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LABORATORY REPORT

July 15, 2013

John Cleary
Washington State Department of Ecology
Eastern regional Office
4601 N Monroe St
Spokane, WA 99205

RE: Site L / PIC #9NWRR

Dear John:

Enclosed are the results of the samples submitted to our laboratory on June 28, 2013. For your reference, these analyses have been assigned our service request number P1302788.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Samantha Henningsen at 4:38 pm, Jul 15, 2013

Project Manager



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Client: Washington State Department of Ecology
Project: Site L / PIC #9NWRR

Service Request No: P1302788

CASE NARRATIVE

The samples were received intact under chain of custody on June 28, 2013 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Helium Analysis

The samples were analyzed for helium according to modified EPA Method 3C (single injection) using a gas chromatograph equipped with a thermal conductivity detector (TCD). This method is not included on the laboratory's NELAP, DoD-ELAP, or AIHA-LAP scope of accreditation.

Volatile Organic Compound Analysis

The samples were also analyzed for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is not included on the laboratory's AIHA-LAP scope of accreditation. Any analytes flagged with an X are not included on the laboratory's NELAP or DoD-ELAP scope of accreditation.

The Summa canisters were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.



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ALS Environmental – Simi Valley

Certifications, Accreditations, and Registrations

Agency	Web Site	Number
AIHA	http://www.aihaaccreditedlabs.org	101661
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0694
DoD ELAP	http://www.pjlabs.com/search-accredited-labs	L11-203
Florida DOH (NELAP)	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E871020
Maine DHHS	http://www.maine.gov/dhhs/mecdc/environmental-health/water/dwp-services/labcert/labcert.htm	2012039
Minnesota DOH (NELAP)	http://www.health.state.mn.us/accreditation	494864
New Jersey DEP (NELAP)	http://www.nj.gov/dep/oqa/	CA009
New York DOH (NELAP)	http://www.wadsworth.org/labcert/elap/elap.html	11221
Oregon PHD (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	CA200007
Pennsylvania DEP	http://www.depweb.state.pa.us/labs	68-03307 (Registration)
Texas CEQ (NELAP)	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704413-12-3
Utah DOH (NELAP)	http://www.health.utah.gov/lab/labimp/certification/index.html	CA01527201 2-2
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C946

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

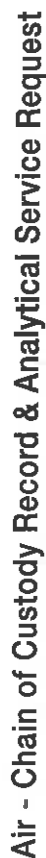
DETAIL SUMMARY REPORT

Client: Washington State Department of Ecology
 Project ID: Site L / PIC #9NWRR

Service Request: P1302788

Date Received: 6/28/2013
 Time Received: 07:20

Client Sample ID	Lab Code	Matrix	Date Collected	Time Collected	Container ID	Pi1 (psig)	Pf1 (psig)		
								3C Modified - Helium Can	TO-15 Modified - VOC Cans
Mass Bed NE Corner	P1302788-001	Air	6/27/2013	08:00	SC01054	0.24	3.56	X	X
Mass Bed NW Corner	P1302788-002	Air	6/27/2013	09:20	SC00611	0.16	3.59	X	X
Mass Bed Middle W	P1302788-003	Air	6/27/2013	10:28	SC01733	0.09	3.55	X	X
Mass Bed Middle S	P1302788-004	Air	6/27/2013	11:50	SC01053	-0.17	3.50	X	X
Mass Bed Middle E	P1302788-005	Air	6/27/2013	12:55	SC01487	0.05	3.50	X	X
Equipment Blank	P1302788-006	Air	6/27/2013	14:15	SC01683	-0.06	3.61	X	X



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Air - Chain of Custody Record & Analytical Service Request

[illegible]

ALS Environmental Sample Acceptance Check Form

Client: Washington State Department of Ecology

Work order: P1302788

Project: Site L / PIC #9NWRR

Sample(s) received on: 6/28/13

Date opened: 6/28/13

by: MZAMORA

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

	Yes	No	N/A
1 Were sample containers properly marked with client sample ID?	☒	☐	☐
2 Container(s) supplied by ALS ?	☒	☐	☐
3 Did sample containers arrive in good condition?	☒	☐	☐
4 Were chain-of-custody papers used and filled out?	☒	☐	☐
5 Did sample container labels and/or tags agree with custody papers?	☒	☐	☐
6 Was sample volume received adequate for analysis?	☒	☐	☐
7 Are samples within specified holding times?	☒	☐	☐
8 Was proper temperature (thermal preservation) of cooler at receipt adhered to?	☐	☐	☒
9 Was a trip blank received?	☐	☒	☐
10 Were custody seals on outside of cooler/Box?	☐	☒	☐
Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
Were signature and date included?	☐	☐	☒
Were seals intact?	☐	☐	☒
Were custody seals on outside of sample container?	☐	☒	☐
Location of seal(s)? _____ Sealing Lid?	☐	☐	☒
Were signature and date included?	☐	☐	☒
Were seals intact?	☐	☐	☒
11 Do containers have appropriate preservation , according to method/SOP or Client specified information?	☐	☐	☒
Is there a client indication that the submitted samples are pH preserved?	☐	☐	☒
Were VOA vials checked for presence/absence of air bubbles?	☐	☐	☒
Does the client/method/SOP require that the analyst check the sample pH and <u>if necessary</u> alter it?	☐	☐	☒
12 Tubes: Are the tubes capped and intact?	☐	☐	☒
Do they contain moisture?	☐	☐	☒
13 Badges: Are the badges properly capped and intact?	☐	☐	☒
Are dual bed badges separated and individually capped and intact?	☐	☐	☒

Lab Sample ID	Container Description	Required pH *	Received pH	Adjusted pH	VOA Headspace (Presence/Absence)	Receipt / Preservation Comments
P1302788-001.01	6.0 L Source Can					
P1302788-002.01	6.0 L Source Can					
P1302788-003.01	6.0 L Source Can					
P1302788-004.01	6.0 L Source Can					
P1302788-005.01	6.0 L Source Can					
P1302788-006.01	6.0 L Source Can					

Explain any discrepancies: (include lab sample ID numbers): _____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: Washington State Department of Ecology
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

Helium

Test Code: EPA 3C Modified
Instrument ID: HP5890 II/GC8/TCD
Analyst: Wade Henton
Sample Type: 6.0 L Summa Canister(s)
Test Notes:

Date(s) Collected: 6/27/13
Date Received: 6/28/13
Date Analyzed: 7/9/13

Client Sample ID	ALS Sample ID	Injection Volume ml(s)	Canister Dilution Factor	Result ppmV	MRL ppmV	Data Qualifier
Mass Bed NE Corner	P1302788-001	0.20	1.22	31,000	150	
Mass Bed NW Corner	P1302788-002	0.20	1.23	25,000	150	
Mass Bed Middle W	P1302788-003	0.20	1.23	39,000	150	
Mass Bed Middle S	P1302788-004	0.10	1.25	38,000	310	
Mass Bed Middle E	P1302788-005	0.10	1.23	9,400	310	
Equipment Blank	P1302788-006	0.10	1.25	75,000	310	
Method Blank	P130709-MB	1.00	1.00	ND	25	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 1

Client: Washington State Department of Ecology

Client Sample ID: Lab Control Sample

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P130709-LCS

Test Code: EPA 3C Modified

Instrument ID: HP5890 II/GC8/TCD

Analyst: Wade Henton

Sample Type: 6.0 L Summa Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 7/09/13

Volume(s) Analyzed: NA ml(s)

CAS #	Compound	Spike Amount ppmV	Result ppmV	% Recovery	ALS Acceptance Limits	Data Qualifier
7440-59-7	Helium	10,000	9,120	91	70-127	

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 4

Client: Washington State Department of Ecology

Client Sample ID: Mass Bed NE Corner

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P1302788-001

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Container ID: SC01054

Date Collected: 6/27/13

Date Received: 6/28/13

Date Analyzed: 7/10 - 7/11/13

Volume(s) Analyzed: 0.20 Liter(s)

0.020 Liter(s)

Initial Pressure (psig): 0.24 Final Pressure (psig): 3.56

Canister Dilution Factor: 1.22

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	72	3.1	42	1.8	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	3.1	ND	0.62	
74-87-3	Chloromethane	10	3.1	4.9	1.5	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	3.1	ND	0.44	
75-01-4	Vinyl Chloride	ND	3.1	ND	1.2	
106-99-0	1,3-Butadiene	ND	3.1	ND	1.4	
74-83-9	Bromomethane	ND	3.1	ND	0.79	
75-00-3	Chloroethane	ND	3.1	ND	1.2	
64-17-5	Ethanol	36	31	19	16	
75-05-8	Acetonitrile	11	3.1	6.6	1.8	
107-02-8	Acrolein	ND	12	ND	5.3	
67-64-1	Acetone	38	31	16	13	
75-69-4	Trichlorofluoromethane	ND	3.1	ND	0.54	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	31	ND	12	
107-13-1	Acrylonitrile	ND	3.1	ND	1.4	
75-35-4	1,1-Dichloroethene	ND	3.1	ND	0.77	
75-09-2	Methylene Chloride	ND	3.1	ND	0.88	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	3.1	ND	0.97	
76-13-1	Trichlorotrifluoroethane	ND	3.1	ND	0.40	
75-15-0	Carbon Disulfide	ND	31	ND	9.8	
156-60-5	trans-1,2-Dichloroethene	ND	3.1	ND	0.77	
75-34-3	1,1-Dichloroethane	ND	3.1	ND	0.75	
1634-04-4	Methyl tert-Butyl Ether	ND	3.1	ND	0.85	
108-05-4	Vinyl Acetate	33	31	9.3	8.7	
78-93-3	2-Butanone (MEK)	ND	31	ND	10	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 4

