ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **LARRY LEWIS**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **08 JAN 2014**

Expires: **30 JUN 2014**

Oscar C. Parcells

Director, Division of Environmental Analysis

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2013

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2013 Expiration Date 30 JUN 2014

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2013

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **01 JUL 2013** **Expiration Date** **30 JUN 2014**

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEF	EPA 608

00003

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	3010A
200.8	ILM05.3
6010C	3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3010A
6010 SPLP (1312) extract	3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 0930
Sample Matrix:	Water	**Date Received:**	4/18/14
Sample Name:	AP26-DO (60')		
Lab Code:	R1402779-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl-E-1997(20	**43.0**		mg/L	1.0	1	NA	4/22/14 13:19	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 0930
Sample Matrix:	Water	**Date Received:**	4/18/14
Sample Name:	AP26-DO (60')		
Lab Code:	R1402779-001	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/21/14	4/22/14 13:33	
Manganese, Dissolved	6010C	**810**		µg/L	10	1	4/21/14	4/22/14 13:33	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 0930
Sample Matrix:	Water	**Date Received:**	4/18/14
		Date Analyzed:	4/25/14 05:37
Sample Name:	AP26-DO (60')	**Units:**	µg/L
Lab Code:	R1402779-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	389662
Data File Name:	I:\ACQUDATA\msvoa10\data\042414\F7900.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	**10**		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**490**	E	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	70-130	4/25/14 05:37	
Dibromofluoromethane	100	70-130	4/25/14 05:37	
Toluene-d8	98	70-130	4/25/14 05:37	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 0930
Sample Matrix:	Water	**Date Received:**	4/18/14
		Date Analyzed:	4/25/14 22:04
Sample Name:	AP26-DO (60')	**Units:**	µg/L
Lab Code:	R1402779-001	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	389843
Data File Name:	I:\ACQUDATA\msvoa10\data\042514\F7931.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	D	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	440	D	10	
79-01-6	Trichloroethene (TCE)	10	U	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	10	U	10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	70-130	4/25/14 22:04	
Dibromofluoromethane	97	70-130	4/25/14 22:04	
Toluene-d8	99	70-130	4/25/14 22:04	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1030
Sample Matrix:	Water	**Date Received:**	4/18/14
Sample Name:	AP31-DO (30')		
Lab Code:	R1402779-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl-E-1997(20	**720**		mg/L	10	10	NA	4/22/14 13:27	

Client: CB&I
Project: Varian Beverly/150148-05000000
Sample Matrix: Water

Service Request: R1402779
Date Collected: 4/16/14 1030
Date Received: 4/18/14

Sample Name: AP31-DO (30')
Lab Code: R1402779-002

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/21/14	4/24/14 16:31	
Manganese, Dissolved	6010C	**865**		µg/L	10	1	4/21/14	4/25/14 10:43	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1030
Sample Matrix:	Water	**Date Received:**	4/18/14
		Date Analyzed:	4/25/14 06:07
Sample Name:	AP31-DO (30')	**Units:**	µg/L
Lab Code:	R1402779-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	389662
Data File Name:	I:\ACQUDATA\msvoa10\data\042414\F7901.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**600**		20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	**150**		20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	**800**		20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	**7500**	E	20	
79-01-6	Trichloroethene (TCE)	**4500**	E	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	20	U	20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	4/25/14 06:07	
Dibromofluoromethane	100	70-130	4/25/14 06:07	
Toluene-d8	99	70-130	4/25/14 06:07	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1030
Sample Matrix:	Water	**Date Received:**	4/18/14
		Date Analyzed:	4/25/14 22:35
Sample Name:	AP31-DO (30')	**Units:**	µg/L
Lab Code:	R1402779-002	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	389843
Data File Name:	I:\ACQUDATA\msvoa10\data\042514\F7932.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	100

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**600**	D	200	
79-34-5	1,1,2,2-Tetrachloroethane	200	U	200	
79-00-5	1,1,2-Trichloroethane	200	U	200	
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	U	200	
75-35-4	1,1-Dichloroethene (1,1-DCE)	200	U	200	
107-06-2	1,2-Dichloroethane	200	U	200	
78-87-5	1,2-Dichloropropane	200	U	200	
67-64-1	Acetone	1000	U	1000	
75-27-4	Bromodichloromethane	200	U	200	
75-25-2	Bromoform	200	U	200	
74-83-9	Bromomethane	200	U	200	
56-23-5	Carbon Tetrachloride	200	U	200	
108-90-7	Chlorobenzene	200	U	200	
75-00-3	Chloroethane	200	U	200	
67-66-3	Chloroform	**830**	D	200	
74-87-3	Chloromethane	200	U	200	
124-48-1	Dibromochloromethane	200	U	200	
75-09-2	Methylene Chloride	200	U	200	
127-18-4	Tetrachloroethene (PCE)	**7400**	D	200	
79-01-6	Trichloroethene (TCE)	**4600**	D	200	
75-69-4	Trichlorofluoromethane (CFC 11)	200	U	200	
75-01-4	Vinyl Chloride	200	U	200	
156-59-2	cis-1,2-Dichloroethene	200	U	200	
10061-01-5	cis-1,3-Dichloropropene	200	U	200	
156-60-5	trans-1,2-Dichloroethene	200	U	200	
10061-02-6	trans-1,3-Dichloropropene	200	U	200	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	4/25/14 22:35	
Dibromofluoromethane	97	70-130	4/25/14 22:35	
Toluene-d8	101	70-130	4/25/14 22:35	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1130
Sample Matrix:	Water	**Date Received:**	4/18/14
Sample Name:	AP32-DO (30')		
Lab Code:	R1402779-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl-E-1997(20	608		mg/L	10	10	NA	4/22/14 13:27	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1130
Sample Matrix:	Water	**Date Received:**	4/18/14
Sample Name:	AP32-DO (30')		
Lab Code:	R1402779-003	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/21/14	4/24/14 16:39	
Manganese, Dissolved	6010C	**107000**		µg/L	2000	200	4/21/14	4/22/14 13:57	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1130
Sample Matrix:	Water	**Date Received:**	4/18/14
		Date Analyzed:	4/25/14 23:05
Sample Name:	AP32-DO (30')	**Units:**	µg/L
Lab Code:	R1402779-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	389843
Data File Name:	I:\ACQUDATA\msvoa10\data\042514\F7933.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**1200**		20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	**450**		20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	**1600**		20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	**1600**		20	
79-01-6	Trichloroethene (TCE)	**36**		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	20	U	20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	4/25/14 23:05	
Dibromofluoromethane	104	70-130	4/25/14 23:05	
Toluene-d8	100	70-130	4/25/14 23:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1315
Sample Matrix:	Water	**Date Received:**	4/18/14
Sample Name:	OB19-DO (56')		
Lab Code:	R1402779-004	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl-E-1997(20	**33.0**		mg/L	1.0	1	NA	4/22/14 13:21	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1315
Sample Matrix:	Water	**Date Received:**	4/18/14
Sample Name:	OB19-DO (56')		
Lab Code:	R1402779-004	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/21/14	4/22/14 14:02	
Manganese, Dissolved	6010C	**109**		µg/L	10	1	4/21/14	4/22/14 14:02	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1315
Sample Matrix:	Water	**Date Received:**	4/18/14
		Date Analyzed:	4/25/14 07:08
Sample Name:	OB19-DO (56')	**Units:**	µg/L
Lab Code:	R1402779-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	389662
Data File Name:	I:\ACQUDATA\msvoa10\data\042414\F7903.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	40	U	40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	40	U	40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	U	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	40	U	40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	40	U	40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	40	U	40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	**410**		40	
79-01-6	Trichloroethene (TCE)	**2000**		40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	**61**		40	
156-59-2	cis-1,2-Dichloroethene	**830**		40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	**57**		40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	70-130	4/25/14 07:08	
Dibromofluoromethane	100	70-130	4/25/14 07:08	
Toluene-d8	99	70-130	4/25/14 07:08	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1230
Sample Matrix:	Water	**Date Received:**	4/18/14
Sample Name:	OB-25-BR (86')		
Lab Code:	R1402779-005	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl-E-1997(20	**114**		mg/L	2.0	2	NA	4/22/14 13:22	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1230
Sample Matrix:	Water	**Date Received:**	4/18/14
Sample Name:	OB-25-BR (86')		
Lab Code:	R1402779-005	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/21/14	4/22/14 14:08	
Manganese, Dissolved	6010C	**6440**		µg/L	10	1	4/21/14	4/22/14 14:08	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1230
Sample Matrix:	Water	**Date Received:**	4/18/14
		Date Analyzed:	4/25/14 07:38
Sample Name:	OB-25-BR (86')	**Units:**	µg/L
Lab Code:	R1402779-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	389662
Data File Name:	I:\ACQUDATA\msvoa10\data\042414\F7904.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	25

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	50	U	50	
79-34-5	1,1,2,2-Tetrachloroethane	50	U	50	
79-00-5	1,1,2-Trichloroethane	50	U	50	
75-34-3	1,1-Dichloroethane (1,1-DCA)	50	U	50	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**64**		50	
107-06-2	1,2-Dichloroethane	50	U	50	
78-87-5	1,2-Dichloropropane	50	U	50	
67-64-1	Acetone	250	U	250	
75-27-4	Bromodichloromethane	50	U	50	
75-25-2	Bromoform	50	U	50	
74-83-9	Bromomethane	50	U	50	
56-23-5	Carbon Tetrachloride	50	U	50	
108-90-7	Chlorobenzene	50	U	50	
75-00-3	Chloroethane	50	U	50	
67-66-3	Chloroform	50	U	50	
74-87-3	Chloromethane	50	U	50	
124-48-1	Dibromochloromethane	50	U	50	
75-09-2	Methylene Chloride	50	U	50	
127-18-4	Tetrachloroethene (PCE)	**320**		50	
79-01-6	Trichloroethene (TCE)	**4500**		50	
75-69-4	Trichlorofluoromethane (CFC 11)	50	U	50	
75-01-4	Vinyl Chloride	**5700**	E	50	
156-59-2	cis-1,2-Dichloroethene	**24000**	E	50	
10061-01-5	cis-1,3-Dichloropropene	50	U	50	
156-60-5	trans-1,2-Dichloroethene	**56**		50	
10061-02-6	trans-1,3-Dichloropropene	50	U	50	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	70-130	4/25/14 07:38	
Dibromofluoromethane	100	70-130	4/25/14 07:38	
Toluene-d8	100	70-130	4/25/14 07:38	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1230
Sample Matrix:	Water	**Date Received:**	4/18/14
		Date Analyzed:	4/25/14 23:36
Sample Name:	OB-25-BR (86')	**Units:**	µg/L
Lab Code:	R1402779-005	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	389843
Data File Name:	I:\ACQUDATA\msvoa10\data\042514\F7934.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	250

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	500	U	500	
79-34-5	1,1,2,2-Tetrachloroethane	500	U	500	
79-00-5	1,1,2-Trichloroethane	500	U	500	
75-34-3	1,1-Dichloroethane (1,1-DCA)	500	U	500	
75-35-4	1,1-Dichloroethene (1,1-DCE)	500	U	500	
107-06-2	1,2-Dichloroethane	500	U	500	
78-87-5	1,2-Dichloropropane	500	U	500	
67-64-1	Acetone	2500	U	2500	
75-27-4	Bromodichloromethane	500	U	500	
75-25-2	Bromoform	500	U	500	
74-83-9	Bromomethane	500	U	500	
56-23-5	Carbon Tetrachloride	500	U	500	
108-90-7	Chlorobenzene	500	U	500	
75-00-3	Chloroethane	500	U	500	
67-66-3	Chloroform	500	U	500	
74-87-3	Chloromethane	500	U	500	
124-48-1	Dibromochloromethane	500	U	500	
75-09-2	Methylene Chloride	500	U	500	
127-18-4	Tetrachloroethene (PCE)	500	U	500	
79-01-6	Trichloroethene (TCE)	**4300**	D	500	
75-69-4	Trichlorofluoromethane (CFC 11)	500	U	500	
75-01-4	Vinyl Chloride	**5600**	D	500	
156-59-2	cis-1,2-Dichloroethene	**25000**	D	500	
10061-01-5	cis-1,3-Dichloropropene	500	U	500	
156-60-5	trans-1,2-Dichloroethene	500	U	500	
10061-02-6	trans-1,3-Dichloropropene	500	U	500	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	4/25/14 23:36	
Dibromofluoromethane	100	70-130	4/25/14 23:36	
Toluene-d8	99	70-130	4/25/14 23:36	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1440
Sample Matrix:	Water	**Date Received:**	4/18/14
		Date Analyzed:	4/25/14 08:09
Sample Name:	OB26-DO (59')	**Units:**	µg/L
Lab Code:	R1402779-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	389662
Data File Name:	I:\ACQUDATA\msvoa10\data\042414\F7905.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	25

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	50	U	50	
79-34-5	1,1,2,2-Tetrachloroethane	50	U	50	
79-00-5	1,1,2-Trichloroethane	50	U	50	
75-34-3	1,1-Dichloroethane (1,1-DCA)	50	U	50	
75-35-4	1,1-Dichloroethene (1,1-DCE)	50	U	50	
107-06-2	1,2-Dichloroethane	50	U	50	
78-87-5	1,2-Dichloropropane	50	U	50	
67-64-1	Acetone	250	U	250	
75-27-4	Bromodichloromethane	50	U	50	
75-25-2	Bromoform	50	U	50	
74-83-9	Bromomethane	50	U	50	
56-23-5	Carbon Tetrachloride	50	U	50	
108-90-7	Chlorobenzene	50	U	50	
75-00-3	Chloroethane	50	U	50	
67-66-3	Chloroform	50	U	50	
74-87-3	Chloromethane	50	U	50	
124-48-1	Dibromochloromethane	50	U	50	
75-09-2	Methylene Chloride	50	U	50	
127-18-4	Tetrachloroethene (PCE)	**1800**		50	
79-01-6	Trichloroethene (TCE)	**7400**	E	50	
75-69-4	Trichlorofluoromethane (CFC 11)	50	U	50	
75-01-4	Vinyl Chloride	50	U	50	
156-59-2	cis-1,2-Dichloroethene	**740**		50	
10061-01-5	cis-1,3-Dichloropropene	50	U	50	
156-60-5	trans-1,2-Dichloroethene	50	U	50	
10061-02-6	trans-1,3-Dichloropropene	50	U	50	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	96	70-130	4/25/14 08:09	
Dibromofluoromethane	100	70-130	4/25/14 08:09	
Toluene-d8	99	70-130	4/25/14 08:09	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1440
Sample Matrix:	Water	**Date Received:**	4/18/14
		Date Analyzed:	4/26/14 00:06
Sample Name:	OB26-DO (59')	**Units:**	µg/L
Lab Code:	R1402779-006	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	389843
Data File Name:	I:\ACQUDATA\msvoa10\data\042514\F7935.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	100

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	200	U	200	
79-34-5	1,1,2,2-Tetrachloroethane	200	U	200	
79-00-5	1,1,2-Trichloroethane	200	U	200	
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	U	200	
75-35-4	1,1-Dichloroethene (1,1-DCE)	200	U	200	
107-06-2	1,2-Dichloroethane	200	U	200	
78-87-5	1,2-Dichloropropane	200	U	200	
67-64-1	Acetone	1000	U	1000	
75-27-4	Bromodichloromethane	200	U	200	
75-25-2	Bromoform	200	U	200	
74-83-9	Bromomethane	200	U	200	
56-23-5	Carbon Tetrachloride	200	U	200	
108-90-7	Chlorobenzene	200	U	200	
75-00-3	Chloroethane	200	U	200	
67-66-3	Chloroform	200	U	200	
74-87-3	Chloromethane	200	U	200	
124-48-1	Dibromochloromethane	200	U	200	
75-09-2	Methylene Chloride	200	U	200	
127-18-4	Tetrachloroethene (PCE)	**1600**	D	200	
79-01-6	Trichloroethene (TCE)	**6600**	D	200	
75-69-4	Trichlorofluoromethane (CFC 11)	200	U	200	
75-01-4	Vinyl Chloride	200	U	200	
156-59-2	cis-1,2-Dichloroethene	**680**	D	200	
10061-01-5	cis-1,3-Dichloropropene	200	U	200	
156-60-5	trans-1,2-Dichloroethene	200	U	200	
10061-02-6	trans-1,3-Dichloropropene	200	U	200	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	70-130	4/26/14 00:06	
Dibromofluoromethane	100	70-130	4/26/14 00:06	
Toluene-d8	100	70-130	4/26/14 00:06	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1415
Sample Matrix:	Water	**Date Received:**	4/18/14
		Date Analyzed:	4/25/14 08:39
Sample Name:	OB26-BR (90')	**Units:**	µg/L
Lab Code:	R1402779-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	389662
Data File Name:	I:\ACQUDATA\msvoa10\data\042414\F7906.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**7.7**		2.0	
79-01-6	Trichloroethene (TCE)	**260**	E	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**6.8**		2.0	
156-59-2	cis-1,2-Dichloroethene	**130**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	70-130	4/25/14 08:39	
Dibromofluoromethane	96	70-130	4/25/14 08:39	
Toluene-d8	99	70-130	4/25/14 08:39	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1415
Sample Matrix:	Water	**Date Received:**	4/18/14
		Date Analyzed:	4/26/14 00:37
Sample Name:	OB26-BR (90')	**Units:**	µg/L
Lab Code:	R1402779-007	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	389843
Data File Name:	I:\ACQUDATA\msvoa10\data\042514\F7936.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
67-64-1	Acetone	25	U	25	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	**7.3**	D	5.0	
79-01-6	Trichloroethene (TCE)	**240**	D	5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	**6.2**	D	5.0	
156-59-2	cis-1,2-Dichloroethene	**130**	D	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	4/26/14 00:37	
Dibromofluoromethane	101	70-130	4/26/14 00:37	
Toluene-d8	99	70-130	4/26/14 00:37	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1350
Sample Matrix:	Water	**Date Received:**	4/18/14
		Date Analyzed:	4/25/14 09:26
Sample Name:	OB28-BR (89')	**Units:**	µg/L
Lab Code:	R1402779-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	389662
Data File Name:	I:\ACQUDATA\msvoa10\data\042414\F7907.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**4.2**		2.0	
79-01-6	Trichloroethene (TCE)	**1000**	E	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	**170**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**2.6**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	70-130	4/25/14 09:26	
Dibromofluoromethane	99	70-130	4/25/14 09:26	
Toluene-d8	100	70-130	4/25/14 09:26	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/16/14 1350
Sample Matrix:	Water	**Date Received:**	4/18/14
		Date Analyzed:	4/26/14 01:07
Sample Name:	OB28-BR (89')	**Units:**	µg/L
Lab Code:	R1402779-008	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	389843
Data File Name:	I:\ACQUDATA\msvoa10\data\042514\F7937.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	20	U	20	
79-01-6	Trichloroethene (TCE)	**980**	D	20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	**160**	D	20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	70-130	4/26/14 01:07	
Dibromofluoromethane	97	70-130	4/26/14 01:07	
Toluene-d8	100	70-130	4/26/14 01:07	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1402779-MB1	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl-E-1997(20	1.0	U	mg/L	1.0	1	NA	4/22/14 13:02	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1402779-MB2	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl-E-1997(20	1.0	U	mg/L	1.0	1	NA	4/22/14 13:18	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1402779-MB	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/21/14	4/22/14 12:38	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	4/21/14	4/22/14 12:38	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	4/25/14 00:32
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1404214-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	389662
Data File Name:	I:\ACQUDATA\msvoa10\data\042414\F7890.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	70-130	4/25/14 00:32	
Dibromofluoromethane	98	70-130	4/25/14 00:32	
Toluene-d8	98	70-130	4/25/14 00:32	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402779
Project:	Varian Beverly/150148-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	4/25/14 17:30
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1404233-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	389843
Data File Name:	I:\ACQUDATA\msvoa10\data\042514\F7922.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	70-130	4/25/14 17:30	
Dibromofluoromethane	99	70-130	4/25/14 17:30	
Toluene-d8	99	70-130	4/25/14 17:30	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150148-05000000
Sample Matrix: Water

Service Request: R1402779
Date Analyzed: 4/22/14

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1402779-LCS1 Result	Spike Amount	% Rec	% Rec Limits
Chloride	SM 4500-Cl-E-1997(20	23.8	25.0	95	86 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150148-05000000
Sample Matrix: Water

Service Request: R1402779
Date Analyzed: 4/22/14

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1402779-LCS2 Result	Spike Amount	% Rec	% Rec Limits
Chloride	SM 4500-Cl-E-1997(20	23.9	25.0	96	86 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: CB&I
Project: Varian Beverly/150148-05000000
Sample Matrix: Water

Service Request: R1402779
Date Analyzed: 4/22/14

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1402779-LCS Result	Spike Amount	% Rec	% Rec Limits
Iron, Dissolved	6010C	1010	1000	101	80 - 120
Manganese, Dissolved	6010C	485	500	97	80 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150148-05000000
Sample Matrix: Water

Service Request: R1402779
Date Analyzed: 4/24/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 389662

Analyte Name	Lab Control Sample RQ1404214-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1404214-03 Result	Spike Amount	% Rec		% Rec Limits	RPD		RPD Limit
1,1,1-Trichloroethane (TCA)	18.5	20.0	93	21.7	20.0	109		70 - 130	16		20
1,1,2,2-Tetrachloroethane	17.4	20.0	87	21.1	20.0	105		70 - 130	19		20
1,1,2-Trichloroethane	20.6	20.0	103	22.9	20.0	114		70 - 130	10		20
1,1-Dichloroethane (1,1-DCA)	19.5	20.0	98	23.2	20.0	116		70 - 130	17		20
1,1-Dichloroethene (1,1-DCE)	21.0	20.0	105	27.3	20.0	137	*	70 - 130	26	*	20
1,2-Dichloroethane	17.6	20.0	88	20.4	20.0	102		70 - 130	15		20
1,2-Dichloropropane	20.7	20.0	104	24.1	20.0	121		70 - 130	15		20
Acetone	23.9	20.0	119	22.1	20.0	110		40 - 160	8		20
Bromodichloromethane	19.3	20.0	97	21.9	20.0	110		70 - 130	13		20
Bromoform	18.9	20.0	94	23.2	20.0	116		70 - 130	21	*	20
Bromomethane	24.7	20.0	124	26.6	20.0	133		40 - 160	7		20
Carbon Tetrachloride	18.4	20.0	92	21.8	20.0	109		70 - 130	17		20
Chlorobenzene	19.0	20.0	95	21.9	20.0	109		70 - 130	14		20
Chloroethane	18.5	20.0	92	21.2	20.0	106		70 - 130	14		20
Chloroform	18.7	20.0	94	21.9	20.0	110		70 - 130	16		20
Chloromethane	20.3	20.0	102	24.7	20.0	124		40 - 160	20		20
Dibromochloromethane	19.9	20.0	99	22.6	20.0	113		70 - 130	13		20
Methylene Chloride	19.9	20.0	99	23.3	20.0	116		70 - 130	16		20
Tetrachloroethene (PCE)	19.9	20.0	99	22.6	20.0	113		70 - 130	13		20
Trichloroethene (TCE)	21.2	20.0	106	24.7	20.0	123		70 - 130	15		20
Trichlorofluoromethane (CFC 11)	18.2	20.0	91	20.7	20.0	103		70 - 130	13		20
Vinyl Chloride	19.9	20.0	99	24.4	20.0	122		70 - 130	21	*	20
cis-1,2-Dichloroethene	19.3	20.0	97	22.3	20.0	112		70 - 130	14		20
cis-1,3-Dichloropropene	19.0	20.0	95	22.1	20.0	110		70 - 130	15		20
trans-1,2-Dichloroethene	19.8	20.0	99	23.6	20.0	118		70 - 130	18		20
trans-1,3-Dichloropropene	18.6	20.0	93	21.8	20.0	109		70 - 130	16		20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150148-05000000
Sample Matrix: Water

