichlorobenzene	ND		0.0012
Hexachlorobutadiene	ND		0.0059
1,2,3-Trichlorobenzene	ND		0.0012

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	100	70-118
Toluene-d8	85	70-121
4-Bromofluorobenzene	81	70-130

Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B**

page 1 of 2

Date Extracted:

7-18-08

Date Analyzed:

7-18-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

07-119-13

Client ID:

SSR-2-0.5-071608

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND	O *	0.0011
Chloromethane	ND		0.0055
Vinyl Chloride	ND		0.0011
Bromomethane	ND		0.0011
Chloroethane	ND		0.0055
Trichlorofluoromethane	ND		0.0011
1,1-Dichloroethene	ND		0.0011
lodomethane	ND		0.0055
Methylene Chloride	ND		0.0055
(trans) 1,2-Dichloroethene	ND		0.0011
1,1-Dichloroethane	ND		0.0011
2,2-Dichloropropane	ND		0.0011
(cis) 1,2-Dichloroethene	ND		0.0011
Bromochloromethane	ND		0.0011
Chloroform	ND		0.0011
1,1,1-Trichloroethane	ND		0.0011
Carbon Tetrachloride	ND		0.0011
1,1-Dichloropropene	ND		0.0011
1,2-Dichloroethane	ND		0.0011
Trichloroethene	ND		0.0011
1,2-Dichloropropane	ND		0.0011
Dibromomethane	ND		0.0011
Bromodichloromethane	ND		0.0011
2-Chloroethyl Vinyl Ether	ND		0.0055
(cis) 1,3-Dichloropropene	ND		0.0011
(trans) 1,3-Dichloropropene	ND		0.0011

#### **HALOGENATED VOLATILES by EPA 8260B**

page 2 of 2

Lab ID:

07-119-13

Client ID:

SSR-2-0.5-071608

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND		0.0011
Tetrachloroethene	ND		0.0011
1,3-Dichloropropane	ND		0.0011
Dibromochloromethane	ND		0.0011
1,2-Dibromoethane	ND		0.0011
Chlorobenzene	ND		0.0011
1,1,1,2-Tetrachloroethane	ND		0.0011
Bromoform	ND		0.0011
Bromobenzene	ND		0.0011
1,1,2,2-Tetrachloroethane	ND		0.0011
1,2,3-Trichloropropane	ND		0.0011
2-Chlorotoluene	ND		0.0011
4-Chlorotoluene	ND		0.0011
1,3-Dichlorobenzene	ND		0.0011
1,4-Dichlorobenzene	ND		0.0011
1,2-Dichlorobenzene	ND		0.0011
1,2-Dibromo-3-chloropropane	ND		0.0055
1,2,4-Trichlorobenzene	ND		0.0011
Hexachlorobutadiene	ND		0.0055
1,2,3-Trichlorobenzene	ND		0.0011

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	97	70-118
Toluene-d8	86	70-121
4-Bromofluorobenzene	84	70-130

Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B**

page 1 of 2

Date Extracted:

7-18-08

Date Analyzed:

7-18-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

07-119-14

Client ID:

SSR-2-1.0-071608

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND	_	0.0010
Chloromethane	ND		0.0052
Vinyl Chloride	ND		0.0010
Bromomethane	ND		0.0010
Chloroethane	ND		0.0052
Trichlorofluoromethane	ND		0.0010
1,1-Dichloroethene	ND		0.0010
lodomethane	ND		0.0052
Methylene Chloride	ND		0.0052
(trans) 1,2-Dichloroethene	ND		0.0010
1,1-Dichloroethane	ND		0.0010
2,2-Dichloropropane	ND		0.0010
(cis) 1,2-Dichloroethene	ND		0.0010
Bromochloromethane	ND		0.0010
Chloroform	ND		0.0010
1,1,1-Trichloroethane	ND		0.0010
Carbon Tetrachloride	ND		0.0010
1,1-Dichloropropene	ND		0.0010
1,2-Dichloroethane	ND		0.0010
Trichloroethene	ND		0.0010
1,2-Dichloropropane	ND		0.0010
Dibromomethane	ND		0.0010
Bromodichloromethane	ND		0.0010
2-Chloroethyl Vinyl Ether	ND		0.0052
(cis) 1,3-Dichloropropene	ND		0.0010
(trans) 1,3-Dichloropropene	ND		0.0010