Client: Washington State Department of Ecology
Client Sample ID: Mass Bed NE Corner
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P1302788-001

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
 Analyst: Chris Cornett
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: SC01054

Date Collected: 6/27/13
 Date Received: 6/28/13
 Date Analyzed: 7/10 - 7/11/13
 Volume(s) Analyzed: 0.20 Liter(s)
 0.020 Liter(s)

Initial Pressure (psig): 0.24 Final Pressure (psig): 3.56

Canister Dilution Factor: 1.22

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	3.1	ND	0.77	
141-78-6	Ethyl Acetate	ND	6.1	ND	1.7	
110-54-3	n-Hexane	ND	3.1	ND	0.87	
67-66-3	Chloroform	ND	3.1	ND	0.62	
109-99-9	Tetrahydrofuran (THF)	ND	3.1	ND	1.0	
107-06-2	1,2-Dichloroethane	ND	3.1	ND	0.75	
71-55-6	1,1,1-Trichloroethane	ND	3.1	ND	0.56	
71-43-2	Benzene	7.9	3.1	2.5	0.96	
56-23-5	Carbon Tetrachloride	ND	3.1	ND	0.49	
110-82-7	Cyclohexane	ND	6.1	ND	1.8	
78-87-5	1,2-Dichloropropane	ND	3.1	ND	0.66	
75-27-4	Bromodichloromethane	ND	3.1	ND	0.46	
79-01-6	Trichloroethene	ND	3.1	ND	0.57	
123-91-1	1,4-Dioxane	ND	3.1	ND	0.85	
80-62-6	Methyl Methacrylate	ND	6.1	ND	1.5	
142-82-5	n-Heptane	5.9	3.1	1.4	0.74	
10061-01-5	cis-1,3-Dichloropropene	ND	3.1	ND	0.67	
108-10-1	4-Methyl-2-pentanone	ND	3.1	ND	0.74	
10061-02-6	trans-1,3-Dichloropropene	ND	3.1	ND	0.67	
79-00-5	1,1,2-Trichloroethane	ND	3.1	ND	0.56	
108-88-3	Toluene	11	3.1	3.0	0.81	
591-78-6	2-Hexanone	ND	3.1	ND	0.74	
124-48-1	Dibromochloromethane	ND	3.1	ND	0.36	
106-93-4	1,2-Dibromoethane	ND	3.1	ND	0.40	
123-86-4	n-Butyl Acetate	ND	3.1	ND	0.64	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology
Client Sample ID: Mass Bed NE Corner
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P1302788-001

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
 Analyst: Chris Cornett
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: SC01054

Date Collected: 6/27/13
 Date Received: 6/28/13
 Date Analyzed: 7/10 - 7/11/13
 Volume(s) Analyzed: 0.20 Liter(s)
 0.020 Liter(s)

Initial Pressure (psig): 0.24 Final Pressure (psig): 3.56

Canister Dilution Factor: 1.22

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	6.4	3.1	1.4	0.65	
127-18-4	Tetrachloroethene	ND	3.1	ND	0.45	
108-90-7	Chlorobenzene	ND	3.1	ND	0.66	
100-41-4	Ethylbenzene	ND	3.1	ND	0.70	
179601-23-1	m,p-Xylenes	ND	6.1	ND	1.4	
75-25-2	Bromoform	ND	3.1	ND	0.30	
100-42-5	Styrene	5.6	3.1	1.3	0.72	
95-47-6	o-Xylene	ND	3.1	ND	0.70	
111-84-2	n-Nonane	ND	3.1	ND	0.58	
79-34-5	1,1,2,2-Tetrachloroethane	ND	3.1	ND	0.44	
98-82-8	Cumene	ND	3.1	ND	0.62	
80-56-8	alpha-Pinene	620	31	110	5.5	D
103-65-1	n-Propylbenzene	ND	3.1	ND	0.62	
622-96-8	4-Ethyltoluene	ND	3.1	ND	0.62	
108-67-8	1,3,5-Trimethylbenzene	ND	3.1	ND	0.62	
95-63-6	1,2,4-Trimethylbenzene	ND	3.1	ND	0.62	
100-44-7	Benzyl Chloride	ND	3.1	ND	0.59	
541-73-1	1,3-Dichlorobenzene	ND	3.1	ND	0.51	
106-46-7	1,4-Dichlorobenzene	ND	3.1	ND	0.51	
95-50-1	1,2-Dichlorobenzene	ND	3.1	ND	0.51	
5989-27-5	d-Limonene	360	3.1	65	0.55	
96-12-8	1,2-Dibromo-3-chloropropane	ND	3.1	ND	0.32	
120-82-1	1,2,4-Trichlorobenzene	ND	3.1	ND	0.41	
91-20-3	Naphthalene	ND	3.1	ND	0.58	
87-68-3	Hexachlorobutadiene	ND	3.1	ND	0.29	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

D = The reported result is from a dilution.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 4 of 4

Client: Washington State Department of Ecology
Client Sample ID: Mass Bed NE Corner
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P1302788-001

Tentatively Identified Compounds

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
 Analyst: Chris Cornett
 Sample Type: 6.0 L Summa Canister
 Test Notes: **T**
 Container ID: SC01054

Date Collected: 6/27/13
 Date Received: 6/28/13
 Date Analyzed: 7/10 - 7/11/13
 Volume(s) Analyzed: 0.20 Liter(s)
 0.020 Liter(s)

Initial Pressure (psig): 0.24 Final Pressure (psig): 3.56

Canister Dilution Factor: 1.22

GC/MS Retention Time	Compound Identification	Concentration $\mu\text{g}/\text{m}^3$	Data Qualifier
	TVOC as Toluene	3,000	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 4

Client: Washington State Department of Ecology

Client Sample ID: Mass Bed NW Corner

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P1302788-002

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Container ID: SC00611

Date Collected: 6/27/13

Date Received: 6/28/13

Date Analyzed: 7/11/13

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.16 Final Pressure (psig): 3.59

Canister Dilution Factor: 1.23

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	49	0.62	28	0.36	
75-71-8	Dichlorodifluoromethane (CFC 12)	1.5	0.62	0.30	0.12	
74-87-3	Chloromethane	ND	0.62	ND	0.30	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.62	ND	0.088	
75-01-4	Vinyl Chloride	ND	0.62	ND	0.24	
106-99-0	1,3-Butadiene	3.8	0.62	1.7	0.28	
74-83-9	Bromomethane	ND	0.62	ND	0.16	
75-00-3	Chloroethane	ND	0.62	ND	0.23	
64-17-5	Ethanol	ND	6.2	ND	3.3	
75-05-8	Acetonitrile	23	0.62	14	0.37	
107-02-8	Acrolein	ND	2.5	ND	1.1	
67-64-1	Acetone	9.1	6.2	3.8	2.6	
75-69-4	Trichlorofluoromethane	0.78	0.62	0.14	0.11	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	6.2	ND	2.5	
107-13-1	Acrylonitrile	ND	0.62	ND	0.28	
75-35-4	1,1-Dichloroethene	ND	0.62	ND	0.16	
75-09-2	Methylene Chloride	ND	0.62	ND	0.18	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.62	ND	0.20	
76-13-1	Trichlorotrifluoroethane	ND	0.62	ND	0.080	
75-15-0	Carbon Disulfide	ND	6.2	ND	2.0	
156-60-5	trans-1,2-Dichloroethene	ND	0.62	ND	0.16	
75-34-3	1,1-Dichloroethane	ND	0.62	ND	0.15	
1634-04-4	Methyl tert-Butyl Ether	ND	0.62	ND	0.17	
108-05-4	Vinyl Acetate	ND	6.2	ND	1.7	
78-93-3	2-Butanone (MEK)	ND	6.2	ND	2.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 4

Client: Washington State Department of Ecology

Client Sample ID: Mass Bed NW Corner

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P1302788-002

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Container ID: SC00611

Date Collected: 6/27/13

Date Received: 6/28/13

Date Analyzed: 7/11/13

Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.16 Final Pressure (psig): 3.59