Service Request: R1402779
Date Analyzed: 4/25/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 389843

Analyte Name	Lab Control Sample RQ1404233-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1404233-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	17.0	20.0	85	16.7	20.0	83	70 - 130	2	20
1,1,2,2-Tetrachloroethane	17.6	20.0	88	17.7	20.0	88	70 - 130	<1	20
1,1,2-Trichloroethane	19.5	20.0	97	19.0	20.0	95	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	19.2	20.0	96	18.7	20.0	94	70 - 130	2	20
1,1-Dichloroethene (1,1-DCE)	20.0	20.0	100	20.4	20.0	102	70 - 130	2	20
1,2-Dichloroethane	17.1	20.0	86	17.4	20.0	87	70 - 130	2	20
1,2-Dichloropropane	20.5	20.0	102	19.6	20.0	98	70 - 130	4	20
Acetone	23.6	20.0	118	18.6	20.0	93	40 - 160	24 *	20
Bromodichloromethane	19.5	20.0	98	18.5	20.0	93	70 - 130	5	20
Bromoform	18.3	20.0	91	17.6	20.0	88	70 - 130	3	20
Bromomethane	25.9	20.0	130	23.6	20.0	118	40 - 160	9	20
Carbon Tetrachloride	16.9	20.0	85	16.9	20.0	84	70 - 130	<1	20
Chlorobenzene	18.3	20.0	92	17.7	20.0	88	70 - 130	3	20
Chloroethane	17.2	20.0	86	16.9	20.0	85	70 - 130	1	20
Chloroform	18.5	20.0	93	18.2	20.0	91	70 - 130	2	20
Chloromethane	19.4	20.0	97	19.5	20.0	98	40 - 160	<1	20
Dibromochloromethane	18.8	20.0	94	18.6	20.0	93	70 - 130	1	20
Methylene Chloride	20.2	20.0	101	19.6	20.0	98	70 - 130	3	20
Tetrachloroethene (PCE)	17.4	20.0	87	17.3	20.0	86	70 - 130	<1	20
Trichloroethene (TCE)	18.5	20.0	93	17.8	20.0	89	70 - 130	4	20
Trichlorofluoromethane (CFC 11)	16.4	20.0	82	16.3	20.0	82	70 - 130	<1	20
Vinyl Chloride	18.9	20.0	94	18.5	20.0	93	70 - 130	2	20
cis-1,2-Dichloroethene	18.8	20.0	94	18.6	20.0	93	70 - 130	<1	20
cis-1,3-Dichloropropene	19.2	20.0	96	18.8	20.0	94	70 - 130	3	20
trans-1,2-Dichloroethene	18.5	20.0	92	18.2	20.0	91	70 - 130	1	20
trans-1,3-Dichloropropene	18.5	20.0	92	18.7	20.0	93	70 - 130	1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Columbia Analytical Services — CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: Varian Beverly	Project Number: 150148-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental, Inc. 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name: Dale Dailey

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 2 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED Fe+ Chloride Ma (List in comments below)	REMARKS/ ALTERNATE DESCRIPTION
AP26-00		4/16/14	930	GW	5	3						1	1	
AP31-00			1030		5	3						1	1	
AP32-00			1130		5	3						1	1	
OB19-00			1315		5	3						1	1	
OB25-BR			1230		5	3						1	1	
OB26-00			1440		3	3								
OB26-BR			1415		3	3								
OB28-BR			1350		3	3								

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field Filtered
Site specific VOC list.
Massachusetts CAM analyses reporting & QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Joe@CBI.com.

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
✓ Standard

REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata ✓ Yes ____ No

INVOICE INFORMATION
PO #: 873489
BILL TO: CB&I

R1402779 7 Y
CB&I Environmental & Infrastructure
Varian Beverly

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature:	Signature: FedEx	Signature:	Signature:	Signature:	Signature:
Printed Name: Dale Dailey	Printed Name:	Printed Name:	Printed Name: J. Sandard	Printed Name:	Printed Name:
Firm: CBI	Firm:	Firm:	Firm: ALS	Firm:	Firm:
Date/Time: 4/17/14 13:30	Date/Time: 4/17/14 13:30	Date/Time:	Date/Time: 4/18/14 0748	Date/Time:	Date/Time:

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 10/2010

Columbia Analytical Services

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax)

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

Project Name: Varian Beverly	Project Number: 150148-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental, Inc. 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature: [illegible]	Sampler's Printed Name: [illegible]

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☑8260 ☐624 ☐CLP	GC/MS SVOA's ☐8270 ☐625	GC VOA's ☐8021 ☐601/602	PESTICIDES ☐8081 ☐608	PCB's ☐8082 ☐608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below) Fe + Mn	Chloride						REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE						1						2	0						
[illegible] (60')		[illegible]	[illegible]	GW	5	3					1	1							
[illegible] (30')		↓	1020	↓	5	3					1	1							
[illegible] (30')		↓	[illegible]	↓	5	3					1	1							
[illegible] (56')		↓	1315	↓	5	3					1	1							
[illegible] (86')		↓	1230	↓	5	3					1								
[illegible] (59')		↓	1440	↓	3	3													
[illegible] (90')		↓	1415	↓	3	3													
[illegible] (89')		↓	1350	↓	3	3													

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field Filtered
Site specific VOC list.
Massachusetts CAM analyses reporting & QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Joe@CBI.com.

See QAPP ☐

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
___ 1 day ___ 2 day ___ 3 day
___ 4 day ___ 5 day
✓ Standard
REQUESTED REPORT DATE ______

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with
Edata ✓ Yes ___ N

INVOICE INFORMATION
PO #: 873489
BILL TO: CB&I

R1402779 7 Y
CB&I Environmental & Infrastructure
Varian Beverly

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
[illegible]	[illegible]				
Signature [illegible]	Signature	Signature	Signature	Signature	Signature
Printed Name [illegible]	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm [illegible]	Firm [illegible]	Firm	Firm	Firm	Firm
Date/Time	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Cooler Receipt and Preservation Check Form

Project/Client CB&I Folder Number R14-1779

Cooler received on 4/18/14 by: SCS **COURIER:** ALS UPS ~~FEDEX~~ VELOCITY CLIENT

1. Were custody seals on outside of cooler? ~~YES~~ NO
2. Were custody papers properly filled out (ink, signed, etc.)? ~~YES~~ NO
3. Did all bottles arrive in good condition (unbroken)? ~~YES~~ NO
4. Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles? YES ~~NO~~ N/A
5. Were **Ice** or **Ice packs** present? ~~YES~~ NO
6. Where did the bottles originate? ~~ALS/ROC~~, CLIENT
7. Soil VOA samples received as: Bulk Jar Encore TerraCore Lab5035set ~~N/A~~
8. Temperature of cooler(s) upon receipt: 2.8

Is the temperature within 0° - 6° C?:	(Y) N	Y N	Y N	Y N	Y N
If No, Explain Below Date/Time Temperatures Taken:	4/18/14			0800	

Thermometer ID: ~~IR GUN#3~~ / IR GUN#4 Reading From: Temp Blank / ~~Sample Bottle~~

If out of Temperature, note packing/ice condition &Client Approval to Run Samples: _____

All Samples held in storage location ROOM by SCS on 4/18/14 at 0800
5035 samples placed in storage location _____ by _____ on _____ at _____

PC Secondary Review: JMW 4/18/14

Cooler Breakdown: Date: 4/18/14 Time: 1732 by: DM

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? ~~YES~~ NO
2. Did all bottle labels and tags agree with custody papers? ~~YES~~ NO
3. Were correct containers used for the tests indicated? ~~YES~~ NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated ~~N/A~~

Explain any discrepancies: _____

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3	✓		Client label					
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*	Client label					

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: Client label.
Other Comments:

PC Secondary Review: JMW 4/28/14

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 150148.05

Prepared By: Dale Dailey

Date : 6/4/2013

Matrix: Groundwater

Analyte Group : Volatile Organics
Metals
Chloride

Analytical Method : SW-846 8260C
6010 C
SM 4500-CL-E

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : R1402843

Chain of Custody included in Data Package ? Yes

Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
4/21/14	SW-846 8260C	14 days	10 days	4/28-4/30/14
4/21/14	6010 C	180 Days	180 Days	4/26, 4/28/14
4/21/14	SM 4500-CL-E	28 Days	28 Days	4/30/2014

Sample temperature within QC limits: No, 9.0 C

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: NA

Equipment Field Blank ID : NA
Trip Blank ID : NA

Method Blank:	SW-846 8260C	4/28, 4/29, 4/30/14
	6010 C	4/28/2014
	SM 4500-CL-E	4/30/2014

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:
Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. OB35 DO (47), OB37 DO (46), and BR-7 Zone 3 was re-analyzed at larger dilutions to bring the target analytes within the calibration range of the method. Both dilutions were reported with analytes over the range flagged with an "E" and the diluted analytes flagged with a "D"

The initial results and analysis did no coincide well for cis-1,2-Dichloroethene. The data and sample bottles were checked and verified. No extra sample remained to reanalyze. The second run was reported since it coincides with previous data and the first run had QC issues

All LCS and LCSD recoveries were within QC limits.

Reviewed By: Pernilla Haley 10/15/14

May 02, 2014

Service Request No: R1402843

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly/150148-05000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on April 22, 2014. For your reference, these analyses have been assigned our service request number **R1402843**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Client Services Manager

CC: Pernilla Haley

ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623 PHONE 585-288-5380 | FAX 585-288-8475
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

CASE NARRATIVE

Client:	CB&I	**Service Request No.:**	R1402843
Project:	Varian Beverly	**Project Number:**	150148-05000000
Sample Matrix:	Water	**Date Received:**	04/22/14

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II, deliverables with Massachusetts CAM analyses reporting. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 04/21/14 and received at ALS in good condition at a cooler temperature of 9.0 °C as noted on the cooler receipt and preservation check form. The client was notified of the out of temperature cooler and the samples were analyzed. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the second page of the Case Narrative for a cross-reference between Client ID and ALS Job #.

Volatile Organics

Twenty nine water samples were analyzed for a site list of Volatile Organics by SW-846 Method 8260C.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. Samples OB35 DO (47), OB37 DO (46) and BR-7 Zone 3 were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D". Please note: The initial result and reanalysis did not coincide well for cis-1,2-Dichloroethene. The data and sample bottles were checked and verified. No extra sample remained to reanalyze.

All initial calibrations were compliant.

All the continuing calibration criteria were met for all analytes.

All Surrogate Standard recoveries were within QC limits.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were within QC limits.

All samples were analyzed within the required holding time of 14 days.

Inorganic Analyses

Three water samples were analyzed for Chloride by SM3400-Cl-E and Soluble Iron and Manganese by method 6010C. Soluble Metals were filtered in the field.

The initial and continuing calibration criteria were met for all analytes.

All Blank Spike (LCS) recoveries were within QC limits.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental | Project #: 150148

Project Location: Varian Beverly | RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1402843-001-029

Matrices: Groundwater/Surface Water X Soil/Sediment Drinking Water Air Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A X	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A X	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: _____ **Position:** Client Services Manager

Printed Name: Janice Jaeger **Date:** 05/02/14

00003

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1402843

Lab ID	Client ID
R1402843-001	TB-6
R1402843-002	EB-5
R1402843-003	OB21-DO (78')
R1402843-004	OB21-BR (98')
R1402843-005	APBI0-01 (77')
R1402843-006	STRM-A-SCDS
R1402843-007	OB20-DO (74')
R1402843-008	OB20-BR (94')
R1402843-009	OB20-S (10')
R1402843-010	P-20R (10')
R1402843-011	P-19A (10')
R1402843-012	P-11R (9')
R1402843-013	OB19-S (32')
R1402843-014	OB32-DO (57')
R1402843-015	AP-14-S (29')
R1402843-016	EB-6
R1402843-017	OB35 DO (47)
R1402843-018	OB37 DO (46)
R1402843-019	OB36 DO (51)
R1402843-020	BR-1 ZONE 1
R1402843-021	BR-1 ZONE 2
R1402843-022	BR-1 ZONE 3
R1402843-023	BR-3 ZONE 1
R1402843-024	BR-3 ZONE 2
R1402843-025	BR-3 ZONE 3
R1402843-026	BR-7 ZONE 1
R1402843-027	BR-7 ZONE 2
R1402843-028	BR-7 ZONE 3
R1402843-029	OB 44S (17')

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **LARRY LEWIS**

for the analysis of: **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **08 JAN 2014**

Expires: **30 JUN 2014**

Oscar C. Parcaba

Director, Division of Environmental Analysis

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2013

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2013 Expiration Date 30 JUN 2014

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2013

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2013 Expiration Date 30 JUN 2014

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEF	EPA 608

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	3010A
200.8	ILM05.3
6010C	3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3010A
6010 SPLP (1312) extract	3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1100
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/28/14 12:56
Sample Name:	TB-6	**Units:**	µg/L
Lab Code:	R1402843-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390021
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F7999.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	87	70-130	4/28/14 12:56	
Dibromofluoromethane	99	70-130	4/28/14 12:56	
Toluene-d8	95	70-130	4/28/14 12:56	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 0730
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/28/14 13:27
Sample Name:	EB-5	**Units:**	µg/L
Lab Code:	R1402843-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390021
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8000.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	4/28/14 13:27	
Dibromofluoromethane	101	70-130	4/28/14 13:27	
Toluene-d8	98	70-130	4/28/14 13:27	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 0830
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/28/14 13:57
Sample Name:	OB21-DO (78')	**Units:**	µg/L
Lab Code:	R1402843-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390021
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8001.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	**260**		20	
79-01-6	Trichloroethene (TCE)	**970**		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	**320**		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	70-130	4/28/14 13:57	
Dibromofluoromethane	99	70-130	4/28/14 13:57	
Toluene-d8	97	70-130	4/28/14 13:57	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 0930
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/28/14 14:28
Sample Name:	OB21-BR (98')	**Units:**	µg/L
Lab Code:	R1402843-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390021
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8002.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	10	U	10	
79-01-6	Trichloroethene (TCE)	**73**		10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	**27**		10	
156-59-2	cis-1,2-Dichloroethene	**860**		10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	70-130	4/28/14 14:28	
Dibromofluoromethane	97	70-130	4/28/14 14:28	
Toluene-d8	96	70-130	4/28/14 14:28	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1015
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/29/14 17:37
Sample Name:	APBI0-01 (77')	**Units:**	µg/L
Lab Code:	R1402843-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390267
Data File Name:	I:\ACQUDATA\msvoa10\data\042914\F8051.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**15**		10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	10	U	10	
79-01-6	Trichloroethene (TCE)	**140**		10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	**150**		10	
156-59-2	cis-1,2-Dichloroethene	**870**		10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	93	70-130	4/29/14 17:37	
Dibromofluoromethane	97	70-130	4/29/14 17:37	
Toluene-d8	97	70-130	4/29/14 17:37	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1030
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/28/14 15:29
Sample Name:	STRM-A-SCDS	**Units:**	µg/L
Lab Code:	R1402843-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390021
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8004.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	**2.0**		2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	**3.8**		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	88	70-130	4/28/14 15:29	
Dibromofluoromethane	101	70-130	4/28/14 15:29	
Toluene-d8	94	70-130	4/28/14 15:29	

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1100
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/28/14 15:59
Sample Name:	OB20-DO (74')	**Units:**	µg/L
Lab Code:	R1402843-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390021
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8005.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.0	U	4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	4.0	U	4.0	
79-01-6	Trichloroethene (TCE)	4.0	U	4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	**22**		4.0	
156-59-2	cis-1,2-Dichloroethene	**190**		4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	88	70-130	4/28/14 15:59	
Dibromofluoromethane	100	70-130	4/28/14 15:59	
Toluene-d8	96	70-130	4/28/14 15:59	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1130
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/28/14 16:29
Sample Name:	OB20-BR (94')	**Units:**	µg/L
Lab Code:	R1402843-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390021
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8006.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	20	U	20	
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	
79-00-5	1,1,2-Trichloroethane	20	U	20	
75-34-3	1,1-Dichloroethane (1,1-DCA)	20	U	20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	20	U	20	
107-06-2	1,2-Dichloroethane	20	U	20	
78-87-5	1,2-Dichloropropane	20	U	20	
67-64-1	Acetone	100	U	100	
75-27-4	Bromodichloromethane	20	U	20	
75-25-2	Bromoform	20	U	20	
74-83-9	Bromomethane	20	U	20	
56-23-5	Carbon Tetrachloride	20	U	20	
108-90-7	Chlorobenzene	20	U	20	
75-00-3	Chloroethane	20	U	20	
67-66-3	Chloroform	20	U	20	
74-87-3	Chloromethane	20	U	20	
124-48-1	Dibromochloromethane	20	U	20	
75-09-2	Methylene Chloride	20	U	20	
127-18-4	Tetrachloroethene (PCE)	20	U	20	
79-01-6	Trichloroethene (TCE)	**100**		20	
75-69-4	Trichlorofluoromethane (CFC 11)	20	U	20	
75-01-4	Vinyl Chloride	20	U	20	
156-59-2	cis-1,2-Dichloroethene	**980**		20	
10061-01-5	cis-1,3-Dichloropropene	20	U	20	
156-60-5	trans-1,2-Dichloroethene	20	U	20	
10061-02-6	trans-1,3-Dichloropropene	20	U	20	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	4/28/14 16:29	
Dibromofluoromethane	101	70-130	4/28/14 16:29	
Toluene-d8	98	70-130	4/28/14 16:29	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1145
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/28/14 17:00
Sample Name:	OB20-S (10')	**Units:**	µg/L
Lab Code:	R1402843-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390021
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8007.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	4/28/14 17:00	
Dibromofluoromethane	99	70-130	4/28/14 17:00	
Toluene-d8	98	70-130	4/28/14 17:00	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1200
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/28/14 17:30
Sample Name:	P-20R (10')	**Units:**	µg/L
Lab Code:	R1402843-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390021
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8008.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**3.8**		2.0	
79-01-6	Trichloroethene (TCE)	**9.0**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	70-130	4/28/14 17:30	
Dibromofluoromethane	100	70-130	4/28/14 17:30	
Toluene-d8	97	70-130	4/28/14 17:30	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1230
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/28/14 18:00
Sample Name:	P-19A (10')	**Units:**	µg/L
Lab Code:	R1402843-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390021
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8009.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4.0	U	4.0	
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	
79-00-5	1,1,2-Trichloroethane	4.0	U	4.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4.0	U	4.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4.0	U	4.0	
107-06-2	1,2-Dichloroethane	4.0	U	4.0	
78-87-5	1,2-Dichloropropane	4.0	U	4.0	
67-64-1	Acetone	20	U	20	
75-27-4	Bromodichloromethane	4.0	U	4.0	
75-25-2	Bromoform	4.0	U	4.0	
74-83-9	Bromomethane	4.0	U	4.0	
56-23-5	Carbon Tetrachloride	4.0	U	4.0	
108-90-7	Chlorobenzene	4.0	U	4.0	
75-00-3	Chloroethane	4.0	U	4.0	
67-66-3	Chloroform	4.0	U	4.0	
74-87-3	Chloromethane	4.0	U	4.0	
124-48-1	Dibromochloromethane	4.0	U	4.0	
75-09-2	Methylene Chloride	4.0	U	4.0	
127-18-4	Tetrachloroethene (PCE)	**4.8**		4.0	
79-01-6	Trichloroethene (TCE)	**27**		4.0	
75-69-4	Trichlorofluoromethane (CFC 11)	4.0	U	4.0	
75-01-4	Vinyl Chloride	4.0	U	4.0	
156-59-2	cis-1,2-Dichloroethene	**200**		4.0	
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	88	70-130	4/28/14 18:00	
Dibromofluoromethane	101	70-130	4/28/14 18:00	
Toluene-d8	97	70-130	4/28/14 18:00	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1300
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/28/14 18:31
Sample Name:	P-11R (9')	**Units:**	µg/L
Lab Code:	R1402843-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390021
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8010.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	70-130	4/28/14 18:31	
Dibromofluoromethane	100	70-130	4/28/14 18:31	
Toluene-d8	97	70-130	4/28/14 18:31	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1330
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/29/14 05:10
Sample Name:	OB19-S (32')	**Units:**	µg/L
Lab Code:	R1402843-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390026
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8031.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	**14**		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	4/29/14 05:10	
Dibromofluoromethane	101	70-130	4/29/14 05:10	
Toluene-d8	97	70-130	4/29/14 05:10	

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1345
Sample Matrix:	Water	**Date Received:**	4/22/14
Sample Name:	OB32-DO (57')		
Lab Code:	R1402843-014	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl-E-1997(20	107		mg/L	2.0	2	NA	4/30/14 16:51	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1345
Sample Matrix:	Water	**Date Received:**	4/22/14
Sample Name:	OB32-DO (57')		
Lab Code:	R1402843-014	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/24/14	4/28/14 20:01	
Manganese, Dissolved	6010C	60000		µg/L	1000	100	4/24/14	4/26/14 00:58	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1345
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/29/14 05:41
Sample Name:	OB32-DO (57')	**Units:**	µg/L
Lab Code:	R1402843-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390026
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8032.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**26**		2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	**37**		2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	**14**		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**63**		2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/29/14 05:41	
Dibromofluoromethane	103	70-130	4/29/14 05:41	
Toluene-d8	98	70-130	4/29/14 05:41	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1400
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/29/14 06:11
Sample Name:	AP-14-S (29')	**Units:**	µg/L
Lab Code:	R1402843-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390026
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8033.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**140**		2.0	
79-01-6	Trichloroethene (TCE)	**28**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/29/14 06:11	
Dibromofluoromethane	101	70-130	4/29/14 06:11	
Toluene-d8	97	70-130	4/29/14 06:11	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1410
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/28/14 12:26
Sample Name:	EB-6	**Units:**	µg/L
Lab Code:	R1402843-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390021
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F7998.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/28/14 12:26	
Dibromofluoromethane	103	70-130	4/28/14 12:26	
Toluene-d8	100	70-130	4/28/14 12:26	

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1400
Sample Matrix:	Water	**Date Received:**	4/22/14
Sample Name:	OB35 DO (47)		
Lab Code:	R1402843-017	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl-E-1997(20	**96.1**		mg/L	1.0	1	NA	4/30/14 16:46	

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1400
Sample Matrix:	Water	**Date Received:**	4/22/14
Sample Name:	OB35 DO (47)		
Lab Code:	R1402843-017	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/24/14	4/28/14 20:07	
Manganese, Dissolved	6010C	**6200**		µg/L	1000	100	4/24/14	4/26/14 01:04	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1400
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/28/14 22:34
Sample Name:	OB35 DO (47)	**Units:**	µg/L
Lab Code:	R1402843-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390026
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8018.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	100

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	200	U	200	
79-34-5	1,1,2,2-Tetrachloroethane	200	U	200	
79-00-5	1,1,2-Trichloroethane	200	U	200	
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	U	200	
75-35-4	1,1-Dichloroethene (1,1-DCE)	200	U	200	
107-06-2	1,2-Dichloroethane	200	U	200	
78-87-5	1,2-Dichloropropane	200	U	200	
67-64-1	Acetone	1000	U	1000	
75-27-4	Bromodichloromethane	200	U	200	
75-25-2	Bromoform	200	U	200	
74-83-9	Bromomethane	200	U	200	
56-23-5	Carbon Tetrachloride	200	U	200	
108-90-7	Chlorobenzene	200	U	200	
75-00-3	Chloroethane	200	U	200	
67-66-3	Chloroform	200	U	200	
74-87-3	Chloromethane	200	U	200	
124-48-1	Dibromochloromethane	200	U	200	
75-09-2	Methylene Chloride	200	U	200	
127-18-4	Tetrachloroethene (PCE)	**30000**	E	200	
79-01-6	Trichloroethene (TCE)	**5200**		200	
75-69-4	Trichlorofluoromethane (CFC 11)	200	U	200	
75-01-4	Vinyl Chloride	200	U	200	
156-59-2	cis-1,2-Dichloroethene	**940**		200	
10061-01-5	cis-1,3-Dichloropropene	200	U	200	
156-60-5	trans-1,2-Dichloroethene	200	U	200	
10061-02-6	trans-1,3-Dichloropropene	200	U	200	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	88	70-130	4/28/14 22:34	
Dibromofluoromethane	99	70-130	4/28/14 22:34	
Toluene-d8	98	70-130	4/28/14 22:34	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1400
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/29/14 18:07
Sample Name:	OB35 DO (47)	**Units:**	µg/L
Lab Code:	R1402843-017	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390267
Data File Name:	I:\ACQUDATA\msvoa10\data\042914\F8052.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	250