# HALOGENATED VOLATILES by EPA 8260B page 2 of 2

Lab ID:

07-119-14

Client ID:

SSR-2-1.0-071608

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND	_	0.0010
Tetrachloroethene	ND		0.0010
1,3-Dichloropropane	ND		0.0010
Dibromochloromethane	ND		0.0010
1,2-Dibromoethane	ND		0.0010
Chlorobenzene	ND		0.0010
1,1,1,2-Tetrachloroethane	ND		0.0010
Bromoform	ND		0.0010
Bromobenzene	ND		0.0010
1,1,2,2-Tetrachloroethane	ND		0.0010
1,2,3-Trichloropropane	ND		0.0010
2-Chlorotoluene	ND		0.0010
4-Chlorotoluene	ND		0.0010
1,3-Dichlorobenzene	ND		0.0010
1,4-Dichlorobenzene	ND		0.0010
1,2-Dichlorobenzene	ND		0.0010
1,2-Dibromo-3-chloropropane	ND		0.0052
1,2,4-Trichlorobenzene	ND		0.0010
Hexachlorobutadiene	ND		0.0052
1,2,3-Trichlorobenzene	ND		0.0010

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	94	70-118
Toluene-d8	84	70-121
4-Bromofluorobenzene	79	70-130

Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B**

page 1 of 2

Date Extracted:

7-18-08

Date Analyzed:

7-18-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

07-119-15

Client ID:

SSR-1-0.5-071608

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND	•	0.0013
Chloromethane	ND		0.0066
Vinyl Chloride	ND		0.0013
Bromomethane	ND		0.0013
Chloroethane	ND		0.0066
Trichlorofluoromethane	ND		0.0013
1,1-Dichloroethene	ND		0.0013
lodomethane	ND		0.0066
Methylene Chloride	ND		0.0066
(trans) 1,2-Dichloroethene	ND		0.0013
1,1-Dichloroethane	ND		0.0013
2,2-Dichloropropane	ND		0.0013
(cis) 1,2-Dichloroethene	ND		0.0013
Bromochloromethane	ND		0.0013
Chloroform	ND		0.0013
1,1,1-Trichloroethane	ND		0.0013
Carbon Tetrachloride	ND		0.0013
1,1-Dichloropropene	ND		0.0013
1,2-Dichloroethane	ND		0.0013
Trichloroethene	ND		0.0013
1,2-Dichloropropane	ND		0.0013
Dibromomethane	ND		0.0013
Bromodichloromethane	ND		0.0013
2-Chloroethyl Vinyl Ether	ND		0.0066
(cis) 1,3-Dichloropropene	ND		0.0013
(trans) 1,3-Dichloropropene	ND		0.0013

Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B**

page 2 of 2

Lab ID:

07-119-15

Client ID:

1 >

SSR-1-0.5-071608

	Compound	Results	Flags	PQL
	1,1,2-Trichloroethane	ND	<u> </u>	0.0013
	Tetrachloroethene	ND		0.0013
	1,3-Dichloropropane	ND		0.0013
	Dibromochloromethane	ND		0.0013
	1,2-Dibromoethane	ND		0.0013
	Chlorobenzene	ND		0.0013
	1,1,1,2-Tetrachloroethane	ND		0.0013
	Bromoform	ND		0.0013
	Bromobenzene	ND		0.0013
	1,1,2,2-Tetrachloroethane	ND		0.0013
	1,2,3-Trichloropropane	ND		0.0013
	2-Chlorotoluene	ND		0.0013
	4-Chlorotoluene	ND		0.0013
	1,3-Dichlorobenzene	ND		0.0013
,	1,4-Dichlorobenzene	ND		0.0013
	1,2-Dichlorobenzene	ND		0.0013
	1,2-Dibromo-3-chloropropane	ND		0.0066
	1,2,4-Trichlorobenzene	ND		0.0013
	Hexachlorobutadiene	ND		0.0066
	1,2,3-Trichlorobenzene	ND		0.0013

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	89	70-118
Toluene-d8	84	70-121
4-Bromofluorobenzene	76	70-130

Project: 457-004

#### **HALOGENATED VOLATILES by EPA 8260B**

page 1 of 2

Date Extracted:

7-18-08

Date Analyzed:

7-18-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

07-119-16

Client ID:

SSR-1-1.0-071608

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND	3.0	0.00091
Chloromethane	ND		0.0046
Vinyl Chloride	ND		0.00091
Bromomethane	ND		0.00091
Chloroethane	ND		0.0046
Trichlorofluoromethane	ND		0.00091
1,1-Dichloroethene	ND		0.00091
lodomethane	ND		0.0046
Methylene Chloride	ND		0.0046
(trans) 1,2-Dichloroethene	ND		0.00091
1,1-Dichloroethane	ND		0.00091
2,2-Dichloropropane	ND		0.00091
(cis) 1,2-Dichloroethene	ND		0.00091
Bromochloromethane	ND		0.00091
Chloroform	ND		0.00091
1,1,1-Trichloroethane	ND		0.00091
Carbon Tetrachloride	ND		0.00091
1,1-Dichloropropene	ND		0.00091
1,2-Dichloroethane	ND		0.00091
Trichloroethene	ND		0.00091
1,2-Dichloropropane	ND		0.00091
Dibromomethane	ND		0.00091
Bromodichloromethane	ND		0.00091
2-Chloroethyl Vinyl Ether	ND		0.0046
(cis) 1,3-Dichloropropene	ND		0.00091
(trans) 1,3-Dichloropropene	ND		0.00091

#### **HALOGENATED VOLATILES by EPA 8260B**

page 2 of 2

Lab ID:

07-119-16

Client ID:

SSR-1-1.0-071608

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND	•	0.00091
Tetrachloroethene	ND		0.00091
1,3-Dichloropropane	ND		0.00091
Dibromochloromethane	ND		0.00091
1,2-Dibromoethane	ND		0.00091
Chlorobenzene	ND		0.00091
1,1,1,2-Tetrachloroethane	ND		0.00091
Bromoform	ND		0.00091
Bromobenzene	ND		0.00091
1,1,2,2-Tetrachloroethane	ND		0.00091
1,2,3-Trichloropropane	ND		0.00091
2-Chlorotoluene	ND		0.00091
4-Chlorotoluene	ND		0.00091
1,3-Dichlorobenzene	ND		0.00091
1,4-Dichlorobenzene	ND		0.00091
1,2-Dichlorobenzene	ND		0.00091
1,2-Dibromo-3-chloropropane	ND		0.0046
1,2,4-Trichlorobenzene	ND		0.00091
Hexachlorobutadiene	ND		0.0046
1,2,3-Trichlorobenzene	ND		0.00091

	Percent		Control
Surrogate	Recovery		Limits
Dibromofluoromethane	98		70-118
Toluene-d8	85		70-121
4-Bromofluorobenzene	67	Q	70-130

Project: 457-004

#### HALOGENATED VOLATILES by EPA 8260B METHOD BLANK QUALITY CONTROL

page 1 of 2

Date Extracted:

7-17-08

Date Analyzed:

7-17-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

MB0717S1

Compound	Results	Elono	חסו
Dichlorodifluoromethane	ND	Flags	PQL
Chloromethane	ND		0.0010
Vinyl Chloride	ND ND		0.0050 0.0010
Bromomethane	ND ND		
Chloroethane	ND ND		0.0010
Trichlorofluoromethane	ND		0.0050
1,1-Dichloroethene	ND		0.0010
Iodomethane			0.0010
	ND		0.0050
Methylene Chloride	ND		0.0050
(trans) 1,2-Dichloroethene	ND		0.0010
1,1-Dichloroethane	ND		0.0010
2,2-Dichloropropane	ND		0.0010
(cis) 1,2-Dichloroethene	ND		0.0010
Bromochloromethane	ND		0.0010
Chloroform	ND		0.0010
1,1,1-Trichloroethane	ND		0.0010
Carbon Tetrachloride	ND		0.0010
1,1-Dichloropropene	ND		0.0010
1,2-Dichloroethane	ND		0.0010
Trichloroethene	ND		0.0010
1,2-Dichloropropane	ND		0.0010
Dibromomethane	ND		0.0010
Bromodichloromethane	ND		0.0010
2-Chloroethyl Vinyl Ether	ND		0.0050
(cis) 1,3-Dichloropropene	ND		0.0010
(trans) 1,3-Dichloropropene	ND		0.0010

Project: 457-004

# HALOGENATED VOLATILES by EPA 8260B METHOD BLANK QUALITY CONTROL

page 2 of 2

Lab ID:

MB0717S1

Compound	Results	Flags	PQL
1,1,2-Trichloroethane	ND	_	0.0010
Tetrachloroethene	ND		0.0010
1,3-Dichloropropane	ND		0.0010
Dibromochloromethane	ND		0.0010
1,2-Dibromoethane	ND		0.0010
Chlorobenzene	ND		0.0010
1,1,1,2-Tetrachloroethane	ND		0.0010
Bromoform	ND		0.0010
Bromobenzene	ND		0.0010
1,1,2,2-Tetrachloroethane	ND		0.0010
1,2,3-Trichloropropane	ND		0.0010
2-Chlorotoluene	ND		0.0010
4-Chlorotoluene	ND		0.0010
1,3-Dichlorobenzene	ND		0.0010
1,4-Dichlorobenzene	ND		0.0010
1,2-Dichlorobenzene	ND		0.0010
1,2-Dibromo-3-chloropropane	ND		0.0050
1,2,4-Trichlorobenzene	ND		0.0010
Hexachlorobutadiene	ND		0.0050
1,2,3-Trichlorobenzene	ND		0.0010

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	95	70-118
Toluene-d8	89	70-121
4-Bromofluorobenzene	85	70-130

Project: 457-004

# HALOGENATED VOLATILES by EPA 8260B METHOD BLANK QUALITY CONTROL

page 1 of 2

Date Extracted:

7-18-08

Date Analyzed:

7-18-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

MB0718S1

Compound	Results	Flags	PQL
Dichlorodifluoromethane	ND		0.0010
Chloromethane	ND		0.0050
Vinyl Chloride	ND		0.0010
Bromomethane	ND		0.0010
Chloroethane	ND		0.0050
Trichlorofluoromethane	ND		0.0010
1,1-Dichloroethene	ND		0.0010
lodomethane	ND		0.0050
Methylene Chloride	ND		0.0050
(trans) 1,2-Dichloroethene	ND		0.0010
1,1-Dichloroethane	ND		0.0010
2,2-Dichloropropane	ND		0.0010
(cis) 1,2-Dichloroethene	ND		0.0010
Bromochloromethane	ND		0.0010
Chloroform	ND		0.0010
1,1,1-Trichloroethane	ND		0.0010
Carbon Tetrachloride	ND		0.0010
1,1-Dichloropropene	ND		0.0010
1,2-Dichloroethane	ND		0.0010
Trichloroethene	ND		0.0010
1,2-Dichloropropane	ND		0.0010
Dibromomethane	ND		0.0010
Bromodichloromethane	ND		0.0010
2-Chloroethyl Vinyl Ether	ND		0.0050
(cis) 1,3-Dichloropropene	ND		0.0010
(trans) 1,3-Dichloropropene	ND		0.0010

Project: 457-004

### HALOGENATED VOLATILES by EPA 8260B METHOD BLANK QUALITY CONTROL

page 2 of 2

Lab ID:

MB0718S1

Compound 1,1,2-Trichloroethane	Results ND	Flags	PQL
Tetrachloroethene	ND		0.0010 0.0010
1,3-Dichloropropane	ND		0.0010
Dibromochloromethane	ND		0.0010
1,2-Dibromoethane	ND		0.0010
Chlorobenzene	ND		0.0010
1,1,1,2-Tetrachloroethane	ND		0.0010
Bromoform	ND		0.0010
Bromobenzene	ND		0.0010
1,1,2,2-Tetrachloroethane	ND		0.0010
1,2,3-Trichloropropane	ND		0.0010
2-Chlorotoluene	ND		0.0010
4-Chlorotoluene	ND		0.0010
1,3-Dichlorobenzene	ND		0.0010
1,4-Dichlorobenzene	ND		0.0010
1,2-Dichlorobenzene	ND		0.0010
1,2-Dibromo-3-chloropropane	ND		0.0050
1,2,4-Trichlorobenzene	ND		0.0010
Hexachlorobutadiene	ND		0.0050
1,2,3-Trichlorobenzene	ND		0.0010

	Percent	Control
Surrogate	Recovery	Limits
Dibromofluoromethane	93	70-118
Toluene-d8	95	70-121
4-Bromofluorobenzene	82	70-130