Canister Dilution Factor: 1.23

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.62	ND	0.16	
141-78-6	Ethyl Acetate	ND	1.2	ND	0.34	
110-54-3	n-Hexane	2.0	0.62	0.56	0.17	
67-66-3	Chloroform	ND	0.62	ND	0.13	
109-99-9	Tetrahydrofuran (THF)	ND	0.62	ND	0.21	
107-06-2	1,2-Dichloroethane	ND	0.62	ND	0.15	
71-55-6	1,1,1-Trichloroethane	ND	0.62	ND	0.11	
71-43-2	Benzene	2.3	0.62	0.73	0.19	
56-23-5	Carbon Tetrachloride	ND	0.62	ND	0.098	
110-82-7	Cyclohexane	ND	1.2	ND	0.36	
78-87-5	1,2-Dichloropropane	ND	0.62	ND	0.13	
75-27-4	Bromodichloromethane	ND	0.62	ND	0.092	
79-01-6	Trichloroethene	ND	0.62	ND	0.11	
123-91-1	1,4-Dioxane	ND	0.62	ND	0.17	
80-62-6	Methyl Methacrylate	ND	1.2	ND	0.30	
142-82-5	n-Heptane	2.3	0.62	0.56	0.15	
10061-01-5	cis-1,3-Dichloropropene	ND	0.62	ND	0.14	
108-10-1	4-Methyl-2-pentanone	ND	0.62	ND	0.15	
10061-02-6	trans-1,3-Dichloropropene	ND	0.62	ND	0.14	
79-00-5	1,1,2-Trichloroethane	ND	0.62	ND	0.11	
108-88-3	Toluene	4.2	0.62	1.1	0.16	
591-78-6	2-Hexanone	ND	0.62	ND	0.15	
124-48-1	Dibromochloromethane	ND	0.62	ND	0.072	
106-93-4	1,2-Dibromoethane	ND	0.62	ND	0.080	
123-86-4	n-Butyl Acetate	ND	0.62	ND	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology
Client Sample ID: Mass Bed NW Corner
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P1302788-002

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
 Analyst: Chris Cornett
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: SC00611

Date Collected: 6/27/13
 Date Received: 6/28/13
 Date Analyzed: 7/11/13
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.16 Final Pressure (psig): 3.59

Canister Dilution Factor: 1.23

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.62	ND	0.13	
127-18-4	Tetrachloroethene	ND	0.62	ND	0.091	
108-90-7	Chlorobenzene	ND	0.62	ND	0.13	
100-41-4	Ethylbenzene	0.65	0.62	0.15	0.14	
179601-23-1	m,p-Xylenes	2.1	1.2	0.49	0.28	
75-25-2	Bromoform	ND	0.62	ND	0.060	
100-42-5	Styrene	ND	0.62	ND	0.14	
95-47-6	o-Xylene	ND	0.62	ND	0.14	
111-84-2	n-Nonane	ND	0.62	ND	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.62	ND	0.090	
98-82-8	Cumene	ND	0.62	ND	0.13	
80-56-8	alpha-Pinene	13	0.62	2.3	0.11	
103-65-1	n-Propylbenzene	ND	0.62	ND	0.13	
622-96-8	4-Ethyltoluene	ND	0.62	ND	0.13	
108-67-8	1,3,5-Trimethylbenzene	ND	0.62	ND	0.13	
95-63-6	1,2,4-Trimethylbenzene	ND	0.62	ND	0.13	
100-44-7	Benzyl Chloride	ND	0.62	ND	0.12	
541-73-1	1,3-Dichlorobenzene	ND	0.62	ND	0.10	
106-46-7	1,4-Dichlorobenzene	ND	0.62	ND	0.10	
95-50-1	1,2-Dichlorobenzene	ND	0.62	ND	0.10	
5989-27-5	d-Limonene	7.9	0.62	1.4	0.11	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.62	ND	0.064	
120-82-1	1,2,4-Trichlorobenzene	ND	0.62	ND	0.083	
91-20-3	Naphthalene	ND	0.62	ND	0.12	
87-68-3	Hexachlorobutadiene	ND	0.62	ND	0.058	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology
Client Sample ID: Mass Bed NW Corner
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P1302788-002

Tentatively Identified Compounds

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
 Analyst: Chris Cornett
 Sample Type: 6.0 L Summa Canister
 Test Notes: **T**
 Container ID: SC00611

Date Collected: 6/27/13
 Date Received: 6/28/13
 Date Analyzed: 7/11/13
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): 0.16 Final Pressure (psig): 3.59

Canister Dilution Factor: 1.23

GC/MS Retention Time	Compound Identification	Concentration $\mu\text{g}/\text{m}^3$	Data Qualifier
	TVOC as Toluene	440	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 4

Client: Washington State Department of Ecology

Client Sample ID: Mass Bed Middle W

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P1302788-003

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Container ID: SC01733

Date Collected: 6/27/13

Date Received: 6/28/13

Date Analyzed: 7/10/13

Volume(s) Analyzed: 0.020 Liter(s)

Initial Pressure (psig): 0.09 Final Pressure (psig): 3.55

Canister Dilution Factor: 1.23

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	5,000	31	2,900	18	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	31	ND	6.2	
74-87-3	Chloromethane	87	31	42	15	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	31	ND	4.4	
75-01-4	Vinyl Chloride	ND	31	ND	12	
106-99-0	1,3-Butadiene	ND	31	ND	14	
74-83-9	Bromomethane	ND	31	ND	7.9	
75-00-3	Chloroethane	ND	31	ND	12	
64-17-5	Ethanol	ND	310	ND	160	
75-05-8	Acetonitrile	46	31	27	18	
107-02-8	Acrolein	ND	120	ND	54	
67-64-1	Acetone	ND	310	ND	130	
75-69-4	Trichlorofluoromethane	ND	31	ND	5.5	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	310	ND	130	
107-13-1	Acrylonitrile	ND	31	ND	14	
75-35-4	1,1-Dichloroethene	ND	31	ND	7.8	
75-09-2	Methylene Chloride	ND	31	ND	8.9	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	31	ND	9.8	
76-13-1	Trichlorotrifluoroethane	ND	31	ND	4.0	
75-15-0	Carbon Disulfide	ND	310	ND	99	
156-60-5	trans-1,2-Dichloroethene	ND	31	ND	7.8	
75-34-3	1,1-Dichloroethane	ND	31	ND	7.6	
1634-04-4	Methyl tert-Butyl Ether	ND	31	ND	8.5	
108-05-4	Vinyl Acetate	ND	310	ND	87	
78-93-3	2-Butanone (MEK)	ND	310	ND	100	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology

Client Sample ID: Mass Bed Middle W

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P1302788-003

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Container ID: SC01733

Date Collected: 6/27/13

Date Received: 6/28/13

Date Analyzed: 7/10/13

Volume(s) Analyzed: 0.020 Liter(s)

Initial Pressure (psig): 0.09 Final Pressure (psig): 3.55

Canister Dilution Factor: 1.23

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	31	ND	7.8	
141-78-6	Ethyl Acetate	ND	62	ND	17	
110-54-3	n-Hexane	51	31	15	8.7	
67-66-3	Chloroform	ND	31	ND	6.3	
109-99-9	Tetrahydrofuran (THF)	ND	31	ND	10	
107-06-2	1,2-Dichloroethane	ND	31	ND	7.6	
71-55-6	1,1,1-Trichloroethane	ND	31	ND	5.6	
71-43-2	Benzene	41	31	13	9.6	
56-23-5	Carbon Tetrachloride	ND	31	ND	4.9	
110-82-7	Cyclohexane	ND	62	ND	18	
78-87-5	1,2-Dichloropropane	ND	31	ND	6.7	
75-27-4	Bromodichloromethane	ND	31	ND	4.6	
79-01-6	Trichloroethene	ND	31	ND	5.7	
123-91-1	1,4-Dioxane	ND	31	ND	8.5	
80-62-6	Methyl Methacrylate	ND	62	ND	15	
142-82-5	n-Heptane	83	31	20	7.5	
10061-01-5	cis-1,3-Dichloropropene	ND	31	ND	6.8	
108-10-1	4-Methyl-2-pentanone	ND	31	ND	7.5	
10061-02-6	trans-1,3-Dichloropropene	ND	31	ND	6.8	
79-00-5	1,1,2-Trichloroethane	ND	31	ND	5.6	
108-88-3	Toluene	75	31	20	8.2	
591-78-6	2-Hexanone	ND	31	ND	7.5	
124-48-1	Dibromochloromethane	ND	31	ND	3.6	
106-93-4	1,2-Dibromoethane	ND	31	ND	4.0	
123-86-4	n-Butyl Acetate	ND	31	ND	6.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology
Client Sample ID: Mass Bed Middle W
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P1302788-003

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
 Analyst: Chris Cornett
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: SC01733

Date Collected: 6/27/13
 Date Received: 6/28/13
 Date Analyzed: 7/10/13
 Volume(s) Analyzed: 0.020 Liter(s)