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	500	U	500	
79-34-5	1,1,2,2-Tetrachloroethane	500	U	500	
79-00-5	1,1,2-Trichloroethane	500	U	500	
75-34-3	1,1-Dichloroethane (1,1-DCA)	500	U	500	
75-35-4	1,1-Dichloroethene (1,1-DCE)	500	U	500	
107-06-2	1,2-Dichloroethane	500	U	500	
78-87-5	1,2-Dichloropropane	500	U	500	
67-64-1	Acetone	2500	U	2500	
75-27-4	Bromodichloromethane	500	U	500	
75-25-2	Bromoform	500	U	500	
74-83-9	Bromomethane	500	U	500	
56-23-5	Carbon Tetrachloride	500	U	500	
108-90-7	Chlorobenzene	500	U	500	
75-00-3	Chloroethane	500	U	500	
67-66-3	Chloroform	500	U	500	
74-87-3	Chloromethane	500	U	500	
124-48-1	Dibromochloromethane	500	U	500	
75-09-2	Methylene Chloride	500	U	500	
127-18-4	Tetrachloroethene (PCE)	**33000**	D	500	
79-01-6	Trichloroethene (TCE)	**5400**	D	500	
75-69-4	Trichlorofluoromethane (CFC 11)	500	U	500	
75-01-4	Vinyl Chloride	500	U	500	
156-59-2	cis-1,2-Dichloroethene	**950**	D	500	
10061-01-5	cis-1,3-Dichloropropene	500	U	500	
156-60-5	trans-1,2-Dichloroethene	500	U	500	
10061-02-6	trans-1,3-Dichloropropene	500	U	500	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/29/14 18:07	
Dibromofluoromethane	94	70-130	4/29/14 18:07	
Toluene-d8	95	70-130	4/29/14 18:07	

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1430
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/28/14 23:05
Sample Name:	OB37 DO (46)	**Units:**	µg/L
Lab Code:	R1402843-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390026
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8019.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	**16**		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	**66**		2.0	
79-01-6	Trichloroethene (TCE)	**370**	E	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	4/28/14 23:05	
Dibromofluoromethane	100	70-130	4/28/14 23:05	
Toluene-d8	97	70-130	4/28/14 23:05	

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Analytical Report

Client: CB&I
Project: Varian Beverly/150148-05000000
Sample Matrix: Water

Service Request: R1402843
Date Collected: 4/21/14 1430
Date Received: 4/22/14
Date Analyzed: 4/29/14 18:38

Sample Name: OB37 DO (46)
Lab Code: R1402843-018
Run Type: Dilution

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa10\data\042914\F8053.D\

Analysis Lot: 390267
Instrument Name: R-MS-10
Dilution Factor: 5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	**66**	D	10	
79-01-6	Trichloroethene (TCE)	**350**	D	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	10	U	10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/29/14 18:38	
Dibromofluoromethane	96	70-130	4/29/14 18:38	
Toluene-d8	96	70-130	4/29/14 18:38	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1500
Sample Matrix:	Water	**Date Received:**	4/22/14
Sample Name:	OB36 DO (51)		
Lab Code:	R1402843-019	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl-E-1997(20	**419**		mg/L	5.0	5	NA	4/30/14 16:54	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1500
Sample Matrix:	Water	**Date Received:**	4/22/14
Sample Name:	OB36 DO (51)		
Lab Code:	R1402843-019	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	**130**		µg/L	100	1	4/24/14	4/28/14 20:14	
Manganese, Dissolved	6010C	**2150000**		µg/L	5000	500	4/24/14	4/28/14 16:45	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1500
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/29/14 19:08
Sample Name:	OB36 DO (51)	**Units:**	µg/L
Lab Code:	R1402843-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390267
Data File Name:	I:\ACQUDATA\msvoa10\data\042914\F8054.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**3.0**		2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	**24**		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	**2.6**		2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/29/14 19:08	
Dibromofluoromethane	96	70-130	4/29/14 19:08	
Toluene-d8	96	70-130	4/29/14 19:08	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 0800
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/29/14 00:06
Sample Name:	BR-1 ZONE 1	**Units:**	µg/L
Lab Code:	R1402843-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390026
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8021.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/29/14 00:06	
Dibromofluoromethane	101	70-130	4/29/14 00:06	
Toluene-d8	97	70-130	4/29/14 00:06	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 0830
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/29/14 00:36
Sample Name:	BR-1 ZONE 2	**Units:**	µg/L
Lab Code:	R1402843-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390026
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8022.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	70-130	4/29/14 00:36	
Dibromofluoromethane	100	70-130	4/29/14 00:36	
Toluene-d8	97	70-130	4/29/14 00:36	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 0900
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/29/14 01:06
Sample Name:	BR-1 ZONE 3	**Units:**	µg/L
Lab Code:	R1402843-022	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390026
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8023.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	4/29/14 01:06	
Dibromofluoromethane	100	70-130	4/29/14 01:06	
Toluene-d8	95	70-130	4/29/14 01:06	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1015
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/29/14 01:37
Sample Name:	BR-3 ZONE 1	**Units:**	µg/L
Lab Code:	R1402843-023	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390026
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8024.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/29/14 01:37	
Dibromofluoromethane	99	70-130	4/29/14 01:37	
Toluene-d8	97	70-130	4/29/14 01:37	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1045
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/29/14 02:07
Sample Name:	BR-3 ZONE 2	**Units:**	µg/L
Lab Code:	R1402843-024	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390026
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8025.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/29/14 02:07	
Dibromofluoromethane	102	70-130	4/29/14 02:07	
Toluene-d8	97	70-130	4/29/14 02:07	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1115
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/29/14 02:38
Sample Name:	BR-3 ZONE 3	**Units:**	µg/L
Lab Code:	R1402843-025	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390026
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8026.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/29/14 02:38	
Dibromofluoromethane	102	70-130	4/29/14 02:38	
Toluene-d8	98	70-130	4/29/14 02:38	

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Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1200
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/29/14 03:08
Sample Name:	BR-7 ZONE 1	**Units:**	µg/L
Lab Code:	R1402843-026	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390026
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8027.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	70-130	4/29/14 03:08	
Dibromofluoromethane	101	70-130	4/29/14 03:08	
Toluene-d8	98	70-130	4/29/14 03:08	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1230
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/29/14 03:39
Sample Name:	BR-7 ZONE 2	**Units:**	µg/L
Lab Code:	R1402843-027	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390026
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8028.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**3.8**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**9.7**		2.0	
156-59-2	cis-1,2-Dichloroethene	**2.1**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/29/14 03:39	
Dibromofluoromethane	101	70-130	4/29/14 03:39	
Toluene-d8	98	70-130	4/29/14 03:39	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1300
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/29/14 19:39
Sample Name:	BR-7 ZONE 3	**Units:**	µg/L
Lab Code:	R1402843-028	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390267
Data File Name:	I:\ACQUDATA\msvoa10\data\042914\F8055.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**6.5**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**3.7**		2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**20**		2.0	
156-59-2	cis-1,2-Dichloroethene	**310**	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**3.8**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/29/14 19:39	
Dibromofluoromethane	99	70-130	4/29/14 19:39	
Toluene-d8	93	70-130	4/29/14 19:39	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1300
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/30/14 15:16
Sample Name:	BR-7 ZONE 3	**Units:**	µg/L
Lab Code:	R1402843-028	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390553
Data File Name:	I:\ACQUDATA\msvoa10\data\043014\F8093.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	2.5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**5.1**	D	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
67-64-1	Acetone	25	U	25	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0	U	5.0	
79-01-6	Trichloroethene (TCE)	5.0	U	5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	**18**	D	5.0	
156-59-2	cis-1,2-Dichloroethene	**15**	D	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/30/14 15:16	
Dibromofluoromethane	99	70-130	4/30/14 15:16	
Toluene-d8	95	70-130	4/30/14 15:16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/21/14 1330
Sample Matrix:	Water	**Date Received:**	4/22/14
		Date Analyzed:	4/29/14 04:40
Sample Name:	OB 44S (17')	**Units:**	µg/L
Lab Code:	R1402843-029	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390026
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8030.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	500

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1000	U	1000	
79-34-5	1,1,2,2-Tetrachloroethane	1000	U	1000	
79-00-5	1,1,2-Trichloroethane	1000	U	1000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	U	1000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1000	U	1000	
107-06-2	1,2-Dichloroethane	1000	U	1000	
78-87-5	1,2-Dichloropropane	1000	U	1000	
67-64-1	Acetone	5000	U	5000	
75-27-4	Bromodichloromethane	1000	U	1000	
75-25-2	Bromoform	1000	U	1000	
74-83-9	Bromomethane	1000	U	1000	
56-23-5	Carbon Tetrachloride	1000	U	1000	
108-90-7	Chlorobenzene	1000	U	1000	
75-00-3	Chloroethane	1000	U	1000	
67-66-3	Chloroform	1000	U	1000	
74-87-3	Chloromethane	1000	U	1000	
124-48-1	Dibromochloromethane	1000	U	1000	
75-09-2	Methylene Chloride	1000	U	1000	
127-18-4	Tetrachloroethene (PCE)	**7200**		1000	
79-01-6	Trichloroethene (TCE)	**1500**		1000	
75-69-4	Trichlorofluoromethane (CFC 11)	1000	U	1000	
75-01-4	Vinyl Chloride	1000	U	1000	
156-59-2	cis-1,2-Dichloroethene	**59000**		1000	
10061-01-5	cis-1,3-Dichloropropene	1000	U	1000	
156-60-5	trans-1,2-Dichloroethene	1000	U	1000	
10061-02-6	trans-1,3-Dichloropropene	1000	U	1000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	89	70-130	4/29/14 04:40	
Dibromofluoromethane	100	70-130	4/29/14 04:40	
Toluene-d8	96	70-130	4/29/14 04:40	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1402843-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chloride	SM 4500-Cl-E-1997(20	1.0	U	mg/L	1.0	1	NA	4/30/14 16:38	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1402843-MB	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	4/24/14	4/28/14 17:43	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	4/24/14	4/25/14 23:39	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	4/28/14 11:25
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1404369-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390021
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F7996.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	4/28/14 11:25	
Dibromofluoromethane	100	70-130	4/28/14 11:25	
Toluene-d8	98	70-130	4/28/14 11:25	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	4/28/14 22:04
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1404383-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390026
Data File Name:	I:\ACQUDATA\msvoa10\data\042814\F8017.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	91	70-130	4/28/14 22:04	
Dibromofluoromethane	101	70-130	4/28/14 22:04	
Toluene-d8	96	70-130	4/28/14 22:04	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	4/29/14 12:32
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1404338-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390267
Data File Name:	I:\ACQUDATA\msvoa10\data\042914\F8041.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	90	70-130	4/29/14 12:32	
Dibromofluoromethane	98	70-130	4/29/14 12:32	
Toluene-d8	96	70-130	4/29/14 12:32	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402843
Project:	Varian Beverly/150148-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	4/30/14 14:15
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1404481-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	390553
Data File Name:	I:\ACQUDATA\msvoa10\data\043014\F8091.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	92	70-130	4/30/14 14:15	
Dibromofluoromethane	99	70-130	4/30/14 14:15	
Toluene-d8	97	70-130	4/30/14 14:15	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150148-05000000
Sample Matrix: Water

Service Request: R1402843
Date Analyzed: 4/30/14

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1402843-LCS Result	Spike Amount	% Rec	% Rec Limits
Chloride	SM 4500-Cl-E-1997(20	23.8	25.0	95	86 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150148-05000000
Sample Matrix: Water

Service Request: R1402843
Date Analyzed: 4/25/14 - 4/28/14

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1402843-LCS Result	Spike Amount	% Rec	% Rec Limits
Iron, Dissolved	6010C	1010	1000	101	80 - 120
Manganese, Dissolved	6010C	484	500	97	80 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150148-05000000
Sample Matrix: Water

Service Request: R1402843
Date Analyzed: 4/28/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 390021

Analyte Name	Lab Control Sample RQ1404369-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1404369-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	17.9	20.0	89	18.8	20.0	94	70 - 130	5	20
1,1,2,2-Tetrachloroethane	19.9	20.0	99	21.5	20.0	108	70 - 130	8	20
1,1,2-Trichloroethane	19.4	20.0	97	21.2	20.0	106	70 - 130	9	20
1,1-Dichloroethane (1,1-DCA)	19.2	20.0	96	20.2	20.0	101	70 - 130	5	20
1,1-Dichloroethene (1,1-DCE)	20.2	20.0	101	22.8	20.0	114	70 - 130	12	20
1,2-Dichloroethane	17.5	20.0	87	18.9	20.0	95	70 - 130	8	20
1,2-Dichloropropane	20.2	20.0	101	22.0	20.0	110	70 - 130	8	20
Acetone	23.5	20.0	118	20.7	20.0	104	40 - 160	13	20
Bromodichloromethane	19.2	20.0	96	20.3	20.0	101	70 - 130	5	20
Bromoform	19.6	20.0	98	21.6	20.0	108	70 - 130	10	20
Bromomethane	23.9	20.0	119	25.3	20.0	126	40 - 160	6	20
Carbon Tetrachloride	17.0	20.0	85	19.5	20.0	98	70 - 130	14	20
Chlorobenzene	19.1	20.0	95	20.7	20.0	104	70 - 130	8	20
Chloroethane	17.5	20.0	87	18.7	20.0	94	70 - 130	7	20
Chloroform	18.3	20.0	92	19.4	20.0	97	70 - 130	6	20
Chloromethane	20.0	20.0	100	21.4	20.0	107	40 - 160	7	20
Dibromochloromethane	20.0	20.0	100	21.8	20.0	109	70 - 130	9	20
Methylene Chloride	19.5	20.0	97	21.4	20.0	107	70 - 130	9	20
Tetrachloroethene (PCE)	19.3	20.0	96	21.2	20.0	106	70 - 130	9	20
Trichloroethene (TCE)	19.1	20.0	96	19.6	20.0	98	70 - 130	3	20
Trichlorofluoromethane (CFC 11)	17.3	20.0	87	18.6	20.0	93	70 - 130	7	20
Vinyl Chloride	19.7	20.0	99	20.3	20.0	101	70 - 130	3	20
cis-1,2-Dichloroethene	18.5	20.0	93	19.7	20.0	99	70 - 130	6	20
cis-1,3-Dichloropropene	19.0	20.0	95	20.7	20.0	103	70 - 130	8	20
trans-1,2-Dichloroethene	19.1	20.0	96	19.8	20.0	99	70 - 130	3	20
trans-1,3-Dichloropropene	19.0	20.0	95	20.6	20.0	103	70 - 130	8	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150148-05000000
Sample Matrix: Water

Service Request: R1402843
Date Analyzed: 4/28/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 390026

Analyte Name	Lab Control Sample RQ1404383-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1404383-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	17.6	20.0	88	15.7	20.0	78	70 - 130	12	20
1,1,2,2-Tetrachloroethane	19.1	20.0	96	16.2	20.0	81	70 - 130	17	20
1,1,2-Trichloroethane	20.4	20.0	102	18.7	20.0	94	70 - 130	8	20
1,1-Dichloroethane (1,1-DCA)	19.4	20.0	97	17.7	20.0	89	70 - 130	9	20
1,1-Dichloroethene (1,1-DCE)	20.4	20.0	102	19.1	20.0	95	70 - 130	7	20
1,2-Dichloroethane	18.4	20.0	92	16.8	20.0	84	70 - 130	10	20
1,2-Dichloropropane	21.7	20.0	108	18.9	20.0	94	70 - 130	14	20
Acetone	26.1	20.0	130	22.2	20.0	111	40 - 160	16	20
Bromodichloromethane	19.7	20.0	99	18.0	20.0	90	70 - 130	9	20
Bromoform	21.0	20.0	105	18.3	20.0	91	70 - 130	14	20
Bromomethane	25.8	20.0	129	24.6	20.0	123	40 - 160	5	20
Carbon Tetrachloride	17.9	20.0	89	15.5	20.0	78	70 - 130	14	20
Chlorobenzene	19.8	20.0	99	17.8	20.0	89	70 - 130	11	20
Chloroethane	18.0	20.0	90	16.4	20.0	82	70 - 130	10	20
Chloroform	18.7	20.0	94	17.2	20.0	86	70 - 130	9	20
Chloromethane	20.6	20.0	103	18.9	20.0	94	40 - 160	9	20
Dibromochloromethane	21.4	20.0	107	19.1	20.0	95	70 - 130	11	20
Methylene Chloride	20.2	20.0	101	18.8	20.0	94	70 - 130	7	20
Tetrachloroethene (PCE)	18.7	20.0	94	16.6	20.0	83	70 - 130	12	20
Trichloroethene (TCE)	20.6	20.0	103	18.3	20.0	92	70 - 130	12	20
Trichlorofluoromethane (CFC 11)	16.5	20.0	82	14.8	20.0	74	70 - 130	11	20
Vinyl Chloride	19.6	20.0	98	17.5	20.0	87	70 - 130	12	20
cis-1,2-Dichloroethene	18.9	20.0	95	17.4	20.0	87	70 - 130	8	20
cis-1,3-Dichloropropene	19.5	20.0	98	17.9	20.0	89	70 - 130	9	20
trans-1,2-Dichloroethene	18.7	20.0	94	17.2	20.0	86	70 - 130	9	20
trans-1,3-Dichloropropene	19.2	20.0	96	17.7	20.0	88	70 - 130	8	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150148-05000000
Sample Matrix: Water

Service Request: R1402843
Date Analyzed: 4/29/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 390267

Analyte Name	Lab Control Sample RQ1404338-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1404338-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	18.8	20.0	94	18.1	20.0	91	70 - 130	4	20
1,1,2,2-Tetrachloroethane	18.7	20.0	94	20.5	20.0	103	70 - 130	9	20
1,1,2-Trichloroethane	19.4	20.0	97	20.1	20.0	100	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	19.5	20.0	97	20.6	20.0	103	70 - 130	6	20
1,1-Dichloroethene (1,1-DCE)	23.3	20.0	116	21.4	20.0	107	70 - 130	8	20
1,2-Dichloroethane	17.6	20.0	88	18.6	20.0	93	70 - 130	6	20
1,2-Dichloropropane	20.7	20.0	104	21.5	20.0	107	70 - 130	4	20
Acetone	19.5	20.0	97	20.4	20.0	102	40 - 160	5	20
Bromodichloromethane	19.4	20.0	97	20.0	20.0	100	70 - 130	3	20
Bromoform	19.0	20.0	95	20.8	20.0	104	70 - 130	9	20
Bromomethane	19.6	20.0	98	21.5	20.0	107	40 - 160	9	20
Carbon Tetrachloride	18.8	20.0	94	19.6	20.0	98	70 - 130	4	20
Chlorobenzene	19.9	20.0	100	20.4	20.0	102	70 - 130	3	20
Chloroethane	19.2	20.0	96	18.7	20.0	94	70 - 130	3	20
Chloroform	19.3	20.0	96	19.3	20.0	97	70 - 130	<1	20
Chloromethane	21.2	20.0	106	21.3	20.0	106	40 - 160	<1	20
Dibromochloromethane	20.8	20.0	104	21.7	20.0	109	70 - 130	4	20
Methylene Chloride	19.7	20.0	99	20.7	20.0	104	70 - 130	5	20
Tetrachloroethene (PCE)	20.2	20.0	101	20.6	20.0	103	70 - 130	2	20
Trichloroethene (TCE)	19.5	20.0	97	19.9	20.0	99	70 - 130	2	20
Trichlorofluoromethane (CFC 11)	18.2	20.0	91	17.9	20.0	90	70 - 130	1	20
Vinyl Chloride	19.8	20.0	99	19.8	20.0	99	70 - 130	<1	20
cis-1,2-Dichloroethene	18.8	20.0	94	19.7	20.0	98	70 - 130	4	20
cis-1,3-Dichloropropene	19.3	20.0	96	19.8	20.0	99	70 - 130	3	20
trans-1,2-Dichloroethene	19.9	20.0	100	19.8	20.0	99	70 - 130	<1	20
trans-1,3-Dichloropropene	18.4	20.0	92	19.4	20.0	97	70 - 130	5	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150148-05000000
Sample Matrix: Water

Service Request: R1402843
Date Analyzed: 4/30/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 390553

Analyte Name	Lab Control Sample RQ1404481-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1404481-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	19.1	20.0	96	20.2	20.0	101	70 - 130	5	20
1,1,2,2-Tetrachloroethane	19.8	20.0	99	21.0	20.0	105	70 - 130	6	20
1,1,2-Trichloroethane	19.8	20.0	99	20.7	20.0	103	70 - 130	5	20
1,1-Dichloroethane (1,1-DCA)	20.7	20.0	103	21.3	20.0	106	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	23.6	20.0	118	23.5	20.0	118	70 - 130	<1	20
1,2-Dichloroethane	17.6	20.0	88	18.8	20.0	94	70 - 130	6	20
1,2-Dichloropropane	21.6	20.0	108	22.6	20.0	113	70 - 130	4	20
Acetone	18.6	20.0	93	21.3	20.0	107	40 - 160	14	20
Bromodichloromethane	20.3	20.0	101	21.1	20.0	105	70 - 130	4	20
Bromoform	19.9	20.0	99	20.9	20.0	105	70 - 130	5	20
Bromomethane	24.5	20.0	123	25.4	20.0	127	40 - 160	3	20
Carbon Tetrachloride	20.3	20.0	101	21.2	20.0	106	70 - 130	5	20
Chlorobenzene	20.6	20.0	103	21.8	20.0	109	70 - 130	6	20
Chloroethane	19.3	20.0	96	19.6	20.0	98	70 - 130	2	20
Chloroform	19.8	20.0	99	20.2	20.0	101	70 - 130	2	20
Chloromethane	21.4	20.0	107	22.3	20.0	111	40 - 160	4	20
Dibromochloromethane	20.2	20.0	101	21.7	20.0	108	70 - 130	7	20
Methylene Chloride	21.1	20.0	106	21.3	20.0	106	70 - 130	<1	20
Tetrachloroethene (PCE)	21.1	20.0	105	22.2	20.0	111	70 - 130	5	20
Trichloroethene (TCE)	20.7	20.0	103	21.7	20.0	108	70 - 130	5	20
Trichlorofluoromethane (CFC 11)	18.5	20.0	92	19.4	20.0	97	70 - 130	5	20
Vinyl Chloride	20.7	20.0	103	21.2	20.0	106	70 - 130	3	20
cis-1,2-Dichloroethene	20.2	20.0	101	20.3	20.0	101	70 - 130	<1	20
cis-1,3-Dichloropropene	20.0	20.0	100	21.0	20.0	105	70 - 130	5	20
trans-1,2-Dichloroethene	20.4	20.0	102	20.9	20.0	105	70 - 130	3	20
trans-1,3-Dichloropropene	19.1	20.0	96	20.5	20.0	102	70 - 130	7	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Columbia Analytical Services — CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF _____

Project Name: Varian Beverly	Project Number: 150148-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental, Inc. 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature: [signature]	Sampler's Printed Name: DANIEL C. LEARY

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 2 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's 8260 ☐ 624 ☐ 5-ft specific ☐ 8270 ☐ 625 ☐ CLP List	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below) Fe+ Mn Chloride						REMARKS/ ALTERNATE DESCRIPTION
TB-6		4/2/14	1100	GW	3	3								(SY	UB)		
EB-5		4/21/14	0730	GW	3	3											
OB21-DO (78')		4/21/14	0830		3	3											
OB21-BR (98')		4/21/14	0930		3	3											
APB10-01 (77')		4/21/14	1015		3	3											
STRM-A-SCDS		4/21/14	1030		3	3											
OB20-DO (74')		4/21/14	1100		3	3											
OB20-BR (94')		4/21/14	1130		3	3											
OB20-S (10')		4/21/14	1145		3	3											
P-20R (10')		4/21/14	1200	↓	3	3											

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field Filtered
Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Joe@CBI.com.