Project: 457-004

#### HALOGENATED VOLATILES by EPA 8260B SB/SBD QUALITY CONTROL

Date Extracted:

7-17-08

Date Analyzed:

7-17-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

SB0717S1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene Benzene Trichloroethene Toluene Chlorobenzene	0.0500 0.0500 0.0500 0.0500 0.0500	0.0608 0.0533 0.0484 0.0520 0.0425	122 107 97 104 85	0.0606 0.0534 0.0478 0.0533 0.0423	121 107 96 107 85	70-130 70-127 73-117 78-115 80-117	

		RPD	
	RPD	Limit	Flags
1,1-Dichloroethene	0	10	
Benzene	0	11	
Trichloroethene	1	13	
Toluene	2	12	
Chlorobenzene	1	10	

Project: 457-004

#### HALOGENATED VOLATILES by EPA 8260B SB/SBD QUALITY CONTROL

Date Extracted:

7-18-08

Date Analyzed:

7-18-08

Matrix:

Soil

Units:

mg/kg (ppm)

Lab ID:

SB0718S1

Compound	Spike Amount	SB	Percent Recovery	SBD	Percent Recovery	Recovery Limits	Flags
1,1-Dichloroethene	0.0500	0.0558	112	0.0546	109	70-130	
Benzene	0.0500	0.0562	112	0.0560	112	70-127	
Trichloroethene	0.0500	0.0472	94	0.0477	95	73-117	
Toluene	0.0500	0.0488	98	0.0486	97	78-115	
Chlorobenzene	0.0500	0.0432	86	0.0428	86	80-117	
	RPD	RPD Limit	Flags				

		RPD	
	RPD	Limit	Flag
1,1-Dichloroethene	2	10	
Benzene	0	11	
Trichloroethene	1	13	
Toluene	0	12	
Chlorobenzene	1	10	

Project: 457-004

#### % MOISTURE

Date Analyzed: 7-17-08

Client ID	Lab ID	% Moisture
SSR-8-0.5-071608	07-119-01	8
SSR-8-1-071608	07-119-02	7
SSR-7-0.5-071608	07-119-03	8
SSR-7-1.0-071608	07-119-04	8
SSR-5-0.5-071608	07-119-05	10
SSR-5-1.0-071608	07-119-06	11
SSR-6-0.5-071608	07-119-07	13
SSR-6-1.0-071608	07-119-08	11
SSR-3-0.5-071608	07-119-09	21
SSR-3-1.0-071608	07-119-10	15
SSR-4-0.5-071608	07-119-11	20
SSR-4-1.0-071608	07-119-12	13
SSR-2-0.5-071608	07-119-13	3
SSR-2-1.0-071608	07-119-14	5
SSR-1-0.5-071608	07-119-15	8
SSR-1-1.0-071608	07-119-16	8



#### **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.
- $\mbox{H}\mbox{ The analyte indicated}$  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.
- 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.
- Y Sample extract treated with an acid/silica gel cleanup procedure.

Z -

ND - Not Detected at PQL

PQL - Practical Quantitation Limit

RPD - Relative Percent Difference

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AIA Onsite	From (425) 845-3881 · Fax: (425) 865-4860	Project Number 457-004	Project Nanager: Day Call Call Call Project Nanager: Call Call Call Call Call Call Call Cal	Sampled by TAMMS TAMMS  20 ALL STATES (BUILD SHORT)	SSR-8-0.5-071608	SSR -6 -1- 071608	SSR-7-05-071608	55R-7-1.0-071608	55R-5-0,5-071608	SSR-5-1.0-071608	55R-6-05-07/608	SSR-6-10-071608	9 558-3-05-07/608	10 SSR-3-10-071608	Pelinquished by A	Received by	Relânciasahed by CO	Recessard by

% Moisture

DISTRIBUTION LEGEND: White - On Site Copy Yellow - Report Crosy - Pink - Creat Copy

Chromatograms with final report

Hewiewed by/Date

Reviewed by/Date

Relinquished by Received by

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(Check One)	Same Day 1 Day  2 Day 3 Day  X Standard (7 working days)  (TPH analysis 5 working days)	111608 1415 S 5 1	11600 1421 SI5	7116108 14411 S S	1618 144 S 5	7/16/18/18/20 S 5	7/11/2/570 SS	1/18/10/1520 SI5	1/4/16/520 S 5"			Form	72					Reviewed by Date
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