Initial Pressure (psig): 0.09 Final Pressure (psig): 3.55

Canister Dilution Factor: 1.23

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	77	31	16	6.6	
127-18-4	Tetrachloroethene	ND	31	ND	4.5	
108-90-7	Chlorobenzene	ND	31	ND	6.7	
100-41-4	Ethylbenzene	ND	31	ND	7.1	
179601-23-1	m,p-Xylenes	ND	62	ND	14	
75-25-2	Bromoform	ND	31	ND	3.0	
100-42-5	Styrene	83	31	19	7.2	
95-47-6	o-Xylene	ND	31	ND	7.1	
111-84-2	n-Nonane	ND	31	ND	5.9	
79-34-5	1,1,2,2-Tetrachloroethane	ND	31	ND	4.5	
98-82-8	Cumene	ND	31	ND	6.3	
80-56-8	alpha-Pinene	4,000	31	720	5.5	
103-65-1	n-Propylbenzene	ND	31	ND	6.3	
622-96-8	4-Ethyltoluene	ND	31	ND	6.3	
108-67-8	1,3,5-Trimethylbenzene	ND	31	ND	6.3	
95-63-6	1,2,4-Trimethylbenzene	ND	31	ND	6.3	
100-44-7	Benzyl Chloride	ND	31	ND	5.9	
541-73-1	1,3-Dichlorobenzene	ND	31	ND	5.1	
106-46-7	1,4-Dichlorobenzene	ND	31	ND	5.1	
95-50-1	1,2-Dichlorobenzene	ND	31	ND	5.1	
5989-27-5	d-Limonene	1,600	31	290	5.5	
96-12-8	1,2-Dibromo-3-chloropropane	ND	31	ND	3.2	
120-82-1	1,2,4-Trichlorobenzene	ND	31	ND	4.1	
91-20-3	Naphthalene	ND	31	ND	5.9	
87-68-3	Hexachlorobutadiene	ND	31	ND	2.9	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology
Client Sample ID: Mass Bed Middle W
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
ALS Sample ID: P1302788-003

Tentatively Identified Compounds

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Chris Cornett
Sample Type: 6.0 L Summa Canister
Test Notes: **T**
Container ID: SC01733

Date Collected: 6/27/13
Date Received: 6/28/13
Date Analyzed: 7/10/13
Volume(s) Analyzed: 0.020 Liter(s)

Initial Pressure (psig): 0.09 Final Pressure (psig): 3.55

Canister Dilution Factor: 1.23

GC/MS Retention Time	Compound Identification	Concentration $\mu\text{g}/\text{m}^3$	Data Qualifier
	TVOC as Toluene	19,000	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 4

Client: Washington State Department of Ecology
Client Sample ID: Mass Bed Middle S
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P1302788-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Chris Cornett
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC01053

Date Collected: 6/27/13
Date Received: 6/28/13
Date Analyzed: 7/10/13 & 7/12/13
Volume(s) Analyzed: 0.040 Liter(s)
 0.020 Liter(s)

Initial Pressure (psig): -0.17 Final Pressure (psig): 3.50

Canister Dilution Factor: 1.25

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	1,700	16	1,000	9.1	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	16	ND	3.2	
74-87-3	Chloromethane	53	16	26	7.6	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	16	ND	2.2	
75-01-4	Vinyl Chloride	ND	16	ND	6.1	
106-99-0	1,3-Butadiene	ND	16	ND	7.1	
74-83-9	Bromomethane	ND	16	ND	4.0	
75-00-3	Chloroethane	ND	16	ND	5.9	
64-17-5	Ethanol	ND	160	ND	83	
75-05-8	Acetonitrile	110	16	66	9.3	
107-02-8	Acrolein	ND	63	ND	27	
67-64-1	Acetone	1,000	160	430	66	
75-69-4	Trichlorofluoromethane	ND	16	ND	2.8	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	160	ND	64	
107-13-1	Acrylonitrile	ND	16	ND	7.2	
75-35-4	1,1-Dichloroethene	ND	16	ND	3.9	
75-09-2	Methylene Chloride	ND	16	ND	4.5	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	16	ND	5.0	
76-13-1	Trichlorotrifluoroethane	ND	16	ND	2.0	
75-15-0	Carbon Disulfide	ND	160	ND	50	
156-60-5	trans-1,2-Dichloroethene	ND	16	ND	3.9	
75-34-3	1,1-Dichloroethane	ND	16	ND	3.9	
1634-04-4	Methyl tert-Butyl Ether	ND	16	ND	4.3	
108-05-4	Vinyl Acetate	ND	160	ND	44	
78-93-3	2-Butanone (MEK)	340	160	110	53	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology
Client Sample ID: Mass Bed Middle S
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P1302788-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Chris Cornett
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC01053

Date Collected: 6/27/13
Date Received: 6/28/13
Date Analyzed: 7/10/13 & 7/12/13
Volume(s) Analyzed: 0.040 Liter(s)
 0.020 Liter(s)

Initial Pressure (psig): -0.17 Final Pressure (psig): 3.50

Canister Dilution Factor: 1.25

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	16	ND	3.9	
141-78-6	Ethyl Acetate	ND	31	ND	8.7	
110-54-3	n-Hexane	ND	16	ND	4.4	
67-66-3	Chloroform	ND	16	ND	3.2	
109-99-9	Tetrahydrofuran (THF)	ND	16	ND	5.3	
107-06-2	1,2-Dichloroethane	ND	16	ND	3.9	
71-55-6	1,1,1-Trichloroethane	ND	16	ND	2.9	
71-43-2	Benzene	24	16	7.5	4.9	
56-23-5	Carbon Tetrachloride	ND	16	ND	2.5	
110-82-7	Cyclohexane	ND	31	ND	9.1	
78-87-5	1,2-Dichloropropane	ND	16	ND	3.4	
75-27-4	Bromodichloromethane	ND	16	ND	2.3	
79-01-6	Trichloroethene	ND	16	ND	2.9	
123-91-1	1,4-Dioxane	ND	16	ND	4.3	
80-62-6	Methyl Methacrylate	ND	31	ND	7.6	
142-82-5	n-Heptane	37	16	8.9	3.8	
10061-01-5	cis-1,3-Dichloropropene	ND	16	ND	3.4	
108-10-1	4-Methyl-2-pentanone	59	16	14	3.8	
10061-02-6	trans-1,3-Dichloropropene	ND	16	ND	3.4	
79-00-5	1,1,2-Trichloroethane	ND	16	ND	2.9	
108-88-3	Toluene	55	16	15	4.1	
591-78-6	2-Hexanone	ND	16	ND	3.8	
124-48-1	Dibromochloromethane	ND	16	ND	1.8	
106-93-4	1,2-Dibromoethane	ND	16	ND	2.0	
123-86-4	n-Butyl Acetate	ND	16	ND	3.3	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology
Client Sample ID: Mass Bed Middle S
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P1302788-004

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Chris Cornett
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC01053

Date Collected: 6/27/13
Date Received: 6/28/13
Date Analyzed: 7/10/13 & 7/12/13
Volume(s) Analyzed: 0.040 Liter(s)
 0.020 Liter(s)

Initial Pressure (psig): -0.17 **Final Pressure (psig):** 3.50

Canister Dilution Factor: 1.25

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	23	16	4.9	3.3	
127-18-4	Tetrachloroethene	ND	16	ND	2.3	
108-90-7	Chlorobenzene	ND	16	ND	3.4	
100-41-4	Ethylbenzene	ND	16	ND	3.6	
179601-23-1	m,p-Xylenes	ND	31	ND	7.2	
75-25-2	Bromoform	ND	16	ND	1.5	
100-42-5	Styrene	74	16	17	3.7	
95-47-6	o-Xylene	ND	16	ND	3.6	
111-84-2	n-Nonane	18	16	3.4	3.0	
79-34-5	1,1,2,2-Tetrachloroethane	ND	16	ND	2.3	
98-82-8	Cumene	ND	16	ND	3.2	
80-56-8	alpha-Pinene	3,500	31	630	5.6	D
103-65-1	n-Propylbenzene	ND	16	ND	3.2	
622-96-8	4-Ethyltoluene	ND	16	ND	3.2	
108-67-8	1,3,5-Trimethylbenzene	ND	16	ND	3.2	
95-63-6	1,2,4-Trimethylbenzene	ND	16	ND	3.2	
100-44-7	Benzyl Chloride	ND	16	ND	3.0	
541-73-1	1,3-Dichlorobenzene	ND	16	ND	2.6	
106-46-7	1,4-Dichlorobenzene	ND	16	ND	2.6	
95-50-1	1,2-Dichlorobenzene	ND	16	ND	2.6	
5989-27-5	d-Limonene	1,800	16	320	2.8	
96-12-8	1,2-Dibromo-3-chloropropane	ND	16	ND	1.6	
120-82-1	1,2,4-Trichlorobenzene	ND	16	ND	2.1	
91-20-3	Naphthalene	ND	16	ND	3.0	
87-68-3	Hexachlorobutadiene	ND	16	ND	1.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