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 1 day _____ 2 day _____ 3 day
_____ 4 day _____ 5 day
✓ Standard

REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw

Edata ✓ Yes _____ No

INVOICE INFORMATION
PO #: 873489
BILL TO: CB&I

R1402843 7 Y
CB&I Environmental & Infrastructure
Varian Beverly

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature: [signature]	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: DAN LEARY	Printed Name: Greg LaFon	Printed Name	Printed Name	Printed Name	Printed Name
Firm: CB&I	Firm: CB&I	Firm	Firm	Firm	Firm
Date/Time: 4/21/14 1430	Date/Time: 4/22/14 0840	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

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Columbia Analytical Services

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax)

Project Name: Varian Beverly	Project Number: 150148-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental, Inc. 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature: (signature)	Sampler's Printed Name: DANIEL C. LEAHY

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☑8260 ☐624 ☐CLP	GC/MS SVOA's ☐8270 ☐625	GC VOA's ☐8021 ☐601/602	PESTICIDES ☐8081 ☐608	PCB's ☐8082 ☐608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below) Fe + Mn	Chloride	REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE						1						2	0	
P-19A (10')		4/21/14	1230	GW	3	3								
P-11R (9')		4/21/14	1300	↓	3	3								
OB19-S (32')		4/21/14	1330	↓	3	3								
OB32-DO (57')		4/21/14	1345	↓	5	3						1	1	
AP-14-S (39')		4/21/14	1400	↓	3	3								
EB-6		4/21/14	1410	↓	3	3								
OB 35 DO (47)		4.21.14	1400	↓	5	3						1	1	
OB 37 DO (46)		4.21.14	1430	↓	3	3								
OB 36 DO (51)		4.21.14	1500	↓	5	3						1	1	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ____

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field filtered
Site specific VOC list.
Massachusetts CAM analyses reporting & QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Joe @cbi.com.

See QAPP ☐

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
___ 1 day ___ 2 day ___ 3 day
___ 4 day ___ 5 day
✓ Standard

REQUESTED REPORT DATE
____

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with ...

Edata ✓ Yes ___ N

INVOICE INFORMATION
PO #: 873489
BILL TO: CB&I

R1402843 7 Y
CB&I Environmental & Infrastructure
Varian Beverly

STATE WHERE SAMPLES WERE COLLECTED:

	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature	(signature)	(signature)				
Printed Name	DAN LEAHY	Greg LaFo...				
Firm	SHAW KEI	ALS				
Date/Time	4/21/14 1430	4/22/14 0840				

Distribution: White - Lab Copy; Yellow - Return To Originator

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE ______ OF ______

Project Name: Varian Beverly	Project Number: 150148-05000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental, Inc.	
150 Royall STreet	
Canton, MA 02021	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☑8260 ☐624 ☐CLP	GC/MS SVOA's ☐8270 ☐625	GC VOA's ☐8021 ☐601/602	PESTICIDES ☐8081 ☐608	PCB's ☐8082 ☐608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below) Fe + Mn	Chloride						REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE						1						2	0						
BR-1 Zone 1		4.21.14	0800	GW	3	3													
BR-1 Zone 2		↓	0830	↓	3	3													
BR-1 Zone 3			0900		3	3													
BR-3 Zone 1			1015		3	3													
BR-3 Zone 2			1045		3	3													
BR-3 Zone 3			1115		3	3													
BR-7 Zone 1			1200		3	3													
BR-7 Zone 2			1230		3	3													
BR-7 Zone 3			1300		3	3													
OB44S (17')		↓	1330	↓	3	3													

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field filtered
Site specific VOC list.
Massachusetts CAM analyses reporting & QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Joe@CBI.com.

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED:

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
✓ Standard

REQUESTED REPORT DATE
______

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata ✓ Yes ____ No

INVOICE INFORMATION
PO #: 873489
BILL TO: CB&I

R1402843

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: [signature]	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: Paul Liedeva	Printed Name: Gary [illegible]	Printed Name	Printed Name	Printed Name	Printed Name
Firm: CB&I	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 4.21.14 1600	Date/Time: 4/22/14 0840	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

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Cooler Receipt and Preservation Check Form

Project/Client CBr I Folder Number R14-2843

Cooler received on 4/22/14 by: [illegible] COURIER: ALS (UPS) FEDEX VELOCITY CLIENT

1. Were custody seals on outside of cooler? YES (NO)
2. Were custody papers properly filled out (ink, signed, etc.)? (YES) NO
3. Did all bottles arrive in good condition (unbroken)? (YES) NO
4. Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles? YES (NO) N/A
5. Were **Ice** or **Ice packs** present? (YES) NO
6. Where did the bottles originate? (ALS/ROC) CLIENT
7. Soil VOA samples received as: Bulk Jar Encore TerraCore Lab5035set (N/A)
8. Temperature of cooler(s) upon receipt: 9.0°

Is the temperature within 0° - 6° C?: Y (N) Y N Y N Y N Y N

If No, Explain Below Date/Time Temperatures Taken: 4/22/14 0851

Thermometer ID: (IR GUN#3) / IR GUN#4 Reading From: (Temp Blank) / Sample Bottle

If out of Temperature, note packing/ice condition &Client Approval to Run Samples:

All Samples held in storage location R-002 by [illegible] on 4/22/14 at 0952

5035 samples placed in storage location _____ by _____ on _____ at _____

PC Secondary Review: MMS 4/22/14

Cooler Breakdown: Date: 4/22/14 Time: 1412 by: [illegible]

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
2. Did all bottle labels and tags agree with custody papers? (YES) NO
3. Were correct containers used for the tests indicated? (YES) NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated (N/A)

Explain any discrepancies:

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3	✓		~~B032~~ client covered					
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*	4112120	3/15				

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 4-002-003, 112612-2VV, client covered

Other Comments:

0820-8 # bottles says (11), COC says (10)

PC Secondary Review: MMS 5/1/14

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc
Job Number : 146898.11

Prepared By: Dale Dailey
Date : 6/2/2014

Matrix: Air

Analyte Group : Volatile Organics
Analytical Method : EPA Method TO-15

Completed MADEP CAM Certification Form included: Yes
Laboratory ID No. : R1402846

Chain of Custody included in Data Package ? Yes
Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
4/17/14	VOC TO-15		30 Days	4/24/14

Sample temperature within QC limits: NA - Air

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: NA

Equipment Field Blank ID : NA
Trip Blank ID : NA

Method Blank: EPA TO-15 4/24/2014

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:

(1) All samples were initially analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method. All initial and continuing calibrations were compliant.

(2) various compounds for 32 TOZER-SV4 have been flagged with an "E" as being outside the calibration range of the instrument. The sample was repeated at dilutions and both sets of data have been reported out.

Reviewed By: Pernilla Haley 6/9/14

April 30, 2014

Service Request No: R1402846

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly Air Samples/146898

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on April 22, 2014. For your reference, these analyses have been assigned our service request number **R1402846**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Client Services Manager

CC: Pernilla Haley

ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623 PHONE 585-288-5380 | FAX 585-288-8475
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

ALS Environmental

Client:	CB&I.	**Service Request No.:**	R1402846
Project:	Varian Beverly	**Project No.:**	146898
Sample Matrix:	Air	**Date Received:**	04/22/14

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS environmental. This report contains analytical results for samples designated for Tier II, MASS. CAM deliverables. When appropriate to the method, blank and LCS results have been reported with each analytical test.

Sample Receipt

CB&I air samples were collected on 04/17/14 and received at ALS in good condition as noted on the receipt and preservation check form. The samples were stored in the laboratory at room temperature prior to analysis. See the ALS case narrative for a cross-reference between Client ID and ALS Job #.

TO - 15 Air Analysis

Six air samples were analyzed for a site list of Volatile Organics by EPA method TO-15.

All samples were initially analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method.

Various compounds for 32 TOZER-SV4 have been flagged with an "E" as being outside the calibration range of the instrument. The sample was repeated at a dilution and both sets of data have been reported out.

All initial and continuing calibrations were compliant.

All surrogate standard recoveries were within QC limits.

The Method blanks were free of contamination.

The LCS recoveries were all within QC limits of 70 – 130 %.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental	Project #: 146898
Project Location: Varian Beverly	RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1402846-001-006

Matrices: Groundwater/Surface Water Soil/Sediment Drinking Water Air X Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B X
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes X No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

***Data User Note**: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Janice Jaeger

Printed Name: Janice Jaeger

Position: Client Services Manager

Date: 05/02/14

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1402846

Lab ID	Client ID
R1402846-001	32 TOZER-SV3
R1402846-002	32 TOZER-SV5
R1402846-003	32 TOZER-SV4
R1402846-004	32 TOZER-1
R1402846-005	32 TOZER-2
R1402846-006	32 TOZER-3

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
E	Organics- Concentration has exceeded the calibration range for that specific analysis.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.
#	Spike was diluted out.
+	Correlation coefficient for MSA is <0.995.
N	Inorganics- Matrix spike recovery was outside laboratory limits.
N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
S	Concentration has been determined using Method of Standard Additions (MSA).
W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
P	Concentration >40% (25% for CLP) difference between the two GC columns.
C	Confirmed by GC/MS
Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).
X	See Case Narrative for discussion.
MRL LOQ	Method Reporting Limit. Also known as: Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **LARRY LEWIS**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **08 JAN 2014**

Expires: **30 JUN 2014**

Oscar C. Parcells

Director, Division of Environmental Analysis

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2013

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2013 Expiration Date 30 JUN 2014

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2013

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **01 JUL 2013** **Expiration Date** **30 JUN 2014**

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEF	EPA 608

00008

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/146898
Sample Matrix: Air

Service Request: R1402846
Date Collected: 4/17/14 1402
Date Received: 4/22/14

Sample Name: 32 TOZER-SV3
Lab Code: R1402846-001

Analytical Method: TO-15

Date Analyzed: 4/24/14 1548
Canister Dilution Factor: 1.47

Initial Pressure (psig): -2.31 Final Pressure (psig): 3.51

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	2.4	37	37	14	14	U
156-60-5	trans-1,2-Dichloroethene	2.4	270	270	68	68	U
71-55-6	1,1,1-Trichloroethane (TCA)	2.4	370	370	67	67	U
156-59-2	**cis-1,2-Dichloroethene**	2.4	**17000**	270	**4200**	68	
79-01-6	**Trichloroethene (TCE)**	2.4	**4500**	37	**840**	6.8	
127-18-4	**Tetrachloroethene (PCE)**	2.4	**14000**	49	**2000**	7.2	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.4	280	280	68	68	U
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.4	270	270	68	68	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	92	70-130	4/24/14 1548	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/146898
Sample Matrix: Air

Service Request: R1402846
Date Collected: 4/17/14 1413
Date Received: 4/22/14

Sample Name: 32 TOZER-SV5
Lab Code: R1402846-002

Analytical Method: TO-15

Date Analyzed: 4/24/14 1640
Canister Dilution Factor: 1.52

Initial Pressure (psig): -2.70 Final Pressure (psig): 3.54

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.091	0.091	0.036	0.036	U
156-60-5	trans-1,2-Dichloroethene	1000	0.67	0.67	0.17	0.17	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.91	0.91	0.17	0.17	U
156-59-2	cis-1,2-Dichloroethene	1000	0.67	0.67	0.17	0.17	U
79-01-6	**Trichloroethene (TCE)**	1000	**0.41**	0.091	**0.076**	0.017	
127-18-4	**Tetrachloroethene (PCE)**	1000	**1.4**	0.12	**0.21**	0.018	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.68	0.68	0.17	0.17	U
75-35-4	1,1-Dichloroethene (1,1-DCE)	1000	0.67	0.67	0.17	0.17	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	70-130	4/24/14 1640	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402846
Project:	Varian Beverly Air Samples/146898	**Date Collected:**	4/17/14 1503
Sample Matrix:	Air	**Date Received:**	4/22/14
Sample Name:	32 TOZER-SV4		
Lab Code:	R1402846-003		

Analytical Method: TO-15 **Date Analyzed:** 4/24/14 1731

Canister Dilution Factor: 1.39

Initial Pressure (psig): -1.52 Final Pressure (psig): 3.58

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	**Vinyl Chloride**	1000	**1.2**	0.083	**0.45**	0.033	
156-60-5	trans-1,2-Dichloroethene	1000	0.61	0.61	0.15	0.15	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.83	0.83	0.15	0.15	U
156-59-2	**cis-1,2-Dichloroethene**	1000	**45**	0.61	**11**	0.15	
79-01-6	**Trichloroethene (TCE)**	1000	**37**	0.083	**6.9**	0.016	
127-18-4	**Tetrachloroethene (PCE)**	1000	**150**	0.11	**23**	0.016	E
75-34-3	**1,1-Dichloroethane (1,1-DCA)**	1000	**0.80**	0.63	**0.20**	0.15	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1000	0.61	0.61	0.15	0.15	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	101	70-130	4/24/14 1731	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402846
Project:	Varian Beverly Air Samples/146898	**Date Collected:**	4/17/14 1503
Sample Matrix:	Air	**Date Received:**	4/22/14
Sample Name:	32 TOZER-SV4		
Lab Code:	R1402846-003		
Run Type:	Dilution		
Analytical Method:	TO-15	**Date Analyzed:**	4/24/14 2316
		Canister Dilution Factor:	1.39

Initial Pressure (psig): -1.52 Final Pressure (psig): 3.58

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	**Vinyl Chloride**	400	**1.1**	0.21	**0.43**	0.082	D
156-60-5	trans-1,2-Dichloroethene	400	1.5	1.5	0.39	0.39	U
71-55-6	1,1,1-Trichloroethane (TCA)	400	2.1	2.1	0.38	0.38	U
156-59-2	**cis-1,2-Dichloroethene**	400	**45**	1.5	**11**	0.39	D
79-01-6	**Trichloroethene (TCE)**	400	**37**	0.21	**6.8**	0.039	D
127-18-4	**Tetrachloroethene (PCE)**	400	**160**	0.28	**23**	0.041	D
75-34-3	1,1-Dichloroethane (1,1-DCA)	400	1.6	1.6	0.39	0.39	U
75-35-4	1,1-Dichloroethene (1,1-DCE)	400	1.5	1.5	0.39	0.39	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	100	70-130	4/24/14 2316	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/146898
Sample Matrix: Air

Service Request: R1402846
Date Collected: 4/17/14 1610
Date Received: 4/22/14

Sample Name: 32 TOZER-1
Lab Code: R1402846-004

Analytical Method: TO-15

Date Analyzed: 4/24/14 1909
Canister Dilution Factor: 1.55

Initial Pressure (psig): -2.80 Final Pressure (psig): 3.70

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.093	0.093	0.036	0.036	U
156-60-5	trans-1,2-Dichloroethene	1000	0.68	0.68	0.17	0.17	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.93	0.93	0.17	0.17	U
156-59-2	**cis-1,2-Dichloroethene**	1000	**3.9**	0.68	**1.0**	0.17	
79-01-6	**Trichloroethene (TCE)**	1000	**1.9**	0.093	**0.36**	0.017	
127-18-4	**Tetrachloroethene (PCE)**	1000	**18**	0.12	**2.7**	0.018	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.70	0.70	0.17	0.17	U
75-35-4	1,1-Dichloroethene (1,1-DCE)	1000	0.68	0.68	0.17	0.17	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	102	70-130	4/24/14 1909	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402846
Project:	Varian Beverly Air Samples/146898	**Date Collected:**	4/17/14 1605
Sample Matrix:	Air	**Date Received:**	4/22/14
Sample Name:	32 TOZER-2		
Lab Code:	R1402846-005		

Analytical Method: TO-15 **Date Analyzed:** 4/24/14 2001

Canister Dilution Factor: 1.56

Initial Pressure (psig): -2.95 Final Pressure (psig): 3.58

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.094	0.094	0.037	0.037	U
156-60-5	trans-1,2-Dichloroethene	1000	0.69	0.69	0.17	0.17	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.94	0.94	0.17	0.17	U
156-59-2	**cis-1,2-Dichloroethene**	1000	**1.7**	0.69	**0.43**	0.17	
79-01-6	**Trichloroethene (TCE)**	1000	**0.55**	0.094	**0.10**	0.017	
127-18-4	**Tetrachloroethene (PCE)**	1000	**3.8**	0.12	**0.56**	0.018	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.70	0.70	0.17	0.17	U
75-35-4	1,1-Dichloroethene (1,1-DCE)	1000	0.69	0.69	0.17	0.17	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	98	70-130	4/24/14 2001	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/146898
Sample Matrix: Air

Service Request: R1402846
Date Collected: 4/17/14 1600
Date Received: 4/22/14

Sample Name: 32 TOZER-3
Lab Code: R1402846-006

Analytical Method: TO-15

Date Analyzed: 4/24/14 2052
Canister Dilution Factor: 1.44

Initial Pressure (psig): -2.06 Final Pressure (psig): 3.53

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.086	0.086	0.034	0.034	U
156-60-5	trans-1,2-Dichloroethene	1000	0.63	0.63	0.16	0.16	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.86	0.86	0.16	0.16	U
156-59-2	cis-1,2-Dichloroethene	1000	0.63	0.63	0.16	0.16	U
79-01-6	Trichloroethene (TCE)	1000	0.086	0.086	0.016	0.016	U
127-18-4	**Tetrachloroethene (PCE)**	1000	**0.26**	0.12	**0.039**	0.017	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.65	0.65	0.16	0.16	U
75-35-4	1,1-Dichloroethene (1,1-DCE)	1000	0.63	0.63	0.16	0.16	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	70-130	4/24/14 2052	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1402846
Project:	Varian Beverly Air Samples/146898	**Date Collected:**	NA
Sample Matrix:	Air	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	RQ1404185-01		

Analytical Method: TO-15 **Date Analyzed:** 4/24/14 1023

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	0.45	0.45	0.11	0.11	U
75-35-4	1,1-Dichloroethene (1,1-DCE)	1000	0.44	0.44	0.11	0.11	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	94	70-130	4/24/14 1023	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/146898
Sample Matrix: Air

Service Request: R1402846
Date Analyzed: 4/24/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 389799

Analyte Name	Lab Control Sample RQ1404185-02 Result	Spike Amount	% Rec	% Rec Limits
Vinyl Chloride	5.84	6.58	89	70 - 130
trans-1,2-Dichloroethene	9.77	10.4	94	70 - 130
1,1,1-Trichloroethane (TCA)	11.6	14.3	81	70 - 130
cis-1,2-Dichloroethene	9.88	10.4	95	70 - 130
Trichloroethene (TCE)	12.5	14.0	90	70 - 130
Tetrachloroethene (PCE)	16.1	18.0	90	70 - 130
1,1-Dichloroethane (1,1-DCA)	10.0	10.4	96	70 - 130
1,1-Dichloroethene (1,1-DCE)	9.03	10.3	88	70 - 130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Columbia Analytical Services™

CHAIN OF CUSTODY - AIR

PAGE 1 OF 1

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 585.288.8475 (fax) | www.caslab.com

Requested Turnaround Time in Business Days from Receipt, please circle:
1 Day | 2 Day | 3 Day | 4 Day | 5 Day | 10 Day Standard

CAS Project #:

Company Name: CB&I
Project Name: Varian
CAS Contact:
Address: 150 Royall Dr.
Project Number: 146898
City, State, Zip: Canton, MA 02021
P.O. #/Billing Information: 853583
Project Manager: R. Cadorette
Phone: 617-589-6102
Fax:
Email (for result reporting): raymond.cadorette@cbi.com
Sampler (Print & Sign): Dale Bailey

Analysis Method and/or Analytes

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID	Flow Controller ID	TO-15: Specific List (See Notes)				**Comments** Specific Instructions
32 Tozer-SV3		4/17/14	14:02	SLC00178	FC00845	1				
32 Tozer-SV5			14:13	SLC00032	FC-861*	1				
32 Tozer-SV4			15:03	SLC00265	FC00862	1				
32 Tozer-1			16:10	SLC00171	FC00848	1				
32 Tozer-2			16:05	SLC00214	FC00857	1				
32 Tozer-3			16:00	SLC00192	FC00852	1				

R1402846 7 Y
CB&I Environmental & Infrastructure
Varian Beverly Air Samples

What State were samples collected in: MA

Report Tier Levels - please select:
Tier I (Results/Default, if not specified) ___
Tier II (Results + QC) X
Tier III (CLP Forms Only) ___
Tier IV (Data Validation) ___

EDD required: YES / NO
Type: _____ EDD Units: _____

Project Requirements (MRLs, QAPP, etc.)
"QA/QC" MADEP CAM
- 2nd Run.
- TO-15 Specific List
1,1,1-TCA, 1,1,1-DCA, 1,1-DCE, PCE, TCE, vinyl chloride, cis-1,2-DCE, and trans-1,2-DCE

Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:
	4/17/14	18:00		4/22/14	0840
Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:

COC AIR REV 7-11

Cooler Receipt and Preservation Check Form

Project/Client CBr I Folder Number R14-2846

Cooler received on 4/22/14 by: RD **COURIER:** ALS (UPS) FEDEX VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	(YES)	NO
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO
4.	Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles?	YES	NO (N/A)
5.	Were **Ice** or **Ice packs** present?	YES	(NO)
6.	Where did the bottles originate?	(ALS/ROC)	CLIENT

7.	Soil VOA samples received as:	Bulk Jar	Encore	TerraCore	Lab5035set	N/A
8.	Temperature of cooler(s) upon receipt:	AIR				
	Is the temperature within 0° - 6° C?:	Y (N)	Y N	Y N	Y N	Y N

If No, Explain Below Date/Time Temperatures Taken: AIR

Thermometer ID: IR GUN#3 / IR GUN#4 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition &Client Approval to Run Samples:

All Samples held in storage location SMO by RD on 4/22/14 at 0845

5035 samples placed in storage location _____ by _____ on _____ at _____

PC Secondary Review: JNW 4/22/14

Cooler Breakdown: Date: 4/22/14 Time: 1241 by: DH

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	YES	NO
2.	Did all bottle labels and tags agree with custody papers?	YES	NO
3.	Were correct containers used for the tests indicated?	YES	NO

4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies:

pH	Reagent	YES	NO	Lot Received	Exp
≥12	NaOH				
≤2	HNO_3				
≤2	H_2SO_4				
<4	$NaHSO_4$				
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)	
	$Na_2S_2O_3$	-	-		
	Zn Aceta	-	-		
	HCl	*	*		

Sample ID	Vol. Added	Lot Added	Final pH

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: _____

Other Comments:

PC Secondary Review: JNW 4/29/14

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc
Job Number : 150148.01

Prepared By: Dale Dailey
Date : 6/2/2014

Matrix: Air

Analyte Group : Volatile Organics
Analytical Method : EPA Method TO-15

Completed MADEP CAM Certification Form included: Yes
Laboratory ID No. : R1403115

Chain of Custody included in Data Package ? Yes
Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
4/29/14	VOC TO-15		30 Days	5/1, 5/2, 5/3/14

Sample temperature within QC limits: NA - Air

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: NA

Equipment Field Blank ID : NA
Trip Blank ID : NA

Method Blank: EPA TO-15 5/1/2014

EPA TO-15 5/2/2014

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:

(1) All samples were initially analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method. All initial and continuing calibrations were compliant.

(2) Various compounds for BLDG 3-2, BLDG 2-6, BLDG 3-4, and BLDG 3-3 have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

(3) No method blank was analyzed on 5/3/14.

Reviewed By: Pernilla Haley, 6/9/14

May 08, 2014

Service Request No: R1403115

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly Air Samples/150148-01000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on April 30, 2014. For your reference, these analyses have been assigned our service request number **R1403115**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Client Services Manager

CC: Pernilla Haley

ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623 PHONE 585-288-5380 | FAX 585-288-8475
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

ALS Environmental

Client:	CB&I.	**Service Request No.:**	R1403115
Project:	Varian Beverly	**Project No.:**	150148
Sample Matrix:	Air	**Date Received:**	04/30/14

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS environmental. This report contains analytical results for samples designated for Tier II, MASS. CAM deliverables. When appropriate to the method, blank and LCS results have been reported with each analytical test.

Sample Receipt

CB&I air samples were collected on 04/29/14 and received at ALS in good condition as noted on the receipt and preservation check form. The samples were stored in the laboratory at room temperature prior to analysis. See the ALS case narrative for a cross-reference between Client ID and ALS Job #.

TO - 15 Air Analysis

Seven air samples were analyzed for a site list of Volatile Organics by EPA method TO-15.

All samples were initially analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method.

Various compounds for BLDG 3-2, BLDG 2-6, BLDG 3-4 and BLDG 3-3 have been flagged with an "E" as being outside the calibration range of the instrument. The sample was repeated at a dilution and both sets of data have been reported out.

All initial and continuing calibrations were compliant.

All surrogate standard recoveries were within QC limits.

The Method blanks were free of contamination.

The LCS recoveries were all within QC limits of 70 – 130 %.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental | Project #: 150148

Project Location: Varian Beverly | RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1403115-001-007

Matrices: Groundwater/Surface Water Soil/Sediment Drinking Water Air X Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B X
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes X No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

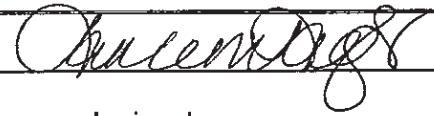
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: 

Position: Client Services Manager

Printed Name: Janice Jaeger

Date: 05/12/14

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1403115

Lab ID	Client ID
R1403115-001	BLDG3-VP-1
R1403115-002	BLDG3-VP-2
R1403115-003	BLDG3-VP-3
R1403115-004	BLDG 3-2
R1403115-005	BLDG 2-6
R1403115-006	BLDG 3-4
R1403115-007	BLDG 3-3

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **LARRY LEWIS**

for the analysis of: **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **08 JAN 2014**
Expires: **30 JUN 2014**

Oscar C. Parcells

Director, Division of Environmental Analysis

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2013

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2013 Expiration Date 30 JUN 2014

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

00007

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2013

M-NY032 **ALS ENVIRONMENTAL ROCHESTER**
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **01 JUL 2013** **Expiration Date** **30 JUN 2014**

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEF	EPA 608

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1123
Date Received: 4/30/14

Sample Name: BLDG3-VP-1
Lab Code: R1403115-001

Analytical Method: TO-15

Date Analyzed: 5/2/14 1143
Canister Dilution Factor: 1.40

Initial Pressure (psig): -1.62 Final Pressure (psig): 3.55

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	3.2	26	26	10	10	U
74-83-9	Bromomethane	3.2	190	190	48	48	U
67-64-1	Acetone	3.2	2200	2200	920	920	U
75-35-4	1,1-Dichloroethene	3.2	190	190	49	49	U
75-09-2	Methylene Chloride	3.2	170	170	48	48	U
156-60-5	trans-1,2-Dichloroethene	3.2	190	190	49	49	U
75-34-3	1,1-Dichloroethane	3.2	200	200	49	49	U
1634-04-4	Methyl tert-Butyl Ether	3.2	350	350	96	96	U
78-93-3	2-Butanone (MEK)	3.2	280	280	96	96	U
156-59-2	cis-1,2-Dichloroethene	3.2	190	190	49	49	U
67-66-3	Chloroform	3.2	240	240	48	48	U
107-06-2	1,2-Dichloroethane	3.2	200	200	49	49	U
71-55-6	1,1,1-Trichloroethane (TCA)	3.2	260	260	48	48	U
71-43-2	Benzene	3.2	150	150	48	48	U
56-23-5	Carbon Tetrachloride	3.2	31	31	4.9	4.9	U
78-87-5	1,2-Dichloropropane	3.2	220	220	48	48	U
75-27-4	Bromodichloromethane	3.2	66	66	9.8	9.8	U
79-01-6	**Trichloroethene (TCE)**	3.2	**960**	26	**180**	4.9	
123-91-1	1,4-Dioxane	3.2	2200	2200	610	610	U
10061-01-5	cis-1,3-Dichloropropene	3.2	440	440	96	96	U
108-10-1	4-Methyl-2-pentanone (MIBK)	3.2	390	390	96	96	U
10061-02-6	trans-1,3-Dichloropropene	3.2	220	220	48	48	U
79-00-5	1,1,2-Trichloroethane	3.2	260	260	48	48	U
108-88-3	Toluene	3.2	180	180	48	48	U
591-78-6	2-Hexanone	3.2	200	200	48	48	U
124-48-1	Dibromochloromethane	3.2	83	83	9.8	9.8	U
106-93-4	1,2-Dibromoethane (EDB)	3.2	74	74	9.7	9.7	U
127-18-4	**Tetrachloroethene (PCE)**	3.2	**19000**	35	**2700**	5.2	
108-90-7	Chlorobenzene	3.2	220	220	48	48	U
100-41-4	Ethylbenzene	3.2	420	420	96	96	U
179601-23-1	m,p-Xylenes	3.2	840	840	190	190	U
75-25-2	Bromoform	3.2	500	500	48	48	U
100-42-5	Styrene	3.2	410	410	97	97	U
95-47-6	o-Xylene	3.2	420	420	96	96	U
79-34-5	1,1,2,2-Tetrachloroethane	3.2	66	66	9.6	9.6	U
541-73-1	1,3-Dichlorobenzene	3.2	580	580	96	96	U
106-46-7	1,4-Dichlorobenzene	3.2	580	580	96	96	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1123
Date Received: 4/30/14

Sample Name: BLDG3-VP-1
Lab Code: R1403115-001

Analytical Method: TO-15

Date Analyzed: 5/2/14 1143
Canister Dilution Factor: 1.40

Initial Pressure (psig): -1.62 Final Pressure (psig): 3.55

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	3.2	580	580	96	96	U
91-20-3	Naphthalene	3.2	880	880	170	170	U
87-68-3	Hexachlorobutadiene	3.2	1300	1300	120	120	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	70-130	5/2/14 1143	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1124
Date Received: 4/30/14

Sample Name: BLDG3-VP-2
Lab Code: R1403115-002

Analytical Method: TO-15

Date Analyzed: 5/2/14 1230
Canister Dilution Factor: 1.40

Initial Pressure (psig): -1.67 Final Pressure (psig): 3.53

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	6.6	13	13	5.0	5.0	U
74-83-9	Bromomethane	6.6	91	91	23	23	U
67-64-1	Acetone	6.6	1100	1100	450	450	U
75-35-4	1,1-Dichloroethene	6.6	93	93	24	24	U
75-09-2	Methylene Chloride	6.6	81	81	23	23	U
156-60-5	trans-1,2-Dichloroethene	6.6	93	93	24	24	U
75-34-3	1,1-Dichloroethane	6.6	95	95	24	24	U
1634-04-4	Methyl tert-Butyl Ether	6.6	170	170	46	46	U
78-93-3	2-Butanone (MEK)	6.6	140	140	47	47	U
156-59-2	cis-1,2-Dichloroethene	6.6	93	93	24	24	U
67-66-3	Chloroform	6.6	110	110	23	23	U
107-06-2	1,2-Dichloroethane	6.6	95	95	24	24	U
71-55-6	1,1,1-Trichloroethane (TCA)	6.6	130	130	23	23	U
71-43-2	Benzene	6.6	74	74	23	23	U
56-23-5	Carbon Tetrachloride	6.6	15	15	2.4	2.4	U
78-87-5	1,2-Dichloropropane	6.6	110	110	23	23	U
75-27-4	Bromodichloromethane	6.6	32	32	4.8	4.8	U
79-01-6	**Trichloroethene (TCE)**	6.6	**820**	13	**150**	2.4	
123-91-1	1,4-Dioxane	6.6	1100	1100	290	290	U
10061-01-5	cis-1,3-Dichloropropene	6.6	210	210	47	47	U
108-10-1	4-Methyl-2-pentanone (MIBK)	6.6	190	190	47	47	U
10061-02-6	trans-1,3-Dichloropropene	6.6	110	110	23	23	U
79-00-5	1,1,2-Trichloroethane	6.6	130	130	23	23	U
108-88-3	Toluene	6.6	87	87	23	23	U
591-78-6	2-Hexanone	6.6	95	95	23	23	U
124-48-1	Dibromochloromethane	6.6	40	40	4.7	4.7	U
106-93-4	1,2-Dibromoethane (EDB)	6.6	36	36	4.7	4.7	U
127-18-4	**Tetrachloroethene (PCE)**	6.6	**9600**	17	**1400**	2.5	
108-90-7	Chlorobenzene	6.6	110	110	24	24	U
100-41-4	Ethylbenzene	6.6	200	200	46	46	U
179601-23-1	m,p-Xylenes	6.6	410	410	93	93	U
75-25-2	Bromoform	6.6	240	240	23	23	U
100-42-5	Styrene	6.6	200	200	47	47	U
95-47-6	o-Xylene	6.6	200	200	46	46	U
79-34-5	1,1,2,2-Tetrachloroethane	6.6	32	32	4.6	4.6	U
541-73-1	1,3-Dichlorobenzene	6.6	280	280	47	47	U
106-46-7	1,4-Dichlorobenzene	6.6	280	280	47	47	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1124
Date Received: 4/30/14

Sample Name: BLDG3-VP-2
Lab Code: R1403115-002

Analytical Method: TO-15

Date Analyzed: 5/2/14 1230
Canister Dilution Factor: 1.40

Initial Pressure (psig): -1.67 Final Pressure (psig): 3.53

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	6.6	280	280	47	47	U
91-20-3	Naphthalene	6.6	420	420	81	81	U
87-68-3	Hexachlorobutadiene	6.6	640	640	60	60	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	70-130	5/2/14 1230	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1125
Date Received: 4/30/14

Sample Name: BLDG3-VP-3
Lab Code: R1403115-003

Analytical Method: TO-15

Date Analyzed: 5/2/14 1316
Canister Dilution Factor: 1.42

Initial Pressure (psig): -1.87 Final Pressure (psig): 3.56

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	33	2.6	2.6	1.0	1.0	U
74-83-9	Bromomethane	33	19	19	4.8	4.8	U
67-64-1	Acetone	33	220	220	91	91	U
75-35-4	1,1-Dichloroethene	33	19	19	4.8	4.8	U
75-09-2	Methylene Chloride	33	16	16	4.7	4.7	U
156-60-5	trans-1,2-Dichloroethene	33	19	19	4.8	4.8	U
75-34-3	1,1-Dichloroethane	33	19	19	4.8	4.8	U
1634-04-4	Methyl tert-Butyl Ether	33	34	34	9.4	9.4	U
78-93-3	2-Butanone (MEK)	33	28	28	9.5	9.5	U
156-59-2	**cis-1,2-Dichloroethene**	33	**20**	19	**5.0**	4.8	
67-66-3	**Chloroform**	33	**24**	23	**5.0**	4.8	
107-06-2	1,2-Dichloroethane	33	19	19	4.8	4.8	U
71-55-6	1,1,1-Trichloroethane (TCA)	33	26	26	4.7	4.7	U
71-43-2	Benzene	33	15	15	4.7	4.7	U
56-23-5	Carbon Tetrachloride	33	3.0	3.0	0.48	0.48	U
78-87-5	1,2-Dichloropropane	33	22	22	4.8	4.8	U
75-27-4	Bromodichloromethane	33	6.5	6.5	0.96	0.96	U
79-01-6	**Trichloroethene (TCE)**	33	**460**	2.6	**86**	0.48	
123-91-1	1,4-Dioxane	33	220	220	60	60	U
10061-01-5	cis-1,3-Dichloropropene	33	43	43	9.5	9.5	U
108-10-1	4-Methyl-2-pentanone (MIBK)	33	39	39	9.5	9.5	U
10061-02-6	trans-1,3-Dichloropropene	33	22	22	4.7	4.7	U
79-00-5	1,1,2-Trichloroethane	33	26	26	4.7	4.7	U
108-88-3	Toluene	33	18	18	4.7	4.7	U
591-78-6	2-Hexanone	33	19	19	4.7	4.7	U
124-48-1	Dibromochloromethane	33	8.2	8.2	0.96	0.96	U
106-93-4	1,2-Dibromoethane (EDB)	33	7.3	7.3	0.95	0.95	U
127-18-4	**Tetrachloroethene (PCE)**	33	**2000**	3.4	**290**	0.51	
108-90-7	Chlorobenzene	33	22	22	4.8	4.8	U
100-41-4	Ethylbenzene	33	41	41	9.4	9.4	U
179601-23-1	m,p-Xylenes	33	82	82	19	19	U
75-25-2	Bromoform	33	49	49	4.7	4.7	U
100-42-5	Styrene	33	40	40	9.5	9.5	U
95-47-6	o-Xylene	33	41	41	9.4	9.4	U
79-34-5	1,1,2,2-Tetrachloroethane	33	6.5	6.5	0.94	0.94	U
541-73-1	1,3-Dichlorobenzene	33	57	57	9.5	9.5	U
106-46-7	1,4-Dichlorobenzene	33	57	57	9.5	9.5	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1125
Date Received: 4/30/14

Sample Name: BLDG3-VP-3
Lab Code: R1403115-003

Analytical Method: TO-15

Date Analyzed: 5/2/14 1316
Canister Dilution Factor: 1.42

Initial Pressure (psig): -1.87 Final Pressure (psig): 3.56

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	33	57	57	9.5	9.5	U
91-20-3	Naphthalene	33	86	86	16	16	U
87-68-3	Hexachlorobutadiene	33	130	130	12	12	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	93	70-130	5/2/14 1316	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1315
Date Received: 4/30/14

Sample Name: BLDG 3-2
Lab Code: R1403115-004

Analytical Method: TO-15

Date Analyzed: 5/2/14 1402
Canister Dilution Factor: 1.34

Initial Pressure (psig): -1.03 Final Pressure (psig): 3.56

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	10	8.0	8.0	3.1	3.1	U
74-83-9	Bromomethane	10	58	58	15	15	U
67-64-1	**Acetone**	10	**2000**	670	**850**	280	D
75-35-4	1,1-Dichloroethene	10	59	59	15	15	U
75-09-2	Methylene Chloride	10	51	51	15	15	U
156-60-5	trans-1,2-Dichloroethene	10	59	59	15	15	U
75-34-3	1,1-Dichloroethane	10	60	60	15	15	U
1634-04-4	Methyl tert-Butyl Ether	10	110	110	29	29	U
78-93-3	2-Butanone (MEK)	10	87	87	30	30	U
156-59-2	cis-1,2-Dichloroethene	10	59	59	15	15	U
67-66-3	Chloroform	10	72	72	15	15	U
107-06-2	1,2-Dichloroethane	10	60	60	15	15	U
71-55-6	1,1,1-Trichloroethane (TCA)	10	80	80	15	15	U
71-43-2	Benzene	10	47	47	15	15	U
56-23-5	Carbon Tetrachloride	10	9.4	9.4	1.5	1.5	U
78-87-5	1,2-Dichloropropane	10	68	68	15	15	U
75-27-4	Bromodichloromethane	10	20	20	3.0	3.0	U
79-01-6	Trichloroethene (TCE)	10	8.0	8.0	1.5	1.5	U
123-91-1	1,4-Dioxane	10	670	670	190	190	U
10061-01-5	cis-1,3-Dichloropropene	10	130	130	30	30	U
108-10-1	4-Methyl-2-pentanone (MIBK)	10	120	120	29	29	U
10061-02-6	trans-1,3-Dichloropropene	10	67	67	15	15	U
79-00-5	1,1,2-Trichloroethane	10	80	80	15	15	U
108-88-3	Toluene	10	55	55	15	15	U
591-78-6	2-Hexanone	10	60	60	15	15	U
124-48-1	Dibromochloromethane	10	25	25	3.0	3.0	U
106-93-4	1,2-Dibromoethane (EDB)	10	23	23	3.0	3.0	U
127-18-4	Tetrachloroethene (PCE)	10	11	11	1.6	1.6	U
108-90-7	Chlorobenzene	10	68	68	15	15	U
100-41-4	Ethylbenzene	10	130	130	29	29	U
179601-23-1	m,p-Xylenes	10	260	260	59	59	U
75-25-2	Bromoform	10	150	150	15	15	U
100-42-5	Styrene	10	130	130	30	30	U
95-47-6	o-Xylene	10	130	130	29	29	U
79-34-5	1,1,2,2-Tetrachloroethane	10	20	20	2.9	2.9	U
541-73-1	1,3-Dichlorobenzene	10	180	180	29	29	U
106-46-7	1,4-Dichlorobenzene	10	180	180	29	29	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1403115
Project:	Varian Beverly Air Samples/150148-01000000	**Date Collected:**	4/29/14 1315
Sample Matrix:	Air	**Date Received:**	4/30/14
Sample Name:	BLDG 3-2		
Lab Code:	R1403115-004		

Analytical Method: TO-15

Date Analyzed: 5/2/14 1402
Canister Dilution Factor: 1.34

Initial Pressure (psig): -1.03 Final Pressure (psig): 3.56

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	10	180	180	29	29	U
91-20-3	Naphthalene	10	270	270	51	51	U
87-68-3	Hexachlorobutadiene	10	400	400	38	38	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	93	70-130	5/2/14 1402	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1315
Date Received: 4/30/14

Sample Name: BLDG 3-2
Lab Code: R1403115-004
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 5/3/14 0321
Canister Dilution Factor: 1.34

Initial Pressure (psig): -1.03 Final Pressure (psig): 3.56

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	350	0.23	0.23	0.090	0.090	U
74-83-9	Bromomethane	350	1.6	1.6	0.42	0.42	U
67-64-1	**Acetone**	350	**1900**	19	**790**	8.1	E
75-35-4	1,1-Dichloroethene	350	1.7	1.7	0.43	0.43	U
75-09-2	Methylene Chloride	350	1.5	1.5	0.42	0.42	U
156-60-5	trans-1,2-Dichloroethene	350	1.7	1.7	0.43	0.43	U
75-34-3	1,1-Dichloroethane	350	1.7	1.7	0.43	0.43	U
1634-04-4	Methyl tert-Butyl Ether	350	3.0	3.0	0.84	0.84	U
78-93-3	**2-Butanone (MEK)**	350	**19**	2.5	**6.3**	0.84	
156-59-2	cis-1,2-Dichloroethene	350	1.7	1.7	0.43	0.43	U
67-66-3	Chloroform	350	2.1	2.1	0.42	0.42	U
107-06-2	1,2-Dichloroethane	350	1.7	1.7	0.43	0.43	U
71-55-6	1,1,1-Trichloroethane (TCA)	350	2.3	2.3	0.42	0.42	U
71-43-2	Benzene	350	1.3	1.3	0.42	0.42	U
56-23-5	**Carbon Tetrachloride**	350	**0.46**	0.27	**0.073**	0.043	
78-87-5	1,2-Dichloropropane	350	2.0	2.0	0.42	0.42	U
75-27-4	Bromodichloromethane	350	0.57	0.57	0.086	0.086	U
79-01-6	**Trichloroethene (TCE)**	350	**0.37**	0.23	**0.069**	0.043	
123-91-1	1,4-Dioxane	350	19	19	5.3	5.3	U
10061-01-5	cis-1,3-Dichloropropene	350	3.8	3.8	0.84	0.84	U
108-10-1	4-Methyl-2-pentanone (MIBK)	350	3.4	3.4	0.84	0.84	U
10061-02-6	trans-1,3-Dichloropropene	350	1.9	1.9	0.42	0.42	U
79-00-5	1,1,2-Trichloroethane	350	2.3	2.3	0.42	0.42	U
108-88-3	**Toluene**	350	**13**	1.6	**3.5**	0.42	
591-78-6	2-Hexanone	350	1.7	1.7	0.42	0.42	U
124-48-1	Dibromochloromethane	350	0.73	0.73	0.085	0.085	U
106-93-4	1,2-Dibromoethane (EDB)	350	0.65	0.65	0.085	0.085	U
127-18-4	**Tetrachloroethene (PCE)**	350	**1.9**	0.31	**0.29**	0.045	
108-90-7	Chlorobenzene	350	2.0	2.0	0.42	0.42	U
100-41-4	Ethylbenzene	350	3.6	3.6	0.84	0.84	U
179601-23-1	m,p-Xylenes	350	7.3	7.3	1.7	1.7	U
75-25-2	Bromoform	350	4.4	4.4	0.42	0.42	U
100-42-5	Styrene	350	3.6	3.6	0.85	0.85	U
95-47-6	o-Xylene	350	3.6	3.6	0.84	0.84	U
79-34-5	1,1,2,2-Tetrachloroethane	350	0.57	0.57	0.084	0.084	U
541-73-1	1,3-Dichlorobenzene	350	5.1	5.1	0.84	0.84	U
106-46-7	1,4-Dichlorobenzene	350	5.1	5.1	0.84	0.84	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1315
Date Received: 4/30/14

Sample Name: BLDG 3-2
Lab Code: R1403115-004
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 5/3/14 0321
Canister Dilution Factor: 1.34

Initial Pressure (psig): -1.03 Final Pressure (psig): 3.56

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	350	5.1	5.1	0.84	0.84	U
91-20-3	Naphthalene	350	7.7	7.7	1.5	1.5	U
87-68-3	Hexachlorobutadiene	350	11	11	1.1	1.1	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	97	70-130	5/3/14 0321	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1317
Date Received: 4/30/14