D = The reported result is from a dilution.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 4 of 4

Client: Washington State Department of Ecology
Client Sample ID: Mass Bed Middle S
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P1302788-004

Tentatively Identified Compounds

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
 Analyst: Chris Cornett
 Sample Type: 6.0 L Summa Canister
 Test Notes: **T**
 Container ID: SC01053

Date Collected: 6/27/13
 Date Received: 6/28/13
 Date Analyzed: 7/10/13 & 7/12/13
 Volume(s) Analyzed: 0.040 Liter(s)
 0.020 Liter(s)

Initial Pressure (psig): -0.17 Final Pressure (psig): 3.50

Canister Dilution Factor: 1.25

GC/MS Retention Time	Compound Identification	Concentration $\mu\text{g}/\text{m}^3$	Data Qualifier
	TVOC as Toluene	19,000	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 4

Client: Washington State Department of Ecology
Client Sample ID: Mass Bed Middle E
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P1302788-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Chris Cornett
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC01487

Date Collected: 6/27/13
Date Received: 6/28/13
Date Analyzed: 7/10 - 7/11/13
Volume(s) Analyzed: 0.020 Liter(s)
 0.0020 Liter(s)

Initial Pressure (psig): 0.05 Final Pressure (psig): 3.50

Canister Dilution Factor: 1.23

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	160	31	94	18	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	31	ND	6.2	
74-87-3	Chloromethane	ND	31	ND	15	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	31	ND	4.4	
75-01-4	Vinyl Chloride	ND	31	ND	12	
106-99-0	1,3-Butadiene	ND	31	ND	14	
74-83-9	Bromomethane	ND	31	ND	7.9	
75-00-3	Chloroethane	ND	31	ND	12	
64-17-5	Ethanol	580	310	310	160	
75-05-8	Acetonitrile	ND	31	ND	18	
107-02-8	Acrolein	ND	120	ND	54	
67-64-1	Acetone	1,100	310	450	130	
75-69-4	Trichlorofluoromethane	ND	31	ND	5.5	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	310	ND	130	
107-13-1	Acrylonitrile	ND	31	ND	14	
75-35-4	1,1-Dichloroethene	ND	31	ND	7.8	
75-09-2	Methylene Chloride	ND	31	ND	8.9	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	31	ND	9.8	
76-13-1	Trichlorotrifluoroethane	ND	31	ND	4.0	
75-15-0	Carbon Disulfide	ND	310	ND	99	
156-60-5	trans-1,2-Dichloroethene	ND	31	ND	7.8	
75-34-3	1,1-Dichloroethane	ND	31	ND	7.6	
1634-04-4	Methyl tert-Butyl Ether	ND	31	ND	8.5	
108-05-4	Vinyl Acetate	480	310	140	87	
78-93-3	2-Butanone (MEK)	650	310	220	100	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology

Client Sample ID: Mass Bed Middle E

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P1302788-005

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Container ID: SC01487

Date Collected: 6/27/13

Date Received: 6/28/13

Date Analyzed: 7/10 - 7/11/13

Volume(s) Analyzed: 0.020 Liter(s)

0.0020 Liter(s)

Initial Pressure (psig): 0.05 Final Pressure (psig): 3.50

Canister Dilution Factor: 1.23

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	31	ND	7.8	
141-78-6	Ethyl Acetate	ND	62	ND	17	
110-54-3	n-Hexane	ND	31	ND	8.7	
67-66-3	Chloroform	ND	31	ND	6.3	
109-99-9	Tetrahydrofuran (THF)	ND	31	ND	10	
107-06-2	1,2-Dichloroethane	ND	31	ND	7.6	
71-55-6	1,1,1-Trichloroethane	ND	31	ND	5.6	
71-43-2	Benzene	ND	31	ND	9.6	
56-23-5	Carbon Tetrachloride	ND	31	ND	4.9	
110-82-7	Cyclohexane	ND	62	ND	18	
78-87-5	1,2-Dichloropropane	ND	31	ND	6.7	
75-27-4	Bromodichloromethane	ND	31	ND	4.6	
79-01-6	Trichloroethene	ND	31	ND	5.7	
123-91-1	1,4-Dioxane	ND	31	ND	8.5	
80-62-6	Methyl Methacrylate	ND	62	ND	15	
142-82-5	n-Heptane	ND	31	ND	7.5	
10061-01-5	cis-1,3-Dichloropropene	ND	31	ND	6.8	
108-10-1	4-Methyl-2-pentanone	ND	31	ND	7.5	
10061-02-6	trans-1,3-Dichloropropene	ND	31	ND	6.8	
79-00-5	1,1,2-Trichloroethane	ND	31	ND	5.6	
108-88-3	Toluene	ND	31	ND	8.2	
591-78-6	2-Hexanone	ND	31	ND	7.5	
124-48-1	Dibromochloromethane	ND	31	ND	3.6	
106-93-4	1,2-Dibromoethane	ND	31	ND	4.0	
123-86-4	n-Butyl Acetate	ND	31	ND	6.5	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology
Client Sample ID: Mass Bed Middle E
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P1302788-005

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Chris Cornett
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC01487

Date Collected: 6/27/13
Date Received: 6/28/13
Date Analyzed: 7/10 - 7/11/13
Volume(s) Analyzed: 0.020 Liter(s)
 0.0020 Liter(s)

Initial Pressure (psig): 0.05 Final Pressure (psig): 3.50

Canister Dilution Factor: 1.23

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	53	31	11	6.6	
127-18-4	Tetrachloroethene	ND	31	ND	4.5	
108-90-7	Chlorobenzene	ND	31	ND	6.7	
100-41-4	Ethylbenzene	ND	31	ND	7.1	
179601-23-1	m,p-Xylenes	ND	62	ND	14	
75-25-2	Bromoform	ND	31	ND	3.0	
100-42-5	Styrene	ND	31	ND	7.2	
95-47-6	o-Xylene	ND	31	ND	7.1	
111-84-2	n-Nonane	62	31	12	5.9	
79-34-5	1,1,2,2-Tetrachloroethane	ND	31	ND	4.5	
98-82-8	Cumene	ND	31	ND	6.3	
80-56-8	alpha-Pinene	6,600	310	1,200	55	D
103-65-1	n-Propylbenzene	ND	31	ND	6.3	
622-96-8	4-Ethyltoluene	ND	31	ND	6.3	
108-67-8	1,3,5-Trimethylbenzene	ND	31	ND	6.3	
95-63-6	1,2,4-Trimethylbenzene	ND	31	ND	6.3	
100-44-7	Benzyl Chloride	ND	31	ND	5.9	
541-73-1	1,3-Dichlorobenzene	ND	31	ND	5.1	
106-46-7	1,4-Dichlorobenzene	ND	31	ND	5.1	
95-50-1	1,2-Dichlorobenzene	ND	31	ND	5.1	
5989-27-5	d-Limonene	5,000	31	890	5.5	
96-12-8	1,2-Dibromo-3-chloropropane	ND	31	ND	3.2	
120-82-1	1,2,4-Trichlorobenzene	ND	31	ND	4.1	
91-20-3	Naphthalene	ND	31	ND	5.9	
87-68-3	Hexachlorobutadiene	ND	31	ND	2.9	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

D = The reported result is from a dilution.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology
Client Sample ID: Mass Bed Middle E
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
ALS Sample ID: P1302788-005

Tentatively Identified Compounds

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Chris Cornett
Sample Type: 6.0 L Summa Canister
Test Notes: **T**
Container ID: SC01487

Date Collected: 6/27/13
Date Received: 6/28/13
Date Analyzed: 7/10 - 7/11/13
Volume(s) Analyzed: 0.020 Liter(s)
0.0020 Liter(s)

Initial Pressure (psig): 0.05 Final Pressure (psig): 3.50

Canister Dilution Factor: 1.23

GC/MS Retention Time	Compound Identification	Concentration $\mu\text{g}/\text{m}^3$	Data Qualifier
	TVOC as Toluene	31,000	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 4

Client: Washington State Department of Ecology
Client Sample ID: Equipment Blank
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P1302788-006

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
 Analyst: Chris Cornett
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: SC01683

Date Collected: 6/27/13
 Date Received: 6/28/13
 Date Analyzed: 7/11/13
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.06 Final Pressure (psig): 3.61

Canister Dilution Factor: 1.25

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	12	0.63	6.9	0.36	
75-71-8	Dichlorodifluoromethane (CFC 12)	0.69	0.63	0.14	0.13	
74-87-3	Chloromethane	ND	0.63	ND	0.30	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.63	ND	0.089	
75-01-4	Vinyl Chloride	ND	0.63	ND	0.24	
106-99-0	1,3-Butadiene	3.8	0.63	1.7	0.28	
74-83-9	Bromomethane	ND	0.63	ND	0.16	
75-00-3	Chloroethane	ND	0.63	ND	0.24	
64-17-5	Ethanol	ND	6.3	ND	3.3	
75-05-8	Acetonitrile	16	0.63	9.5	0.37	
107-02-8	Acrolein	ND	2.5	ND	1.1	
67-64-1	Acetone	ND	6.3	ND	2.6	
75-69-4	Trichlorofluoromethane	ND	0.63	ND	0.11	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	6.3	ND	2.5	
107-13-1	Acrylonitrile	ND	0.63	ND	0.29	
75-35-4	1,1-Dichloroethene	ND	0.63	ND	0.16	
75-09-2	Methylene Chloride	ND	0.63	ND	0.18	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.63	ND	0.20	
76-13-1	Trichlorotrifluoroethane	ND	0.63	ND	0.082	
75-15-0	Carbon Disulfide	ND	6.3	ND	2.0	
156-60-5	trans-1,2-Dichloroethene	ND	0.63	ND	0.16	
75-34-3	1,1-Dichloroethane	ND	0.63	ND	0.15	
1634-04-4	Methyl tert-Butyl Ether	ND	0.63	ND	0.17	
108-05-4	Vinyl Acetate	ND	6.3	ND	1.8	
78-93-3	2-Butanone (MEK)	ND	6.3	ND	2.1	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology
Client Sample ID: Equipment Blank
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P1302788-006

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Chris Cornett
Sample Type: 6.0 L Summa Canister
Test Notes:
Container ID: SC01683

Date Collected: 6/27/13
Date Received: 6/28/13
Date Analyzed: 7/11/13
Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.06 **Final Pressure (psig):** 3.61

Canister Dilution Factor: 1.25

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.63	ND	0.16	
141-78-6	Ethyl Acetate	ND	1.3	ND	0.35	
110-54-3	n-Hexane	ND	0.63	ND	0.18	
67-66-3	Chloroform	ND	0.63	ND	0.13	
109-99-9	Tetrahydrofuran (THF)	ND	0.63	ND	0.21	
107-06-2	1,2-Dichloroethane	ND	0.63	ND	0.15	
71-55-6	1,1,1-Trichloroethane	ND	0.63	ND	0.11	
71-43-2	Benzene	ND	0.63	ND	0.20	
56-23-5	Carbon Tetrachloride	ND	0.63	ND	0.099	
110-82-7	Cyclohexane	ND	1.3	ND	0.36	
78-87-5	1,2-Dichloropropane	ND	0.63	ND	0.14	
75-27-4	Bromodichloromethane	ND	0.63	ND	0.093	
79-01-6	Trichloroethene	ND	0.63	ND	0.12	
123-91-1	1,4-Dioxane	ND	0.63	ND	0.17	
80-62-6	Methyl Methacrylate	ND	1.3	ND	0.31	
142-82-5	n-Heptane	ND	0.63	ND	0.15	
10061-01-5	cis-1,3-Dichloropropene	ND	0.63	ND	0.14	
108-10-1	4-Methyl-2-pentanone	ND	0.63	ND	0.15	
10061-02-6	trans-1,3-Dichloropropene	ND	0.63	ND	0.14	
79-00-5	1,1,2-Trichloroethane	ND	0.63	ND	0.11	
108-88-3	Toluene	ND	0.63	ND	0.17	
591-78-6	2-Hexanone	ND	0.63	ND	0.15	
124-48-1	Dibromochloromethane	ND	0.63	ND	0.073	
106-93-4	1,2-Dibromoethane	ND	0.63	ND	0.081	
123-86-4	n-Butyl Acetate	ND	0.63	ND	0.13	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology
Client Sample ID: Equipment Blank
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P1302788-006

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
 Analyst: Chris Cornett
 Sample Type: 6.0 L Summa Canister
 Test Notes:
 Container ID: SC01683

Date Collected: 6/27/13
 Date Received: 6/28/13
 Date Analyzed: 7/11/13
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.06 Final Pressure (psig): 3.61

Canister Dilution Factor: 1.25

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.63	ND	0.13	
127-18-4	Tetrachloroethene	ND	0.63	ND	0.092	
108-90-7	Chlorobenzene	ND	0.63	ND	0.14	
100-41-4	Ethylbenzene	ND	0.63	ND	0.14	
179601-23-1	m,p-Xylenes	ND	1.3	ND	0.29	
75-25-2	Bromoform	ND	0.63	ND	0.060	
100-42-5	Styrene	ND	0.63	ND	0.15	
95-47-6	o-Xylene	ND	0.63	ND	0.14	
111-84-2	n-Nonane	ND	0.63	ND	0.12	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.63	ND	0.091	
98-82-8	Cumene	ND	0.63	ND	0.13	
80-56-8	alpha-Pinene	6.8	0.63	1.2	0.11	
103-65-1	n-Propylbenzene	ND	0.63	ND	0.13	
622-96-8	4-Ethyltoluene	ND	0.63	ND	0.13	
108-67-8	1,3,5-Trimethylbenzene	ND	0.63	ND	0.13	
95-63-6	1,2,4-Trimethylbenzene	ND	0.63	ND	0.13	
100-44-7	Benzyl Chloride	ND	0.63	ND	0.12	
541-73-1	1,3-Dichlorobenzene	ND	0.63	ND	0.10	
106-46-7	1,4-Dichlorobenzene	ND	0.63	ND	0.10	
95-50-1	1,2-Dichlorobenzene	ND	0.63	ND	0.10	
5989-27-5	d-Limonene	14	0.63	2.4	0.11	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.63	ND	0.065	
120-82-1	1,2,4-Trichlorobenzene	ND	0.63	ND	0.084	
91-20-3	Naphthalene	ND	0.63	ND	0.12	
87-68-3	Hexachlorobutadiene	ND	0.63	ND	0.059	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology
Client Sample ID: Equipment Blank
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P1302788-006

Tentatively Identified Compounds

Test Code: EPA TO-15
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
 Analyst: Chris Cornett
 Sample Type: 6.0 L Summa Canister
 Test Notes: **T**
 Container ID: SC01683

Date Collected: 6/27/13
 Date Received: 6/28/13
 Date Analyzed: 7/11/13
 Volume(s) Analyzed: 1.00 Liter(s)

Initial Pressure (psig): -0.06 Final Pressure (psig): 3.61

Canister Dilution Factor: 1.25

GC/MS Retention Time	Compound Identification	Concentration µg/m ³	Data Qualifier
	TVOC as Toluene	190	

T = Analyte is a tentatively identified compound, result is estimated.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology

Client Sample ID: Method Blank

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P130710-MB

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 7/10/13

Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 2 of 4

Client: Washington State Department of Ecology

Client Sample ID: Method Blank

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P130710-MB

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 7/10/13

Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	0.50	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology
Client Sample ID: Method Blank
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P130710-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Chris Cornett
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 7/10/13
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology

Client Sample ID: Method Blank

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P130710-MB

Tentatively Identified Compounds

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 7/10/13

Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

GC/MS Retention Time	Compound Identification	Concentration µg/m ³	Data Qualifier
	TVOC as Toluene	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 4

Client: Washington State Department of Ecology

Client Sample ID: Method Blank

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P130711-MB

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 7/11/13

Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
115-07-1	Propene	ND	0.50	ND	0.29	
75-71-8	Dichlorodifluoromethane (CFC 12)	ND	0.50	ND	0.10	
74-87-3	Chloromethane	ND	0.50	ND	0.24	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	ND	0.50	ND	0.072	
75-01-4	Vinyl Chloride	ND	0.50	ND	0.20	
106-99-0	1,3-Butadiene	ND	0.50	ND	0.23	
74-83-9	Bromomethane	ND	0.50	ND	0.13	
75-00-3	Chloroethane	ND	0.50	ND	0.19	
64-17-5	Ethanol	ND	5.0	ND	2.7	
75-05-8	Acetonitrile	ND	0.50	ND	0.30	
107-02-8	Acrolein	ND	2.0	ND	0.87	
67-64-1	Acetone	ND	5.0	ND	2.1	
75-69-4	Trichlorofluoromethane	ND	0.50	ND	0.089	
67-63-0	2-Propanol (Isopropyl Alcohol)	ND	5.0	ND	2.0	
107-13-1	Acrylonitrile	ND	0.50	ND	0.23	
75-35-4	1,1-Dichloroethene	ND	0.50	ND	0.13	
75-09-2	Methylene Chloride	ND	0.50	ND	0.14	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	ND	0.50	ND	0.16	
76-13-1	Trichlorotrifluoroethane	ND	0.50	ND	0.065	
75-15-0	Carbon Disulfide	ND	5.0	ND	1.6	
156-60-5	trans-1,2-Dichloroethene	ND	0.50	ND	0.13	
75-34-3	1,1-Dichloroethane	ND	0.50	ND	0.12	
1634-04-4	Methyl tert-Butyl Ether	ND	0.50	ND	0.14	
108-05-4	Vinyl Acetate	ND	5.0	ND	1.4	
78-93-3	2-Butanone (MEK)	ND	5.0	ND	1.7	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Washington State Department of Ecology