Sample Name: BLDG 2-6
Lab Code: R1403115-005

Analytical Method: TO-15

Date Analyzed: 5/1/14 1701
Canister Dilution Factor: 1.38

Initial Pressure (psig): -1.42 Final Pressure (psig): 3.64

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	800	0.10	0.10	0.041	0.041	U
74-83-9	Bromomethane	800	0.74	0.74	0.19	0.19	U
67-64-1	**Acetone**	800	**82**	8.6	**34**	3.6	E
75-35-4	1,1-Dichloroethene	800	0.76	0.76	0.19	0.19	U
75-09-2	Methylene Chloride	800	0.66	0.66	0.19	0.19	U
156-60-5	trans-1,2-Dichloroethene	800	0.76	0.76	0.19	0.19	U
75-34-3	1,1-Dichloroethane	800	0.78	0.78	0.19	0.19	U
1634-04-4	Methyl tert-Butyl Ether	800	1.4	1.4	0.38	0.38	U
78-93-3	**2-Butanone (MEK)**	800	**14**	1.1	**4.8**	0.38	
156-59-2	cis-1,2-Dichloroethene	800	0.76	0.76	0.19	0.19	U
67-66-3	Chloroform	800	0.93	0.93	0.19	0.19	U
107-06-2	1,2-Dichloroethane	800	0.78	0.78	0.19	0.19	U
71-55-6	1,1,1-Trichloroethane (TCA)	800	1.0	1.0	0.19	0.19	U
71-43-2	Benzene	800	0.60	0.60	0.19	0.19	U
56-23-5	**Carbon Tetrachloride**	800	**0.49**	0.12	**0.077**	0.019	
78-87-5	1,2-Dichloropropane	800	0.88	0.88	0.19	0.19	U
75-27-4	Bromodichloromethane	800	0.26	0.26	0.039	0.039	U
79-01-6	**Trichloroethene (TCE)**	800	**0.55**	0.10	**0.10**	0.019	
123-91-1	1,4-Dioxane	800	8.6	8.6	2.4	2.4	U
10061-01-5	cis-1,3-Dichloropropene	800	1.7	1.7	0.38	0.38	U
108-10-1	**4-Methyl-2-pentanone (MIBK)**	800	**4.1**	1.6	**1.0**	0.38	
10061-02-6	trans-1,3-Dichloropropene	800	0.86	0.86	0.19	0.19	U
79-00-5	1,1,2-Trichloroethane	800	1.0	1.0	0.19	0.19	U
108-88-3	**Toluene**	800	**1.3**	0.71	**0.34**	0.19	
591-78-6	2-Hexanone	800	0.78	0.78	0.19	0.19	U
124-48-1	Dibromochloromethane	800	0.33	0.33	0.038	0.038	U
106-93-4	1,2-Dibromoethane (EDB)	800	0.29	0.29	0.038	0.038	U
127-18-4	**Tetrachloroethene (PCE)**	800	**3.2**	0.14	**0.47**	0.020	
108-90-7	Chlorobenzene	800	0.88	0.88	0.19	0.19	U
100-41-4	Ethylbenzene	800	1.6	1.6	0.38	0.38	U
179601-23-1	m,p-Xylenes	800	3.3	3.3	0.76	0.76	U
75-25-2	Bromoform	800	2.0	2.0	0.19	0.19	U
100-42-5	Styrene	800	1.6	1.6	0.38	0.38	U
95-47-6	o-Xylene	800	1.6	1.6	0.38	0.38	U
79-34-5	1,1,2,2-Tetrachloroethane	800	0.26	0.26	0.038	0.038	U
541-73-1	1,3-Dichlorobenzene	800	2.3	2.3	0.38	0.38	U
106-46-7	1,4-Dichlorobenzene	800	2.3	2.3	0.38	0.38	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1317
Date Received: 4/30/14

Sample Name: BLDG 2-6
Lab Code: R1403115-005

Analytical Method: TO-15

Date Analyzed: 5/1/14 1701
Canister Dilution Factor: 1.38

Initial Pressure (psig): -1.42 Final Pressure (psig): 3.64

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	800	2.3	2.3	0.38	0.38	U
91-20-3	Naphthalene	800	3.5	3.5	0.66	0.66	U
87-68-3	Hexachlorobutadiene	800	5.2	5.2	0.49	0.49	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	70-130	5/1/14 1701	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1317
Date Received: 4/30/14

Sample Name: BLDG 2-6
Lab Code: R1403115-005
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 5/1/14 1746
Canister Dilution Factor: 1.38

Initial Pressure (psig): -1.42 Final Pressure (psig): 3.64

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	275	0.30	0.30	0.12	0.12	U
74-83-9	Bromomethane	275	2.2	2.2	0.56	0.56	U
67-64-1	**Acetone**	275	**75**	25	**32**	11	D
75-35-4	1,1-Dichloroethene	275	2.2	2.2	0.56	0.56	U
75-09-2	Methylene Chloride	275	1.9	1.9	0.55	0.55	U
156-60-5	trans-1,2-Dichloroethene	275	2.2	2.2	0.56	0.56	U
75-34-3	1,1-Dichloroethane	275	2.3	2.3	0.56	0.56	U
1634-04-4	Methyl tert-Butyl Ether	275	4.0	4.0	1.1	1.1	U
78-93-3	**2-Butanone (MEK)**	275	**13**	3.3	**4.4**	1.1	D
156-59-2	cis-1,2-Dichloroethene	275	2.2	2.2	0.56	0.56	U
67-66-3	Chloroform	275	2.7	2.7	0.56	0.56	U
107-06-2	1,2-Dichloroethane	275	2.3	2.3	0.56	0.56	U
71-55-6	1,1,1-Trichloroethane (TCA)	275	3.0	3.0	0.55	0.55	U
71-43-2	Benzene	275	1.8	1.8	0.55	0.55	U
56-23-5	**Carbon Tetrachloride**	275	**0.45**	0.35	**0.072**	0.056	D
78-87-5	1,2-Dichloropropane	275	2.6	2.6	0.55	0.55	U
75-27-4	Bromodichloromethane	275	0.75	0.75	0.11	0.11	U
79-01-6	**Trichloroethene (TCE)**	275	**0.52**	0.30	**0.096**	0.056	D
123-91-1	1,4-Dioxane	275	25	25	7.0	7.0	U
10061-01-5	cis-1,3-Dichloropropene	275	5.0	5.0	1.1	1.1	U
108-10-1	4-Methyl-2-pentanone (MIBK)	275	4.5	4.5	1.1	1.1	U
10061-02-6	trans-1,3-Dichloropropene	275	2.5	2.5	0.55	0.55	U
79-00-5	1,1,2-Trichloroethane	275	3.0	3.0	0.55	0.55	U
108-88-3	Toluene	275	2.1	2.1	0.55	0.55	U
591-78-6	2-Hexanone	275	2.3	2.3	0.55	0.55	U
124-48-1	Dibromochloromethane	275	0.95	0.95	0.11	0.11	U
106-93-4	1,2-Dibromoethane (EDB)	275	0.85	0.85	0.11	0.11	U
127-18-4	**Tetrachloroethene (PCE)**	275	**3.1**	0.40	**0.45**	0.059	D
108-90-7	Chlorobenzene	275	2.6	2.6	0.56	0.56	U
100-41-4	Ethylbenzene	275	4.8	4.8	1.1	1.1	U
179601-23-1	m,p-Xylenes	275	9.6	9.6	2.2	2.2	U
75-25-2	Bromoform	275	5.7	5.7	0.55	0.55	U
100-42-5	Styrene	275	4.7	4.7	1.1	1.1	U
95-47-6	o-Xylene	275	4.8	4.8	1.1	1.1	U
79-34-5	1,1,2,2-Tetrachloroethane	275	0.75	0.75	0.11	0.11	U
541-73-1	1,3-Dichlorobenzene	275	6.6	6.6	1.1	1.1	U
106-46-7	1,4-Dichlorobenzene	275	6.6	6.6	1.1	1.1	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1317
Date Received: 4/30/14

Sample Name: BLDG 2-6
Lab Code: R1403115-005
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 5/1/14 1746
Canister Dilution Factor: 1.38

Initial Pressure (psig): -1.42 Final Pressure (psig): 3.64

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	275	6.6	6.6	1.1	1.1	U
91-20-3	Naphthalene	275	10	10	1.9	1.9	U
87-68-3	Hexachlorobutadiene	275	15	15	1.4	1.4	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	97	70-130	5/1/14 1746	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1320
Date Received: 4/30/14

Sample Name: BLDG 3-4
Lab Code: R1403115-006

Analytical Method: TO-15

Date Analyzed: 5/2/14 1449
Canister Dilution Factor: 1.41

Initial Pressure (psig): -1.77 Final Pressure (psig): 3.52

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	7.7	11	11	4.3	4.3	U
74-83-9	Bromomethane	7.7	79	79	20	20	U
67-64-1	**Acetone**	7.7	**2300**	920	**950**	390	D
75-35-4	1,1-Dichloroethene	7.7	81	81	20	20	U
75-09-2	Methylene Chloride	7.7	70	70	20	20	U
156-60-5	trans-1,2-Dichloroethene	7.7	81	81	20	20	U
75-34-3	1,1-Dichloroethane	7.7	82	82	20	20	U
1634-04-4	Methyl tert-Butyl Ether	7.7	140	140	40	40	U
78-93-3	2-Butanone (MEK)	7.7	120	120	40	40	U
156-59-2	cis-1,2-Dichloroethene	7.7	81	81	20	20	U
67-66-3	Chloroform	7.7	99	99	20	20	U
107-06-2	1,2-Dichloroethane	7.7	82	82	20	20	U
71-55-6	1,1,1-Trichloroethane (TCA)	7.7	110	110	20	20	U
71-43-2	Benzene	7.7	64	64	20	20	U
56-23-5	Carbon Tetrachloride	7.7	13	13	2.0	2.0	U
78-87-5	1,2-Dichloropropane	7.7	93	93	20	20	U
75-27-4	Bromodichloromethane	7.7	27	27	4.1	4.1	U
79-01-6	Trichloroethene (TCE)	7.7	11	11	2.0	2.0	U
123-91-1	1,4-Dioxane	7.7	920	920	250	250	U
10061-01-5	cis-1,3-Dichloropropene	7.7	180	180	40	40	U
108-10-1	4-Methyl-2-pentanone (MIBK)	7.7	160	160	40	40	U
10061-02-6	trans-1,3-Dichloropropene	7.7	92	92	20	20	U
79-00-5	1,1,2-Trichloroethane	7.7	110	110	20	20	U
108-88-3	Toluene	7.7	75	75	20	20	U
591-78-6	2-Hexanone	7.7	82	82	20	20	U
124-48-1	Dibromochloromethane	7.7	35	35	4.1	4.1	U
106-93-4	1,2-Dibromoethane (EDB)	7.7	31	31	4.1	4.1	U
127-18-4	Tetrachloroethene (PCE)	7.7	15	15	2.2	2.2	U
108-90-7	Chlorobenzene	7.7	93	93	20	20	U
100-41-4	Ethylbenzene	7.7	170	170	40	40	U
179601-23-1	m,p-Xylenes	7.7	350	350	81	81	U
75-25-2	Bromoform	7.7	210	210	20	20	U
100-42-5	Styrene	7.7	170	170	40	40	U
95-47-6	o-Xylene	7.7	170	170	40	40	U
79-34-5	1,1,2,2-Tetrachloroethane	7.7	27	27	4.0	4.0	U
541-73-1	1,3-Dichlorobenzene	7.7	240	240	40	40	U
106-46-7	1,4-Dichlorobenzene	7.7	240	240	40	40	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1320
Date Received: 4/30/14

Sample Name: BLDG 3-4
Lab Code: R1403115-006

Analytical Method: TO-15

Date Analyzed: 5/2/14 1449
Canister Dilution Factor: 1.41

Initial Pressure (psig): -1.77 Final Pressure (psig): 3.52

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	7.7	240	240	40	40	U
91-20-3	Naphthalene	7.7	370	370	70	70	U
87-68-3	Hexachlorobutadiene	7.7	550	550	52	52	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	94	70-130	5/2/14 1449	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1320
Date Received: 4/30/14

Sample Name: BLDG 3-4
Lab Code: R1403115-006
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 5/3/14 0405
Canister Dilution Factor: 1.41

Initial Pressure (psig): -1.77 Final Pressure (psig): 3.52

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	275	0.31	0.31	0.12	0.12	U
74-83-9	Bromomethane	275	2.2	2.2	0.57	0.57	U
67-64-1	**Acetone**	275	**2000**	26	**850**	11	E
75-35-4	1,1-Dichloroethene	275	2.3	2.3	0.57	0.57	U
75-09-2	Methylene Chloride	275	1.9	1.9	0.56	0.56	U
156-60-5	trans-1,2-Dichloroethene	275	2.3	2.3	0.57	0.57	U
75-34-3	1,1-Dichloroethane	275	2.3	2.3	0.57	0.57	U
1634-04-4	Methyl tert-Butyl Ether	275	4.1	4.1	1.1	1.1	U
78-93-3	**2-Butanone (MEK)**	275	**11**	3.3	**3.7**	1.1	
156-59-2	cis-1,2-Dichloroethene	275	2.3	2.3	0.57	0.57	U
67-66-3	Chloroform	275	2.8	2.8	0.57	0.57	U
107-06-2	1,2-Dichloroethane	275	2.3	2.3	0.57	0.57	U
71-55-6	1,1,1-Trichloroethane (TCA)	275	3.1	3.1	0.56	0.56	U
71-43-2	Benzene	275	1.8	1.8	0.56	0.56	U
56-23-5	**Carbon Tetrachloride**	275	**0.43**	0.36	**0.068**	0.057	
78-87-5	1,2-Dichloropropane	275	2.6	2.6	0.57	0.57	U
75-27-4	Bromodichloromethane	275	0.77	0.77	0.11	0.11	U
79-01-6	Trichloroethene (TCE)	275	0.31	0.31	0.057	0.057	U
123-91-1	1,4-Dioxane	275	26	26	7.1	7.1	U
10061-01-5	cis-1,3-Dichloropropene	275	5.1	5.1	1.1	1.1	U
108-10-1	4-Methyl-2-pentanone (MIBK)	275	4.6	4.6	1.1	1.1	U
10061-02-6	trans-1,3-Dichloropropene	275	2.6	2.6	0.56	0.56	U
79-00-5	1,1,2-Trichloroethane	275	3.1	3.1	0.56	0.56	U
108-88-3	**Toluene**	275	**14**	2.1	**3.7**	0.56	
591-78-6	2-Hexanone	275	2.3	2.3	0.56	0.56	U
124-48-1	Dibromochloromethane	275	0.97	0.97	0.11	0.11	U
106-93-4	1,2-Dibromoethane (EDB)	275	0.87	0.87	0.11	0.11	U
127-18-4	**Tetrachloroethene (PCE)**	275	**5.7**	0.41	**0.84**	0.061	
108-90-7	Chlorobenzene	275	2.6	2.6	0.57	0.57	U
100-41-4	Ethylbenzene	275	4.9	4.9	1.1	1.1	U
179601-23-1	m,p-Xylenes	275	9.8	9.8	2.3	2.3	U
75-25-2	Bromoform	275	5.8	5.8	0.57	0.57	U
100-42-5	Styrene	275	4.8	4.8	1.1	1.1	U
95-47-6	o-Xylene	275	4.9	4.9	1.1	1.1	U
79-34-5	1,1,2,2-Tetrachloroethane	275	0.77	0.77	0.11	0.11	U
541-73-1	1,3-Dichlorobenzene	275	6.8	6.8	1.1	1.1	U
106-46-7	1,4-Dichlorobenzene	275	6.8	6.8	1.1	1.1	U

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Analytical Report

Client:	CB&I	**Service Request:**	R1403115
Project:	Varian Beverly Air Samples/150148-01000000	**Date Collected:**	4/29/14 1320
Sample Matrix:	Air	**Date Received:**	4/30/14
Sample Name:	BLDG 3-4		
Lab Code:	R1403115-006		
Run Type:	Dilution		
Analytical Method:	TO-15	**Date Analyzed:**	5/3/14 0405
		Canister Dilution Factor:	1.41

Initial Pressure (psig): -1.77 Final Pressure (psig): 3.52

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	275	6.8	6.8	1.1	1.1	U
91-20-3	Naphthalene	275	10	10	2.0	2.0	U
87-68-3	Hexachlorobutadiene	275	15	15	1.4	1.4	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	98	70-130	5/3/14 0405	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1316
Date Received: 4/30/14

Sample Name: BLDG 3-3
Lab Code: R1403115-007

Analytical Method: TO-15

Date Analyzed: 5/2/14 1535
Canister Dilution Factor: 1.42

Initial Pressure (psig): -1.82 Final Pressure (psig): 3.53

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	16	5.3	5.3	2.1	2.1	U
74-83-9	Bromomethane	16	38	38	9.8	9.8	U
67-64-1	**Acetone**	16	**880**	440	**370**	190	D
75-35-4	1,1-Dichloroethene	16	39	39	9.9	9.9	U
75-09-2	Methylene Chloride	16	34	34	9.7	9.7	U
156-60-5	trans-1,2-Dichloroethene	16	39	39	9.9	9.9	U
75-34-3	1,1-Dichloroethane	16	40	40	9.9	9.9	U
1634-04-4	Methyl tert-Butyl Ether	16	70	70	19	19	U
78-93-3	2-Butanone (MEK)	16	58	58	20	20	U
156-59-2	cis-1,2-Dichloroethene	16	39	39	9.9	9.9	U
67-66-3	Chloroform	16	48	48	9.8	9.8	U
107-06-2	1,2-Dichloroethane	16	40	40	9.9	9.9	U
71-55-6	1,1,1-Trichloroethane (TCA)	16	53	53	9.8	9.8	U
71-43-2	Benzene	16	31	31	9.7	9.7	U
56-23-5	Carbon Tetrachloride	16	6.2	6.2	0.99	0.99	U
78-87-5	1,2-Dichloropropane	16	45	45	9.8	9.8	U
75-27-4	Bromodichloromethane	16	13	13	2.0	2.0	U
79-01-6	Trichloroethene (TCE)	16	5.3	5.3	0.99	0.99	U
123-91-1	1,4-Dioxane	16	440	440	120	120	U
10061-01-5	cis-1,3-Dichloropropene	16	89	89	20	20	U
108-10-1	4-Methyl-2-pentanone (MIBK)	16	80	80	19	19	U
10061-02-6	trans-1,3-Dichloropropene	16	44	44	9.8	9.8	U
79-00-5	1,1,2-Trichloroethane	16	53	53	9.8	9.8	U
108-88-3	Toluene	16	36	36	9.7	9.7	U
591-78-6	2-Hexanone	16	40	40	9.8	9.8	U
124-48-1	Dibromochloromethane	16	17	17	2.0	2.0	U
106-93-4	1,2-Dibromoethane (EDB)	16	15	15	2.0	2.0	U
127-18-4	**Tetrachloroethene (PCE)**	16	**96**	7.1	**14**	1.0	D
108-90-7	Chlorobenzene	16	45	45	9.8	9.8	U
100-41-4	Ethylbenzene	16	84	84	19	19	U
179601-23-1	m,p-Xylenes	16	170	170	39	39	U
75-25-2	Bromoform	16	100	100	9.8	9.8	U
100-42-5	Styrene	16	83	83	20	20	U
95-47-6	o-Xylene	16	84	84	19	19	U
79-34-5	1,1,2,2-Tetrachloroethane	16	13	13	1.9	1.9	U
541-73-1	1,3-Dichlorobenzene	16	120	120	19	19	U
106-46-7	1,4-Dichlorobenzene	16	120	120	19	19	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1316
Date Received: 4/30/14

Sample Name: BLDG 3-3
Lab Code: R1403115-007

Analytical Method: TO-15

Date Analyzed: 5/2/14 1535
Canister Dilution Factor: 1.42

Initial Pressure (psig): -1.82 Final Pressure (psig): 3.53

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	16	120	120	19	19	U
91-20-3	Naphthalene	16	180	180	34	34	U
87-68-3	Hexachlorobutadiene	16	270	270	25	25	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	92	70-130	5/2/14 1535	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1316
Date Received: 4/30/14

Sample Name: BLDG 3-3
Lab Code: R1403115-007
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 5/3/14 0450
Canister Dilution Factor: 1.42

Initial Pressure (psig): -1.82 Final Pressure (psig): 3.53

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	325	0.26	0.26	0.10	0.10	U
74-83-9	Bromomethane	325	1.9	1.9	0.48	0.48	U
67-64-1	**Acetone**	325	**790**	22	**330**	9.2	E
75-35-4	1,1-Dichloroethene	325	1.9	1.9	0.49	0.49	U
75-09-2	Methylene Chloride	325	1.7	1.7	0.48	0.48	U
156-60-5	trans-1,2-Dichloroethene	325	1.9	1.9	0.49	0.49	U
75-34-3	1,1-Dichloroethane	325	2.0	2.0	0.49	0.49	U
1634-04-4	Methyl tert-Butyl Ether	325	3.5	3.5	0.96	0.96	U
78-93-3	**2-Butanone (MEK)**	325	**5.1**	2.8	**1.7**	0.96	
156-59-2	cis-1,2-Dichloroethene	325	1.9	1.9	0.49	0.49	U
67-66-3	Chloroform	325	2.4	2.4	0.48	0.48	U
107-06-2	1,2-Dichloroethane	325	2.0	2.0	0.49	0.49	U
71-55-6	1,1,1-Trichloroethane (TCA)	325	2.6	2.6	0.48	0.48	U
71-43-2	Benzene	325	1.5	1.5	0.48	0.48	U
56-23-5	**Carbon Tetrachloride**	325	**0.45**	0.31	**0.071**	0.049	
78-87-5	1,2-Dichloropropane	325	2.2	2.2	0.48	0.48	U
75-27-4	Bromodichloromethane	325	0.66	0.66	0.098	0.098	U
79-01-6	**Trichloroethene (TCE)**	325	**1.7**	0.26	**0.32**	0.049	
123-91-1	1,4-Dioxane	325	22	22	6.1	6.1	U
10061-01-5	cis-1,3-Dichloropropene	325	4.4	4.4	0.96	0.96	U
108-10-1	4-Methyl-2-pentanone (MIBK)	325	3.9	3.9	0.96	0.96	U
10061-02-6	trans-1,3-Dichloropropene	325	2.2	2.2	0.48	0.48	U
79-00-5	1,1,2-Trichloroethane	325	2.6	2.6	0.48	0.48	U
108-88-3	**Toluene**	325	**5.4**	1.8	**1.4**	0.48	
591-78-6	2-Hexanone	325	2.0	2.0	0.48	0.48	U
124-48-1	Dibromochloromethane	325	0.83	0.83	0.097	0.097	U
106-93-4	1,2-Dibromoethane (EDB)	325	0.74	0.74	0.097	0.097	U
127-18-4	**Tetrachloroethene (PCE)**	325	**99**	0.35	**15**	0.052	
108-90-7	Chlorobenzene	325	2.2	2.2	0.48	0.48	U
100-41-4	Ethylbenzene	325	4.2	4.2	0.96	0.96	U
179601-23-1	m,p-Xylenes	325	8.3	8.3	1.9	1.9	U
75-25-2	Bromoform	325	5.0	5.0	0.48	0.48	U
100-42-5	Styrene	325	4.1	4.1	0.97	0.97	U
95-47-6	o-Xylene	325	4.2	4.2	0.96	0.96	U
79-34-5	1,1,2,2-Tetrachloroethane	325	0.66	0.66	0.095	0.095	U
541-73-1	1,3-Dichlorobenzene	325	5.8	5.8	0.96	0.96	U
106-46-7	1,4-Dichlorobenzene	325	5.8	5.8	0.96	0.96	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: 4/29/14 1316
Date Received: 4/30/14

Sample Name: BLDG 3-3
Lab Code: R1403115-007
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 5/3/14 0450
Canister Dilution Factor: 1.42

Initial Pressure (psig): -1.82 Final Pressure (psig): 3.53

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	325	5.8	5.8	0.96	0.96	U
91-20-3	Naphthalene	325	8.7	8.7	1.7	1.7	U
87-68-3	Hexachlorobutadiene	325	13	13	1.2	1.2	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	97	70-130	5/3/14 0450	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1404525-01

Analytical Method: TO-15

Date Analyzed: 5/1/14 1025

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
67-64-1	Acetone	1000	5.0	5.0	2.1	2.1	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.22	0.22	U
78-93-3	2-Butanone (MEK)	1000	0.65	0.65	0.22	0.22	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
71-43-2	Benzene	1000	0.35	0.35	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
123-91-1	1,4-Dioxane	1000	5.0	5.0	1.4	1.4	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1000	0.90	0.90	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
108-88-3	Toluene	1000	0.41	0.41	0.11	0.11	U
591-78-6	2-Hexanone	1000	0.45	0.45	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
106-93-4	1,2-Dibromoethane (EDB)	1000	0.17	0.17	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
100-42-5	Styrene	1000	0.94	0.94	0.22	0.22	U
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U
541-73-1	1,3-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
106-46-7	1,4-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1404525-01

Analytical Method: TO-15

Date Analyzed: 5/1/14 1025

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
91-20-3	Naphthalene	1000	2.0	2.0	0.38	0.38	U
87-68-3	Hexachlorobutadiene	1000	3.0	3.0	0.28	0.28	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	70-130	5/1/14 1025	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1404596-01

Analytical Method: TO-15

Date Analyzed: 5/2/14 1057

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
67-64-1	Acetone	1000	5.0	5.0	2.1	2.1	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.22	0.22	U
78-93-3	2-Butanone (MEK)	1000	0.65	0.65	0.22	0.22	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
71-43-2	Benzene	1000	0.35	0.35	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
123-91-1	1,4-Dioxane	1000	5.0	5.0	1.4	1.4	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1000	0.90	0.90	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
108-88-3	Toluene	1000	0.41	0.41	0.11	0.11	U
591-78-6	2-Hexanone	1000	0.45	0.45	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
106-93-4	1,2-Dibromoethane (EDB)	1000	0.17	0.17	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
100-42-5	Styrene	1000	0.94	0.94	0.22	0.22	U
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U
541-73-1	1,3-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
106-46-7	1,4-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1403115
Project:	Varian Beverly Air Samples/150148-01000000	**Date Collected:**	NA
Sample Matrix:	Air	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	RQ1404596-01		

Analytical Method: TO-15 **Date Analyzed:** 5/2/14 1057

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
91-20-3	Naphthalene	1000	2.0	2.0	0.38	0.38	U
87-68-3	Hexachlorobutadiene	1000	3.0	3.0	0.28	0.28	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	94	70-130	5/2/14 1057	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Analyzed: 5/ 1/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 390832

Analyte Name	Lab Control Sample RQ1404525-02 Result	Spike Amount	% Rec	% Rec Limits
Vinyl Chloride	5.76	6.58	88	70 - 130
Bromomethane	8.47	9.80	86	70 - 130
Acetone	5.91	6.47	91	50 - 150
1,1-Dichloroethene	9.65	10.3	94	70 - 130
Methylene Chloride	9.59	8.94	107	70 - 130
trans-1,2-Dichloroethene	10.4	10.4	100	70 - 130
1,1-Dichloroethane	10.7	10.4	103	70 - 130
Methyl tert-Butyl Ether	9.27	9.55	97	70 - 130
2-Butanone (MEK)	8.08	7.81	103	70 - 130
cis-1,2-Dichloroethene	10.6	10.4	102	70 - 130
Chloroform	12.7	13.2	96	70 - 130
1,2-Dichloroethane	9.93	10.6	94	70 - 130
1,1,1-Trichloroethane (TCA)	13.2	14.3	92	70 - 130
Benzene	8.68	8.38	104	70 - 130
Carbon Tetrachloride	15.1	16.0	94	70 - 130
1,2-Dichloropropane	12.3	12.1	101	70 - 130
Bromodichloromethane	17.5	17.4	101	70 - 130
Trichloroethene (TCE)	13.8	14.0	99	70 - 130
1,4-Dioxane	11.2	9.37	120	50 - 150
cis-1,3-Dichloropropene	12.5	12.5	100	70 - 130
4-Methyl-2-pentanone (MIBK)	9.45	10.5	90	70 - 130
trans-1,3-Dichloropropene	10.7	10.9	99	70 - 130
1,1,2-Trichloroethane	14.4	14.5	99	70 - 130
Toluene	10.1	9.98	101	70 - 130
2-Hexanone	10.0	11.1	91	70 - 130
Dibromochloromethane	22.3	23.4	95	70 - 130
1,2-Dibromoethane (EDB)	19.2	20.0	96	70 - 130
Tetrachloroethene (PCE)	17.7	18.0	98	70 - 130
Chlorobenzene	12.7	12.3	103	70 - 130
Ethylbenzene	11.8	11.5	102	70 - 130
m,p-Xylenes	22.1	22.4	99	70 - 130
Bromoform	26.8	26.6	101	70 - 130
Styrene	10.8	11.1	97	70 - 130
o-Xylene	11.2	11.7	96	70 - 130
1,1,2,2-Tetrachloroethane	17.5	18.5	95	70 - 130
1,3-Dichlorobenzene	14.0	14.7	95	70 - 130
1,4-Dichlorobenzene	13.7	14.9	92	70 - 130
1,2-Dichlorobenzene	13.6	14.6	93	70 - 130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Analyzed: 5/ 1/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 390832

Analyte Name	Lab Control Sample RQ1404525-02 Result	Spike Amount	% Rec	% Rec Limits
Naphthalene	10.2	11.0	92	50 - 150
Hexachlorobutadiene	27.8	23.5	119	50 - 150

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Analyzed: 5/ 2/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 391042

Analyte Name	Lab Control Sample RQ1404596-02 Result	Spike Amount	% Rec	% Rec Limits
Vinyl Chloride	5.98	6.58	91	70 - 130
Bromomethane	8.64	9.80	88	70 - 130
Acetone	5.82	6.47	90	50 - 150
1,1-Dichloroethene	9.55	10.3	93	70 - 130
Methylene Chloride	9.30	8.94	104	70 - 130
trans-1,2-Dichloroethene	10.3	10.4	99	70 - 130
1,1-Dichloroethane	10.6	10.4	102	70 - 130
Methyl tert-Butyl Ether	9.12	9.55	96	70 - 130
2-Butanone (MEK)	8.23	7.81	105	70 - 130
cis-1,2-Dichloroethene	10.6	10.4	102	70 - 130
Chloroform	12.5	13.2	95	70 - 130
1,2-Dichloroethane	9.78	10.6	92	70 - 130
1,1,1-Trichloroethane (TCA)	12.8	14.3	89	70 - 130
Benzene	8.48	8.38	101	70 - 130
Carbon Tetrachloride	14.7	16.0	92	70 - 130
1,2-Dichloropropane	11.8	12.1	97	70 - 130
Bromodichloromethane	17.0	17.4	97	70 - 130
Trichloroethene (TCE)	13.6	14.0	97	70 - 130
1,4-Dioxane	11.5	9.37	122	50 - 150
cis-1,3-Dichloropropene	12.2	12.5	98	70 - 130
4-Methyl-2-pentanone (MIBK)	9.23	10.5	88	70 - 130
trans-1,3-Dichloropropene	10.3	10.9	95	70 - 130
1,1,2-Trichloroethane	13.7	14.5	95	70 - 130
Toluene	9.65	9.98	97	70 - 130
2-Hexanone	9.87	11.1	89	70 - 130
Dibromochloromethane	21.9	23.4	94	70 - 130
1,2-Dibromoethane (EDB)	18.6	20.0	93	70 - 130
Tetrachloroethene (PCE)	17.2	18.0	96	70 - 130
Chlorobenzene	12.5	12.3	102	70 - 130
Ethylbenzene	11.4	11.5	100	70 - 130
m,p-Xylenes	21.4	22.4	96	70 - 130
Bromoform	26.5	26.6	100	70 - 130
Styrene	10.4	11.1	94	70 - 130
o-Xylene	10.9	11.7	93	70 - 130
1,1,2,2-Tetrachloroethane	17.0	18.5	92	70 - 130
1,3-Dichlorobenzene	13.8	14.7	94	70 - 130
1,4-Dichlorobenzene	13.5	14.9	91	70 - 130
1,2-Dichlorobenzene	13.4	14.6	92	70 - 130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/150148-01000000
Sample Matrix: Air

Service Request: R1403115
Date Analyzed: 5/ 2/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 391042

Analyte Name	Lab Control Sample RQ1404596-02 Result	Spike Amount	% Rec	% Rec Limits
Naphthalene	13.2	11.0	120	50 - 150
Hexachlorobutadiene	32.9	23.5	140	50 - 150

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Columbia Analytical Services™

CHAIN OF CUSTODY - AIR

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 585.288.8475 (fax) | www.caslab.com

Requested Turnaround Time in Business Days from Receipt, please circle:
1 Day 2 Day 3 Day 4 Day 5 Day 10 Day-Standard

CAS Project #:

Company Name: CB&I Environmental, Inc.

Project Name: Varian Beverly

CAS Contact:

Address: 150 Royall Street

Project Number: 150148-01000000

City, State, Zip: Canton, MA 02021

P.O. #/Billing Information: 876613

Project Manager: Raymond Cadorette

Phone: 617-589-6102

Fax:

Email (for result reporting): Raymond.Cadorette@CBI.com

Sampler (Print & Sign): Paul LeDoux

Analysis Method and/or Analytes

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID	Flow Controller ID	TO-15 Site specific VOC List				**Comments** Specific Instructions
Bldg 3 - VP-1		4.29.14	1123	SLC00282	FC00852	1				
Bldg 3- VP-2			1124	SLC00221	FC00864	1				
Bldg 3- VP-3			1125	SLC00226	FC00863	1				
Bldg 3-2			1315	SLC00224	FC00855	1				
Bldg 2-6			1317	SLC00201	FC00845	1				
Bldg 3-4			1320	SLC00205	FC00860	1				
Bldg 3-3			~~1320~~ 1316	SLC00204	FC00853	1				

What State were samples collected in: MA

Report Tier Levels - please select:
Tier I (Results/Default, if not specified) ___ Tier III (CLP Forms Only) ___
Tier II (Results + QC) ___ Tier IV (Data Validation) ___

EDD required: YES / NO
Type: GISKey EDD Units: ug/m3 & ppmv

Project Requirements (MRLs, QAPP, etc.)
QA/QC: MADEP CAM
Complete 2nd run.

Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:
	4.29.14	1600	ACS	4/30/14	0850
Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:

R1403115 7 Y
CB&I Environmental & Infrastructure
Varian Beverly Air Samples

Cooler Receipt and Preservation Check Form

Project/Client CB&I Folder Number R14-3115

Cooler received on 4/30/14 by: JB **COURIER:** ALS (UPS) FEDEX VELOCITY CLIENT

1.	Were custody seals on outside of cooler?	YES	(NO)
2.	Were custody papers properly filled out (ink, signed, etc.)?	(YES)	NO
3.	Did all bottles arrive in good condition (unbroken)?	(YES)	NO
4.	Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles?	YES	NO (N/A)
5.	Were **Ice** or **Ice packs** present?	YES	(NO)
6.	Where did the bottles originate?	(ALS/ROC)	CLIENT

7.	Soil VOA samples received as:	Bulk Jar	Encore	TerraCore	Lab5035set	N/A
8.	Temperature of cooler(s) upon receipt:					
	Is the temperature within 0° - 6° C?:	Y N	Y N	Y N	Y N	Y N

If No, Explain Below Date/Time Temperatures Taken: ~~4/30/14~~ Air Canisters

Thermometer ID: IR GUN#3 / IR GUN#4 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition &Client Approval to Run Samples:

All Samples held in storage location SMO by JPS on 4/30 at 1000

5035 samples placed in storage location ____ by ____ on ____ at ____

PC Secondary Review: SMO 4/30/14

Cooler Breakdown: Date: 4/30/14 Time: 1940 by: DW

1.	Were all bottle labels complete (*i.e.* analysis, preservation, etc.)?	(YES)	NO
2.	Did all bottle labels and tags agree with custody papers?	(YES)	NO
3.	Were correct containers used for the tests indicated?	(YES)	NO

4. Air Samples: Cassettes / Tubes Intact (Canisters Pressurized) Tedlar® Bags Inflated N/A

Explain any discrepancies:

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*						

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: ____

Bottle lot numbers: ____

Other Comments:

PC Secondary Review: JMS 5/1/14 *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc
Job Number : 150148.05

Prepared By: Dale Dailey
Date : 6/2/2014

Matrix: Groundwater

Analyte Group : Volatile Organics
Analytical Method : SW-846 8260C

Completed MADEP CAM Certification Form included: Yes
Laboratory ID No. : R1403116

Chain of Custody included in Data Package ? Yes
Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
4/2, 4/29/14	SW-846 8260C	14 days	10 days	5/7/2014

Sample temperature within QC limits: Yes, 2.8 C

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? No

If no, list sample ID where range was exceeded: See Notes

Equipment Field Blank ID : NA
Trip Blank ID : TB-1

Method Blank: SW-846 8260C 5/7/2014

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:

Sample TB-1 has a collection date of 4/2/14 according to the COC, but is listed as 4/29/14 in the report.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. Sample CL2-BR (80) was re-analyzed at larger dilutions to bring the target analytes within the calibration range of the method. Both dilutions were reported with analytes over the range flagged with an "E" and the diluted analytes flagged with a "D".

All LCS and LCSD recoveries were within QC limits. All RPD's were acceptable except various RPD's were outside limits in batch 391269. All outlying QC has been flagged with an "*". The data was impacted for analyte Vinyl Chloride which was given a J qualifier in CL2-BR (80). No other data was impacted since the analytical results were non-detect for these analytes in these batches.

Reviewed By: Pernilla Haley, 6/5/14

May 09, 2014

Service Request No: R1403116

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly/150148-05000000

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on April 30, 2014. For your reference, these analyses have been assigned our service request number **R1403116**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Client Services Manager

CC: Pernilla Haley

ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623 PHONE 585-288-5380 | FAX 585-288-8475
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

CASE NARRATIVE

Client:	CB&I	**Service Request No.:**	R1403116
Project:	Varian Beverly	**Project Number:**	150148-05000000
Sample Matrix:	Water	**Date Received:**	04/30/14

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II, deliverables with Massachusetts CAM analyses reporting. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 04/29/14 and received at ALS in good condition at a cooler temperature of 2.8 °C as noted on the cooler receipt and preservation check form. The client was notified of the out of temperature cooler and the samples were analyzed. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the second page of the Case Narrative for a cross-reference between Client ID and ALS Job #.

Volatile Organics

Four water samples were analyzed for a site list of Volatile Organics by SW-846 Method 8260C.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. Sample CL2-BR (80) was re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All initial calibrations were compliant.

All the continuing calibration criteria were met for all analytes.

All Surrogate Standard recoveries were within QC limits.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were within QC limits. Various RPD's were outside limits and have been flagged with an "*". No data was affected.

All samples were analyzed within the required holding time of 14 days.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental | Project #: 150148

Project Location: Varian Beverly | RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1403116-001-004

Matrices: Groundwater/Surface Water X Soil/Sediment Drinking Water Air Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A **X**	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

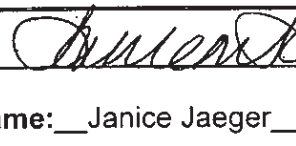
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

***Data User Note**: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: 

Position: Client Services Manager

Printed Name: Janice Jaeger

Date: 05/12/14 00003

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1403116

Lab ID	Client ID
R1403116-001	CL2-BR (80)
R1403116-002	MW-2R (9)
R1403116-003	P-9R (4)
R1403116-004	TB-1

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **LARRY LEWIS**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **08 JAN 2014**

Expires: **30 JUN 2014**

Oscar C. Parcarba

Director, Division of Environmental Analysis

00006

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2013

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2013 Expiration Date 30 JUN 2014

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

00007

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2013

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2013 Expiration Date 30 JUN 2014

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEF	EPA 608

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1403116
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/29/14 1000
Sample Matrix:	Water	**Date Received:**	4/30/14
		Date Analyzed:	5/7/14 02:53
Sample Name:	CL2-BR (80)	**Units:**	µg/L
Lab Code:	R1403116-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	391269
Data File Name:	I:\ACQUDATA\msvoa10\data\050614\F8332.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	**69**		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	**15**		2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**4.4**		2.0	
156-59-2	cis-1,2-Dichloroethene	**440**	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	**3.4**		2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	5/7/14 02:53	
Dibromofluoromethane	109	70-130	5/7/14 02:53	
Toluene-d8	98	70-130	5/7/14 02:53	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1403116
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/29/14 1000
Sample Matrix:	Water	**Date Received:**	4/30/14
		Date Analyzed:	5/7/14 09:58
Sample Name:	CL2-BR (80)	**Units:**	µg/L
Lab Code:	R1403116-001	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	391269
Data File Name:	I:\ACQUDATA\msvoa10\data\050614\F8346.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	**63**	D	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	10	U	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	10	U	10	
79-01-6	Trichloroethene (TCE)	**13**	D	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	10	U	10	
156-59-2	cis-1,2-Dichloroethene	**360**	D	10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	87	70-130	5/7/14 09:58	
Dibromofluoromethane	100	70-130	5/7/14 09:58	
Toluene-d8	87	70-130	5/7/14 09:58	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1403116
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/29/14 1030
Sample Matrix:	Water	**Date Received:**	4/30/14
		Date Analyzed:	5/7/14 03:24
Sample Name:	MW-2R (9)	**Units:**	µg/L
Lab Code:	R1403116-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	391269
Data File Name:	I:\ACQUDATA\msvoa10\data\050614\F8333.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	**67**		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	97	70-130	5/7/14 03:24	
Dibromofluoromethane	102	70-130	5/7/14 03:24	
Toluene-d8	99	70-130	5/7/14 03:24	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1403116
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/29/14 1415
Sample Matrix:	Water	**Date Received:**	4/30/14
		Date Analyzed:	5/7/14 03:54
Sample Name:	P-9R (4)	**Units:**	µg/L
Lab Code:	R1403116-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	391269
Data File Name:	I:\ACQUDATA\msvoa10\data\050614\F8334.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	**74**		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	5/7/14 03:54	
Dibromofluoromethane	107	70-130	5/7/14 03:54	
Toluene-d8	104	70-130	5/7/14 03:54	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1403116
Project:	Varian Beverly/150148-05000000	**Date Collected:**	4/29/14 1100
Sample Matrix:	Water	**Date Received:**	4/30/14
		Date Analyzed:	5/7/14 04:24
Sample Name:	TB-1	**Units:**	µg/L
Lab Code:	R1403116-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	391269
Data File Name:	I:\ACQUDATA\msvoa10\data\050614\F8335.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	5/7/14 04:24	
Dibromofluoromethane	90	70-130	5/7/14 04:24	
Toluene-d8	100	70-130	5/7/14 04:24	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1403116
Project:	Varian Beverly/150148-05000000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	5/7/14 00:51
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1404808-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	391269
Data File Name:	I:\ACQUDATA\msvoa10\data\050614\F8328.D\	**Instrument Name:**	R-MS-10
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	95	70-130	5/7/14 00:51	
Dibromofluoromethane	100	70-130	5/7/14 00:51	
Toluene-d8	100	70-130	5/7/14 00:51	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150148-05000000
Sample Matrix: Water

Service Request: R1403116
Date Analyzed: 5/ 6/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 391269

Analyte Name	Lab Control Sample RQ1404808-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1404808-03 Result	Spike Amount	% Rec	% Rec Limits	RPD		RPD Limit
1,1,1-Trichloroethane (TCA)	17.2	20.0	86	21.4	20.0	107	70 - 130	22	*	20
1,1,2,2-Tetrachloroethane	17.6	20.0	88	19.3	20.0	96	70 - 130	9		20
1,1,2-Trichloroethane	20.3	20.0	101	23.6	20.0	118	70 - 130	15		20
1,1-Dichloroethane (1,1-DCA)	19.5	20.0	97	24.0	20.0	120	70 - 130	21	*	20
1,1-Dichloroethene (1,1-DCE)	18.7	20.0	94	21.4	20.0	107	70 - 130	13		20
1,2-Dichloroethane	19.4	20.0	97	22.3	20.0	112	70 - 130	14		20
1,2-Dichloropropane	21.6	20.0	108	23.4	20.0	117	70 - 130	8		20
Acetone	20.6	20.0	103	23.0	20.0	115	40 - 160	11		20
Bromodichloromethane	20.1	20.0	100	22.9	20.0	115	70 - 130	13		20
Bromoform	19.3	20.0	96	20.9	20.0	104	70 - 130	8		20
Bromomethane	22.8	20.0	114	23.7	20.0	119	40 - 160	4		20
Carbon Tetrachloride	17.4	20.0	87	20.3	20.0	102	70 - 130	16		20
Chlorobenzene	17.9	20.0	90	20.2	20.0	101	70 - 130	12		20
Chloroethane	15.1	20.0	76	18.8	20.0	94	70 - 130	22	*	20
Chloroform	18.9	20.0	94	23.0	20.0	115	70 - 130	20		20
Chloromethane	16.6	20.0	83	20.0	20.0	100	40 - 160	18		20
Dibromochloromethane	20.8	20.0	104	21.5	20.0	108	70 - 130	3		20
Methylene Chloride	20.0	20.0	100	21.0	20.0	105	70 - 130	5		20
Tetrachloroethene (PCE)	17.2	20.0	86	19.1	20.0	96	70 - 130	10		20
Trichloroethene (TCE)	18.3	20.0	91	22.3	20.0	112	70 - 130	20		20
Trichlorofluoromethane (CFC 11)	15.0	20.0	75	18.8	20.0	94	70 - 130	22	*	20
Vinyl Chloride	15.5	20.0	77	19.3	20.0	97	70 - 130	22	*	20
cis-1,2-Dichloroethene	19.0	20.0	95	22.8	20.0	114	70 - 130	18		20
cis-1,3-Dichloropropene	18.8	20.0	94	21.4	20.0	107	70 - 130	13		20
trans-1,2-Dichloroethene	18.2	20.0	91	21.5	20.0	107	70 - 130	17		20
trans-1,3-Dichloropropene	19.2	20.0	96	21.6	20.0	108	70 - 130	11		20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Columbia Analytical Services

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: Varian Beverly
Project Number: 150148-05000000
Project Manager: Raymond Cadorette
Report CC:
Company/Address: CB&I Environmental, Inc.
150 Royall Street
Canton, MA 02021
Phone #: 617-589-6102
E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature: XXXX
Sampler's Printed Name: Paul LeDoux

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP Site Specific List (Preservative: 1)	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)								REMARKS/ ALTERNATE DESCRIPTION
CL2-BR (80)		4.29.14	1000	GW	3	3														
MW 2R (9)		↓	1030		3	3														
P.9R (4)		↓	1415		3	3														
TB-1		4.2.14	1100		3	3														

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ______

SPECIAL INSTRUCTIONS/COMMENTS
Metals

Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Joe@CBI.Com.

See QAPP ☐

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
___ 1 day ___ 2 day ___ 3 day
___ 4 day ___ 5 day
✓ Standard

REQUESTED REPORT DATE
______

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data

Edata ✓ Yes ___ No

INVOICE INFORMATION
PO #: 873800
BILL TO: CB&I

R1403116 7 Y
CB&I Environmental & Infrastructure
Varian Beverly

STATE WHERE SAMPLES WERE COLLECTED:

	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature	[signature]	[signature]				
Printed Name	Paul LeDoux	Gregory Esmerian				
Firm	CBI	ALS				
Date/Time	4.29.14 1600	4-30-14 8:50				

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 10/2010

Cooler Receipt and Preservation Check Form

Project/Client CBI Folder Number R14-3116

Cooler received on 4-30-14 by: ME COURIER: ALS (UPS) FEDEX VELOCITY CLIENT

1. Were custody seals on outside of cooler? YES (NO)
2. Were custody papers properly filled out (ink, signed, etc.)? (YES) NO
3. Did all bottles arrive in good condition (unbroken)? (YES) NO
4. Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles? YES (NO) N/A
5. Were (Ice) or **Ice packs** present? (YES) NO
6. Where did the bottles originate? (ALS/ROC), CLIENT
7. Soil VOA samples received as: Bulk Jar Encore TerraCore Lab5035set (N/A)
8. Temperature of cooler(s) upon receipt: 2.8°

Is the temperature within 0° - 6° C?:	(Y) N	Y N	Y N	Y N	Y N
If No, Explain Below Date/Time Temperatures Taken:	4-30-14 @ 09:12				
Thermometer ID: IR GUN#3 (IR GUN#4) Reading From: Temp Blank (Sample Bottle)					

If out of Temperature, note packing/ice condition &Client Approval to Run Samples:

All Samples held in storage location R-002 by ME on 4-30-14 at 09:15
5035 samples placed in storage location _____ by _____ on _____ at _____

PC Secondary Review: JMV 4/30/14

Cooler Breakdown: Date: 5/1/14 Time: 1100 by: (M)

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
2. Did all bottle labels and tags agree with custody papers? (YES) NO
3. Were correct containers used for the tests indicated? (YES) NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated (N/A)

Explain any discrepancies:

pH	Reagent	YES	NO	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	$Na_2S_2O_3$	-	-						
	Zn Aceta	-	-						
	HCl	*	*	4112120	3/15				

*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet

Yes = All samples OK

No = Samples were preserved at lab as listed

PM OK to Adjust: _____

Bottle lot numbers: Client covered

Other Comments:

PC Secondary Review: JMV 5/5/14

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc
Job Number : 150148.02

Prepared By: Dale Dailey
Date : 6/5/2014

Matrix: Air

Analyte Group : Volatile Organics
Analytical Method : EPA Method TO-15

Completed MADEP CAM Certification Form included: Yes
Laboratory ID No. : R1403682

Chain of Custody included in Data Package ? Yes
Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
5/13/14	VOC TO-15		30 Days	5/21/14

Sample temperature within QC limits: NA - Air

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: NA

Equipment Field Blank ID : NA
Trip Blank ID : NA

Method Blank: EPA TO-15 5/21/2014

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:

All samples were initially analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method.