Client Sample ID: Method Blank

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P130711-MB

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 7/11/13

Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m³	MRL µg/m³	Result ppbV	MRL ppbV	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	ND	0.50	ND	0.13	
141-78-6	Ethyl Acetate	ND	1.0	ND	0.28	
110-54-3	n-Hexane	ND	0.50	ND	0.14	
67-66-3	Chloroform	ND	0.50	ND	0.10	
109-99-9	Tetrahydrofuran (THF)	ND	0.50	ND	0.17	
107-06-2	1,2-Dichloroethane	ND	0.50	ND	0.12	
71-55-6	1,1,1-Trichloroethane	ND	0.50	ND	0.092	
71-43-2	Benzene	ND	0.50	ND	0.16	
56-23-5	Carbon Tetrachloride	ND	0.50	ND	0.080	
110-82-7	Cyclohexane	ND	1.0	ND	0.29	
78-87-5	1,2-Dichloropropane	ND	0.50	ND	0.11	
75-27-4	Bromodichloromethane	ND	0.50	ND	0.075	
79-01-6	Trichloroethene	ND	0.50	ND	0.093	
123-91-1	1,4-Dioxane	ND	0.50	ND	0.14	
80-62-6	Methyl Methacrylate	ND	1.0	ND	0.24	
142-82-5	n-Heptane	ND	0.50	ND	0.12	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ND	0.11	
108-10-1	4-Methyl-2-pentanone	ND	0.50	ND	0.12	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ND	0.11	
79-00-5	1,1,2-Trichloroethane	ND	0.50	ND	0.092	
108-88-3	Toluene	ND	0.50	ND	0.13	
591-78-6	2-Hexanone	ND	0.50	ND	0.12	
124-48-1	Dibromochloromethane	ND	0.50	ND	0.059	
106-93-4	1,2-Dibromoethane	ND	0.50	ND	0.065	
123-86-4	n-Butyl Acetate	ND	0.50	ND	0.11	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 3 of 4

Client: Washington State Department of Ecology
Client Sample ID: Method Blank
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788
 ALS Sample ID: P130711-MB

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Chris Cornett
Sample Type: 6.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 7/11/13
Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

CAS #	Compound	Result µg/m ³	MRL µg/m ³	Result ppbV	MRL ppbV	Data Qualifier
111-65-9	n-Octane	ND	0.50	ND	0.11	
127-18-4	Tetrachloroethene	ND	0.50	ND	0.074	
108-90-7	Chlorobenzene	ND	0.50	ND	0.11	
100-41-4	Ethylbenzene	ND	0.50	ND	0.12	
179601-23-1	m,p-Xylenes	ND	1.0	ND	0.23	
75-25-2	Bromoform	ND	0.50	ND	0.048	
100-42-5	Styrene	ND	0.50	ND	0.12	
95-47-6	o-Xylene	ND	0.50	ND	0.12	
111-84-2	n-Nonane	ND	0.50	ND	0.095	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.50	ND	0.073	
98-82-8	Cumene	ND	0.50	ND	0.10	
80-56-8	alpha-Pinene	ND	0.50	ND	0.090	
103-65-1	n-Propylbenzene	ND	0.50	ND	0.10	
622-96-8	4-Ethyltoluene	ND	0.50	ND	0.10	
108-67-8	1,3,5-Trimethylbenzene	ND	0.50	ND	0.10	
95-63-6	1,2,4-Trimethylbenzene	ND	0.50	ND	0.10	
100-44-7	Benzyl Chloride	ND	0.50	ND	0.097	
541-73-1	1,3-Dichlorobenzene	ND	0.50	ND	0.083	
106-46-7	1,4-Dichlorobenzene	ND	0.50	ND	0.083	
95-50-1	1,2-Dichlorobenzene	ND	0.50	ND	0.083	
5989-27-5	d-Limonene	ND	0.50	ND	0.090	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.50	ND	0.052	
120-82-1	1,2,4-Trichlorobenzene	ND	0.50	ND	0.067	
91-20-3	Naphthalene	ND	0.50	ND	0.095	
87-68-3	Hexachlorobutadiene	ND	0.50	ND	0.047	

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 4 of 4

Client: Washington State Department of Ecology

Client Sample ID: Method Blank

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P130711-MB

Tentatively Identified Compounds

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 7/11/13

Volume(s) Analyzed: 1.00 Liter(s)

Canister Dilution Factor: 1.00

GC/MS Retention Time	Compound Identification	Concentration $\mu\text{g}/\text{m}^3$	Data Qualifier
	TVOC as Toluene	NF	

NF = Compound was searched for, but not found.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 1

Client: Washington State Department of Ecology
Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

Test Code: EPA TO-15
Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13
Analyst: Chris Cornett
Sample Type: 6.0 L Summa Canister(s)
Test Notes:

Date(s) Collected: 6/27/13
Date(s) Received: 6/28/13
Date(s) Analyzed: 7/10 - 7/12/13

Client Sample ID	ALS Sample ID	1,2-Dichloroethane-d4	Toluene-d8	Bromofluorobenzene	Acceptance Limits	Data Qualifier
		Percent Recovered	Percent Recovered	Percent Recovered		
Method Blank	P130710-MB	99	101	97	70-130	
Method Blank	P130711-MB	95	101	102	70-130	
Lab Control Sample	P130710-LCS	98	98	100	70-130	
Lab Control Sample	P130711-LCS	93	98	103	70-130	
Mass Bed NE Corner	P1302788-001	95	99	102	70-130	
Mass Bed NW Corner	P1302788-002	97	99	101	70-130	
Mass Bed Middle W	P1302788-003	94	100	100	70-130	
Mass Bed Middle S	P1302788-004	93	95	109	70-130	
Mass Bed Middle E	P1302788-005	91	94	108	70-130	
Equipment Blank	P1302788-006	99	98	106	70-130	

Surrogate percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 3

Client: Washington State Department of Ecology

Client Sample ID: Lab Control Sample

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P130710-LCS

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 7/10/13

Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
115-07-1	Propene	200	189	95	58-139	
75-71-8	Dichlorodifluoromethane (CFC 12)	204	206	101	63-115	
74-87-3	Chloromethane	198	197	99	58-122	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	204	202	99	65-115	
75-01-4	Vinyl Chloride	200	206	103	64-122	
106-99-0	1,3-Butadiene	212	222	105	57-141	
74-83-9	Bromomethane	200	176	88	68-122	
75-00-3	Chloroethane	202	204	101	66-120	
64-17-5	Ethanol	1,020	1060	104	58-126	
75-05-8	Acetonitrile	202	207	102	64-136	
107-02-8	Acrolein	214	223	104	58-129	
67-64-1	Acetone	1,080	961	89	60-114	
75-69-4	Trichlorofluoromethane	198	194	98	62-107	
67-63-0	2-Propanol (Isopropyl Alcohol)	420	445	106	54-118	
107-13-1	Acrylonitrile	208	227	109	72-143	
75-35-4	1,1-Dichloroethene	214	218	102	69-119	
75-09-2	Methylene Chloride	216	191	88	64-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	216	235	109	59-131	
76-13-1	Trichlorotrifluoroethane	214	217	101	69-117	
75-15-0	Carbon Disulfide	196	201	103	65-115	
156-60-5	trans-1,2-Dichloroethene	212	222	105	70-126	
75-34-3	1,1-Dichloroethane	208	207	100	68-116	
1634-04-4	Methyl tert-Butyl Ether	212	218	103	69-120	
108-05-4	Vinyl Acetate	1,020	1050	103	58-160	
78-93-3	2-Butanone (MEK)	218	211	97	70-127	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 3

Client: Washington State Department of Ecology

Client Sample ID: Lab Control Sample

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P130710-LCS

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 7/10/13

Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	214	220	103	70-119	
141-78-6	Ethyl Acetate	426	414	97	72-129	
110-54-3	n-Hexane	210	187	89	63-115	
67-66-3	Chloroform	214	211	99	68-110	
109-99-9	Tetrahydrofuran (THF)	206	219	106	60-126	
107-06-2	1,2-Dichloroethane	210	209	100	69-118	
71-55-6	1,1,1-Trichloroethane	206	218	106	68-120	
71-43-2	Benzene	220	200	91	69-117	
56-23-5	Carbon Tetrachloride	210	228	109	65-134	
110-82-7	Cyclohexane	420	444	106	69-114	
78-87-5	1,2-Dichloropropane	212	217	102	70-116	
75-27-4	Bromodichloromethane	214	235	110	71-126	
79-01-6	Trichloroethene	208	213	102	71-119	
123-91-1	1,4-Dioxane	218	231	106	72-126	
80-62-6	Methyl Methacrylate	420	459	109	75-136	
142-82-5	n-Heptane	214	214	100	70-117	
10061-01-5	cis-1,3-Dichloropropene	226	246	109	75-132	
108-10-1	4-Methyl-2-pentanone	218	233	107	70-133	
10061-02-6	trans-1,3-Dichloropropene	216	246	114	78-136	
79-00-5	1,1,2-Trichloroethane	210	221	105	72-119	
108-88-3	Toluene	210	211	100	65-116	
591-78-6	2-Hexanone	222	230	104	62-132	
124-48-1	Dibromochloromethane	220	249	113	66-140	
106-93-4	1,2-Dibromoethane	216	226	105	69-130	
123-86-4	n-Butyl Acetate	224	240	107	63-136	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 3 of 3

Client: Washington State Department of Ecology

Client Sample ID: Lab Control Sample

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P130710-LCS

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 7/10/13

Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	208	213	102	66-118	
127-18-4	Tetrachloroethene	196	201	103	63-123	
108-90-7	Chlorobenzene	216	221	102	66-118	
100-41-4	Ethylbenzene	212	225	106	66-119	
179601-23-1	m,p-Xylenes	420	444	106	64-118	
75-25-2	Bromoform	216	268	124	64-140	
100-42-5	Styrene	218	240	110	68-132	
95-47-6	o-Xylene	206	218	106	65-120	
111-84-2	n-Nonane	206	211	102	64-117	
79-34-5	1,1,2,2-Tetrachloroethane	202	216	107	63-128	
98-82-8	Cumene	204	217	106	65-121	
80-56-8	alpha-Pinene	208	226	109	66-123	
103-65-1	n-Propylbenzene	202	216	107	65-121	
622-96-8	4-Ethyltoluene	212	230	108	64-122	
108-67-8	1,3,5-Trimethylbenzene	212	227	107	64-125	
95-63-6	1,2,4-Trimethylbenzene	212	227	107	64-131	
100-44-7	Benzyl Chloride	222	278	125	67-146	
541-73-1	1,3-Dichlorobenzene	222	231	104	64-130	
106-46-7	1,4-Dichlorobenzene	214	224	105	61-124	
95-50-1	1,2-Dichlorobenzene	218	226	104	63-126	
5989-27-5	d-Limonene	210	250	119	62-133	
96-12-8	1,2-Dibromo-3-chloropropane	212	236	111	62-155	
120-82-1	1,2,4-Trichlorobenzene	220	216	98	59-146	
91-20-3	Naphthalene	204	210	103	56-143	
87-68-3	Hexachlorobutadiene	218	217	100	58-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 3

Client: Washington State Department of Ecology

Client Sample ID: Lab Control Sample

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P130711-LCS

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 7/11/13

Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
115-07-1	Propene	200	179	90	58-139	
75-71-8	Dichlorodifluoromethane (CFC 12)	204	193	95	63-115	
74-87-3	Chloromethane	198	186	94	58-122	
76-14-2	1,2-Dichloro-1,1,2,2-tetrafluoroethane (CFC 114)	204	197	97	65-115	
75-01-4	Vinyl Chloride	200	196	98	64-122	
106-99-0	1,3-Butadiene	212	216	102	57-141	
74-83-9	Bromomethane	200	169	85	68-122	
75-00-3	Chloroethane	202	196	97	66-120	
64-17-5	Ethanol	1,020	1000	98	58-126	
75-05-8	Acetonitrile	202	195	97	64-136	
107-02-8	Acrolein	214	212	99	58-129	
67-64-1	Acetone	1,080	918	85	60-114	
75-69-4	Trichlorofluoromethane	198	183	92	62-107	
67-63-0	2-Propanol (Isopropyl Alcohol)	420	418	100	54-118	
107-13-1	Acrylonitrile	208	216	104	72-143	
75-35-4	1,1-Dichloroethene	214	211	99	69-119	
75-09-2	Methylene Chloride	216	183	85	64-113	
107-05-1	3-Chloro-1-propene (Allyl Chloride)	216	222	103	59-131	
76-13-1	Trichlorotrifluoroethane	214	212	99	69-117	
75-15-0	Carbon Disulfide	196	192	98	65-115	
156-60-5	trans-1,2-Dichloroethene	212	211	100	70-126	
75-34-3	1,1-Dichloroethane	208	198	95	68-116	
1634-04-4	Methyl tert-Butyl Ether	212	208	98	69-120	
108-05-4	Vinyl Acetate	1,020	1020	100	58-160	
78-93-3	2-Butanone (MEK)	218	205	94	70-127	

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ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 2 of 3

Client: Washington State Department of Ecology

Client Sample ID: Lab Control Sample

Client Project ID: Site L / PIC #9NWR

ALS Project ID: P1302788

ALS Sample ID: P130711-LCS

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 7/11/13

Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
156-59-2	cis-1,2-Dichloroethene	214	208	97	70-119	
141-78-6	Ethyl Acetate	426	400	94	72-129	
110-54-3	n-Hexane	210	182	87	63-115	
67-66-3	Chloroform	214	200	93	68-110	
109-99-9	Tetrahydrofuran (THF)	206	211	102	60-126	
107-06-2	1,2-Dichloroethane	210	195	93	69-118	
71-55-6	1,1,1-Trichloroethane	206	209	101	68-120	
71-43-2	Benzene	220	197	90	69-117	
56-23-5	Carbon Tetrachloride	210	218	104	65-134	
110-82-7	Cyclohexane	420	435	104	69-114	
78-87-5	1,2-Dichloropropane	212	211	100	70-116	
75-27-4	Bromodichloromethane	214	226	106	71-126	
79-01-6	Trichloroethene	208	212	102	71-119	
123-91-1	1,4-Dioxane	218	227	104	72-126	
80-62-6	Methyl Methacrylate	420	455	108	75-136	
142-82-5	n-Heptane	214	210	98	70-117	
10061-01-5	cis-1,3-Dichloropropene	226	240	106	75-132	
108-10-1	4-Methyl-2-pentanone	218	228	105	70-133	
10061-02-6	trans-1,3-Dichloropropene	216	238	110	78-136	
79-00-5	1,1,2-Trichloroethane	210	217	103	72-119	
108-88-3	Toluene	210	207	99	65-116	
591-78-6	2-Hexanone	222	220	99	62-132	
124-48-1	Dibromochloromethane	220	242	110	66-140	
106-93-4	1,2-Dibromoethane	216	220	102	69-130	
123-86-4	n-Butyl Acetate	224	229	102	63-136	

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ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 3 of 3

Client: Washington State Department of Ecology

Client Sample ID: Lab Control Sample

Client Project ID: Site L / PIC #9NWRR

ALS Project ID: P1302788

ALS Sample ID: P130711-LCS

Test Code: EPA TO-15

Instrument ID: Tekmar AUTOCAN/Agilent 5975Binert/6890N/MS13

Analyst: Chris Cornett

Sample Type: 6.0 L Summa Canister

Test Notes:

Date Collected: NA

Date Received: NA

Date Analyzed: 7/11/13

Volume(s) Analyzed: 0.125 Liter(s)

CAS #	Compound	Spike Amount µg/m ³	Result µg/m ³	% Recovery	ALS Acceptance Limits	Data Qualifier
111-65-9	n-Octane	208	207	100	66-118	
127-18-4	Tetrachloroethene	196	198	101	63-123	
108-90-7	Chlorobenzene	216	215	100	66-118	
100-41-4	Ethylbenzene	212	218	103	66-119	
179601-23-1	m,p-Xylenes	420	430	102	64-118	
75-25-2	Bromoform	216	262	121	64-140	
100-42-5	Styrene	218	233	107	68-132	
95-47-6	o-Xylene	206	211	102	65-120	
111-84-2	n-Nonane	206	203	99	64-117	
79-34-5	1,1,2,2-Tetrachloroethane	202	209	103	63-128	
98-82-8	Cumene	204	209	102	65-121	
80-56-8	alpha-Pinene	208	219	105	66-123	
103-65-1	n-Propylbenzene	202	208	103	65-121	
622-96-8	4-Ethyltoluene	212	222	105	64-122	
108-67-8	1,3,5-Trimethylbenzene	212	220	104	64-125	
95-63-6	1,2,4-Trimethylbenzene	212	218	103	64-131	
100-44-7	Benzyl Chloride	222	266	120	67-146	
541-73-1	1,3-Dichlorobenzene	222	223	100	64-130	
106-46-7	1,4-Dichlorobenzene	214	217	101	61-124	
95-50-1	1,2-Dichlorobenzene	218	217	100	63-126	
5989-27-5	d-Limonene	210	238	113	62-133	
96-12-8	1,2-Dibromo-3-chloropropane	212	229	108	62-155	
120-82-1	1,2,4-Trichlorobenzene	220	208	95	59-146	
91-20-3	Naphthalene	204	200	98	56-143	
87-68-3	Hexachlorobutadiene	218	208	95	58-133	

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.

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