Various compounds for BLDG 5 SVE Influent and BLDG 5 SVE 1 have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at a dilution and both sets of data have been reported out.

All initial and continuing calibrations were compliant.

Reviewed By: Pernilla Haley 6/9/14

May 28, 2014

Service Request No: R1403682

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly Air Samples/150148

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on May 20, 2014. For your reference, these analyses have been assigned our service request number **R1403682.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Client Services Manager

CC: Pernilla Haley

ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623 PHONE 585-288-5380 | FAX 585-288-8475
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

ALS Environmental

Client:	CB&I.	**Service Request No.:**	R1403682
Project:	Varian Beverly	**Project No.:**	
Sample Matrix:	Air	**Date Received:**	05/20/14

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS environmental. This report contains analytical results for samples designated for Tier II, MASS. CAM deliverables. When appropriate to the method, blank and LCS results have been reported with each analytical test.

Sample Receipt

CB&I air samples were collected on 05/15/14 and received at ALS in good condition as noted on the receipt and preservation check form. The samples were stored in the laboratory at room temperature prior to analysis. See the ALS case narrative for a cross-reference between Client ID and ALS Job #.

TO - 15 Air Analysis

Seven air samples were analyzed for a site list of Volatile Organics by EPA method TO-15.

All samples were initially analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method.

Various compounds for BLDG 5 SVE Influent and BLDG 5 SVE 1 have been flagged with an "E" as being outside the calibration range of the instrument. The sample was repeated at a dilution and both sets of data have been reported out.

All initial and continuing calibrations were compliant.

All surrogate standard recoveries were within QC limits.

The Method blanks were free of contamination.

The LCS recoveries were all within QC limits of 70 – 130 %.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental	Project #:
Project Location: Varian Beverly	RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1403682-001-003

Matrices: Groundwater/Surface Water Soil/Sediment Drinking Water Air X Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B X
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes X No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

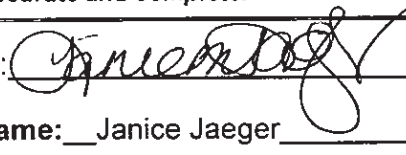
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: 

Position: Client Services Manager

Printed Name: Janice Jaeger

Date: 05/28/14

00003

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1403682

Lab ID	Client ID
R1403682-001	Bldg 5 SVE influent
R1403682-002	Bldg 5 SVE 1
R1403682-003	Bldg 5 SVE 2

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **LARRY LEWIS**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **08 JAN 2014**

Expires: **30 JUN 2014**

Oscar C. Parcarbo

Director, Division of Environmental Analysis

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COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2013

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2013 Expiration Date 30 JUN 2014

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2013

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2013 Expiration Date 30 JUN 2014

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEF	EPA 608

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1403682
Date Collected: 5/15/14 1035
Date Received: 5/20/14

Sample Name: Bldg 5 SVE influent
Lab Code: R1403682-001

Analytical Method: TO-15

Date Analyzed: 5/21/14 1235
Canister Dilution Factor: 1.38

Initial Pressure (psig): -1.42 Final Pressure (psig): 3.59

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	91	0.91	0.91	0.36	0.36	U
74-83-9	Bromomethane	91	6.5	6.5	1.7	1.7	U
67-64-1	**Acetone**	91	**130**	76	**56**	32	
75-35-4	1,1-Dichloroethene	91	6.7	6.7	1.7	1.7	U
75-09-2	Methylene Chloride	91	5.8	5.8	1.7	1.7	U
156-60-5	trans-1,2-Dichloroethene	91	6.7	6.7	1.7	1.7	U
75-34-3	1,1-Dichloroethane	91	6.8	6.8	1.7	1.7	U
1634-04-4	Methyl tert-Butyl Ether	91	12	12	3.3	3.3	U
78-93-3	**2-Butanone (MEK)**	91	**50**	9.9	**17**	3.3	
156-59-2	**cis-1,2-Dichloroethene**	91	**73**	6.7	**18**	1.7	
67-66-3	Chloroform	91	8.2	8.2	1.7	1.7	U
107-06-2	1,2-Dichloroethane	91	6.8	6.8	1.7	1.7	U
71-55-6	1,1,1-Trichloroethane (TCA)	91	9.1	9.1	1.7	1.7	U
71-43-2	Benzene	91	5.3	5.3	1.7	1.7	U
56-23-5	Carbon Tetrachloride	91	1.1	1.1	0.17	0.17	U
78-87-5	1,2-Dichloropropane	91	7.7	7.7	1.7	1.7	U
75-27-4	Bromodichloromethane	91	2.3	2.3	0.34	0.34	U
79-01-6	**Trichloroethene (TCE)**	91	**1000**	0.91	**190**	0.17	E
123-91-1	1,4-Dioxane	91	76	76	21	21	U
10061-01-5	cis-1,3-Dichloropropene	91	15	15	3.3	3.3	U
108-10-1	4-Methyl-2-pentanone (MIBK)	91	14	14	3.3	3.3	U
10061-02-6	trans-1,3-Dichloropropene	91	7.6	7.6	1.7	1.7	U
79-00-5	1,1,2-Trichloroethane	91	9.1	9.1	1.7	1.7	U
108-88-3	Toluene	91	6.2	6.2	1.7	1.7	U
591-78-6	2-Hexanone	91	6.8	6.8	1.7	1.7	U
124-48-1	Dibromochloromethane	91	2.9	2.9	0.34	0.34	U
106-93-4	1,2-Dibromoethane (EDB)	91	2.6	2.6	0.34	0.34	U
127-18-4	**Tetrachloroethene (PCE)**	91	**280**	1.2	**41**	0.18	
108-90-7	Chlorobenzene	91	7.7	7.7	1.7	1.7	U
100-41-4	Ethylbenzene	91	14	14	3.3	3.3	U
179601-23-1	m,p-Xylenes	91	29	29	6.7	6.7	U
75-25-2	Bromoform	91	17	17	1.7	1.7	U
100-42-5	Styrene	91	14	14	3.3	3.3	U
95-47-6	o-Xylene	91	14	14	3.3	3.3	U
79-34-5	1,1,2,2-Tetrachloroethane	91	2.3	2.3	0.33	0.33	U
541-73-1	1,3-Dichlorobenzene	91	20	20	3.3	3.3	U
106-46-7	1,4-Dichlorobenzene	91	20	20	3.3	3.3	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1403682
Date Collected: 5/15/14 1035
Date Received: 5/20/14

Sample Name: Bldg 5 SVE influent
Lab Code: R1403682-001

Analytical Method: TO-15

Date Analyzed: 5/21/14 1235
Canister Dilution Factor: 1.38

Initial Pressure (psig): -1.42 Final Pressure (psig): 3.59

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	91	20	20	3.3	3.3	U
91-20-3	Naphthalene	91	30	30	5.8	5.8	U
87-68-3	Hexachlorobutadiene	91	45	45	4.3	4.3	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	93	70-130	5/21/14 1235	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1403682
Date Collected: 5/15/14 1035
Date Received: 5/20/14

Sample Name: Bldg 5 SVE influent
Lab Code: R1403682-001
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 5/21/14 1317
Canister Dilution Factor: 1.38

Initial Pressure (psig): -1.42 Final Pressure (psig): 3.59

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	50	1.7	1.7	0.65	0.65	U
74-83-9	Bromomethane	50	12	12	3.1	3.1	U
67-64-1	Acetone	50	140	140	58	58	U
75-35-4	1,1-Dichloroethene	50	12	12	3.1	3.1	U
75-09-2	Methylene Chloride	50	10	10	3.0	3.0	U
156-60-5	trans-1,2-Dichloroethene	50	12	12	3.1	3.1	U
75-34-3	1,1-Dichloroethane	50	12	12	3.1	3.1	U
1634-04-4	Methyl tert-Butyl Ether	50	22	22	6.1	6.1	U
78-93-3	**2-Butanone (MEK)**	50	**48**	18	**16**	6.1	D
156-59-2	**cis-1,2-Dichloroethene**	50	**70**	12	**18**	3.1	D
67-66-3	Chloroform	50	15	15	3.1	3.1	U
107-06-2	1,2-Dichloroethane	50	12	12	3.1	3.1	U
71-55-6	1,1,1-Trichloroethane (TCA)	50	17	17	3.0	3.0	U
71-43-2	Benzene	50	9.7	9.7	3.0	3.0	U
56-23-5	Carbon Tetrachloride	50	1.9	1.9	0.31	0.31	U
78-87-5	1,2-Dichloropropane	50	14	14	3.0	3.0	U
75-27-4	Bromodichloromethane	50	4.1	4.1	0.62	0.62	U
79-01-6	**Trichloroethene (TCE)**	50	**960**	1.7	**180**	0.31	D
123-91-1	1,4-Dioxane	50	140	140	38	38	U
10061-01-5	cis-1,3-Dichloropropene	50	28	28	6.1	6.1	U
108-10-1	4-Methyl-2-pentanone (MIBK)	50	25	25	6.1	6.1	U
10061-02-6	trans-1,3-Dichloropropene	50	14	14	3.0	3.0	U
79-00-5	1,1,2-Trichloroethane	50	17	17	3.0	3.0	U
108-88-3	Toluene	50	11	11	3.0	3.0	U
591-78-6	2-Hexanone	50	12	12	3.0	3.0	U
124-48-1	Dibromochloromethane	50	5.2	5.2	0.62	0.62	U
106-93-4	1,2-Dibromoethane (EDB)	50	4.7	4.7	0.61	0.61	U
127-18-4	**Tetrachloroethene (PCE)**	50	**270**	2.2	**39**	0.33	D
108-90-7	Chlorobenzene	50	14	14	3.1	3.1	U
100-41-4	Ethylbenzene	50	26	26	6.0	6.0	U
179601-23-1	m,p-Xylenes	50	53	53	12	12	U
75-25-2	Bromoform	50	31	31	3.0	3.0	U
100-42-5	Styrene	50	26	26	6.1	6.1	U
95-47-6	o-Xylene	50	26	26	6.0	6.0	U
79-34-5	1,1,2,2-Tetrachloroethane	50	4.1	4.1	0.60	0.60	U
541-73-1	1,3-Dichlorobenzene	50	36	36	6.1	6.1	U
106-46-7	1,4-Dichlorobenzene	50	36	36	6.1	6.1	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1403682
Date Collected: 5/15/14 1035
Date Received: 5/20/14

Sample Name: Bldg 5 SVE influent
Lab Code: R1403682-001
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 5/21/14 1317
Canister Dilution Factor: 1.38

Initial Pressure (psig): -1.42 Final Pressure (psig): 3.59

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	50	36	36	6.1	6.1	U
91-20-3	Naphthalene	50	55	55	11	11	U
87-68-3	Hexachlorobutadiene	50	83	83	7.8	7.8	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	92	70-130	5/21/14 1317	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1403682
Date Collected: 5/15/14 1130
Date Received: 5/20/14

Sample Name: Bldg 5 SVE 1
Lab Code: R1403682-002

Analytical Method: TO-15

Date Analyzed: 5/21/14 1107
Canister Dilution Factor: 1.35

Initial Pressure (psig): -1.13 Final Pressure (psig): 3.60

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	8.9	9.1	9.1	3.6	3.6	U
74-83-9	Bromomethane	8.9	65	65	17	17	U
67-64-1	Acetone	8.9	760	760	320	320	U
75-35-4	1,1-Dichloroethene	8.9	67	67	17	17	U
75-09-2	Methylene Chloride	8.9	58	58	17	17	U
156-60-5	trans-1,2-Dichloroethene	8.9	67	67	17	17	U
75-34-3	1,1-Dichloroethane	8.9	68	68	17	17	U
1634-04-4	Methyl tert-Butyl Ether	8.9	120	120	33	33	U
78-93-3	2-Butanone (MEK)	8.9	99	99	33	33	U
156-59-2	**cis-1,2-Dichloroethene**	8.9	**230**	67	**59**	17	
67-66-3	Chloroform	8.9	82	82	17	17	U
107-06-2	1,2-Dichloroethane	8.9	68	68	17	17	U
71-55-6	1,1,1-Trichloroethane (TCA)	8.9	91	91	17	17	U
71-43-2	Benzene	8.9	53	53	17	17	U
56-23-5	Carbon Tetrachloride	8.9	11	11	1.7	1.7	U
78-87-5	1,2-Dichloropropane	8.9	77	77	17	17	U
75-27-4	Bromodichloromethane	8.9	23	23	3.4	3.4	U
79-01-6	**Trichloroethene (TCE)**	8.9	**10000**	9.1	**1900**	1.7	E
123-91-1	1,4-Dioxane	8.9	760	760	210	210	U
10061-01-5	cis-1,3-Dichloropropene	8.9	150	150	33	33	U
108-10-1	4-Methyl-2-pentanone (MIBK)	8.9	140	140	33	33	U
10061-02-6	trans-1,3-Dichloropropene	8.9	76	76	17	17	U
79-00-5	1,1,2-Trichloroethane	8.9	91	91	17	17	U
108-88-3	Toluene	8.9	62	62	17	17	U
591-78-6	2-Hexanone	8.9	68	68	17	17	U
124-48-1	Dibromochloromethane	8.9	29	29	3.4	3.4	U
106-93-4	1,2-Dibromoethane (EDB)	8.9	26	26	3.4	3.4	U
127-18-4	**Tetrachloroethene (PCE)**	8.9	**920**	12	**140**	1.8	
108-90-7	Chlorobenzene	8.9	77	77	17	17	U
100-41-4	Ethylbenzene	8.9	140	140	33	33	U
179601-23-1	m,p-Xylenes	8.9	290	290	67	67	U
75-25-2	Bromoform	8.9	170	170	17	17	U
100-42-5	Styrene	8.9	140	140	34	34	U
95-47-6	o-Xylene	8.9	140	140	33	33	U
79-34-5	1,1,2,2-Tetrachloroethane	8.9	23	23	3.3	3.3	U
541-73-1	1,3-Dichlorobenzene	8.9	200	200	33	33	U
106-46-7	1,4-Dichlorobenzene	8.9	200	200	33	33	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1403682
Date Collected: 5/15/14 1130
Date Received: 5/20/14

Sample Name: Bldg 5 SVE 1
Lab Code: R1403682-002

Analytical Method: TO-15

Date Analyzed: 5/21/14 1107
Canister Dilution Factor: 1.35

Initial Pressure (psig): -1.13 Final Pressure (psig): 3.60

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	8.9	200	200	33	33	U
91-20-3	Naphthalene	8.9	300	300	58	58	U
87-68-3	Hexachlorobutadiene	8.9	460	460	43	43	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	94	70-130	5/21/14 1107	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1403682
Date Collected: 5/15/14 1130
Date Received: 5/20/14

Sample Name: Bldg 5 SVE 1
Lab Code: R1403682-002
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 5/21/14 1153
Canister Dilution Factor: 1.35

Initial Pressure (psig): -1.13 Final Pressure (psig): 3.60

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	5.0	16	16	6.3	6.3	U
74-83-9	Bromomethane	5.0	120	120	30	30	U
67-64-1	Acetone	5.0	1400	1400	570	570	U
75-35-4	1,1-Dichloroethene	5.0	120	120	30	30	U
75-09-2	Methylene Chloride	5.0	100	100	30	30	U
156-60-5	trans-1,2-Dichloroethene	5.0	120	120	30	30	U
75-34-3	1,1-Dichloroethane	5.0	120	120	30	30	U
1634-04-4	Methyl tert-Butyl Ether	5.0	210	210	59	59	U
78-93-3	2-Butanone (MEK)	5.0	180	180	60	60	U
156-59-2	**cis-1,2-Dichloroethene**	5.0	**230**	120	**58**	30	D
67-66-3	Chloroform	5.0	150	150	30	30	U
107-06-2	1,2-Dichloroethane	5.0	120	120	30	30	U
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	160	160	30	30	U
71-43-2	Benzene	5.0	95	95	30	30	U
56-23-5	Carbon Tetrachloride	5.0	19	19	3.0	3.0	U
78-87-5	1,2-Dichloropropane	5.0	140	140	30	30	U
75-27-4	Bromodichloromethane	5.0	41	41	6.0	6.0	U
79-01-6	**Trichloroethene (TCE)**	5.0	**9900**	16	**1800**	3.0	D
123-91-1	1,4-Dioxane	5.0	1400	1400	370	370	U
10061-01-5	cis-1,3-Dichloropropene	5.0	270	270	59	59	U
108-10-1	4-Methyl-2-pentanone (MIBK)	5.0	240	240	59	59	U
10061-02-6	trans-1,3-Dichloropropene	5.0	140	140	30	30	U
79-00-5	1,1,2-Trichloroethane	5.0	160	160	30	30	U
108-88-3	Toluene	5.0	110	110	29	29	U
591-78-6	2-Hexanone	5.0	120	120	30	30	U
124-48-1	Dibromochloromethane	5.0	51	51	6.0	6.0	U
106-93-4	1,2-Dibromoethane (EDB)	5.0	46	46	6.0	6.0	U
127-18-4	**Tetrachloroethene (PCE)**	5.0	**890**	22	**130**	3.2	D
108-90-7	Chlorobenzene	5.0	140	140	30	30	U
100-41-4	Ethylbenzene	5.0	260	260	59	59	U
179601-23-1	m,p-Xylenes	5.0	520	520	120	120	U
75-25-2	Bromoform	5.0	310	310	30	30	U
100-42-5	Styrene	5.0	250	250	60	60	U
95-47-6	o-Xylene	5.0	260	260	59	59	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	41	41	5.9	5.9	U
541-73-1	1,3-Dichlorobenzene	5.0	360	360	59	59	U
106-46-7	1,4-Dichlorobenzene	5.0	360	360	59	59	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1403682
Project:	Varian Beverly Air Samples/150148	**Date Collected:**	5/15/14 1130
Sample Matrix:	Air	**Date Received:**	5/20/14
Sample Name:	Bldg 5 SVE 1		
Lab Code:	R1403682-002		
Run Type:	Dilution		
Analytical Method:	TO-15	**Date Analyzed:**	5/21/14 1153
		Canister Dilution Factor:	1.35

Initial Pressure (psig): -1.13 Final Pressure (psig): 3.60

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	5.0	360	360	59	59	U
91-20-3	Naphthalene	5.0	540	540	100	100	U
87-68-3	Hexachlorobutadiene	5.0	810	810	76	76	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	95	70-130	5/21/14 1153	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1403682
Date Collected: 5/13/14 1105
Date Received: 5/20/14

Sample Name: Bldg 5 SVE 2
Lab Code: R1403682-003

Analytical Method: TO-15

Date Analyzed: 5/21/14 1443
Canister Dilution Factor: 1.36

Initial Pressure (psig): -1.23 Final Pressure (psig): 3.67

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	175	0.47	0.47	0.18	0.18	U
74-83-9	Bromomethane	175	3.3	3.3	0.86	0.86	U
67-64-1	**Acetone**	175	**90**	39	**38**	16	
75-35-4	1,1-Dichloroethene	175	3.4	3.4	0.86	0.86	U
75-09-2	Methylene Chloride	175	3.0	3.0	0.85	0.85	U
156-60-5	trans-1,2-Dichloroethene	175	3.4	3.4	0.86	0.86	U
75-34-3	1,1-Dichloroethane	175	3.5	3.5	0.86	0.86	U
1634-04-4	Methyl tert-Butyl Ether	175	6.1	6.1	1.7	1.7	U
78-93-3	**2-Butanone (MEK)**	175	**51**	5.1	**17**	1.7	
156-59-2	**cis-1,2-Dichloroethene**	175	**53**	3.4	**13**	0.86	
67-66-3	Chloroform	175	4.2	4.2	0.86	0.86	U
107-06-2	1,2-Dichloroethane	175	3.5	3.5	0.86	0.86	U
71-55-6	**1,1,1-Trichloroethane (TCA)**	175	**5.1**	4.7	**0.94**	0.85	
71-43-2	Benzene	175	2.7	2.7	0.85	0.85	U
56-23-5	Carbon Tetrachloride	175	0.54	0.54	0.087	0.087	U
78-87-5	1,2-Dichloropropane	175	4.0	4.0	0.86	0.86	U
75-27-4	Bromodichloromethane	175	1.2	1.2	0.17	0.17	U
79-01-6	**Trichloroethene (TCE)**	175	**260**	0.47	**49**	0.087	
123-91-1	1,4-Dioxane	175	39	39	11	11	U
10061-01-5	cis-1,3-Dichloropropene	175	7.8	7.8	1.7	1.7	U
108-10-1	**4-Methyl-2-pentanone (MIBK)**	175	**13**	7.0	**3.2**	1.7	
10061-02-6	trans-1,3-Dichloropropene	175	3.9	3.9	0.86	0.86	U
79-00-5	1,1,2-Trichloroethane	175	4.7	4.7	0.85	0.85	U
108-88-3	Toluene	175	3.2	3.2	0.85	0.85	U
591-78-6	2-Hexanone	175	3.5	3.5	0.85	0.85	U
124-48-1	Dibromochloromethane	175	1.5	1.5	0.17	0.17	U
106-93-4	1,2-Dibromoethane (EDB)	175	1.3	1.3	0.17	0.17	U
127-18-4	**Tetrachloroethene (PCE)**	175	**200**	0.62	**29**	0.092	
108-90-7	Chlorobenzene	175	4.0	4.0	0.86	0.86	U
100-41-4	Ethylbenzene	175	7.4	7.4	1.7	1.7	U
179601-23-1	m,p-Xylenes	175	15	15	3.4	3.4	U
75-25-2	Bromoform	175	8.9	8.9	0.86	0.86	U
100-42-5	Styrene	175	7.3	7.3	1.7	1.7	U
95-47-6	o-Xylene	175	7.4	7.4	1.7	1.7	U
79-34-5	1,1,2,2-Tetrachloroethane	175	1.2	1.2	0.17	0.17	U
541-73-1	1,3-Dichlorobenzene	175	10	10	1.7	1.7	U
106-46-7	1,4-Dichlorobenzene	175	10	10	1.7	1.7	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1403682
Date Collected: 5/13/14 1105
Date Received: 5/20/14

Sample Name: Bldg 5 SVE 2
Lab Code: R1403682-003

Analytical Method: TO-15

Date Analyzed: 5/21/14 1443
Canister Dilution Factor: 1.36

Initial Pressure (psig): -1.23 Final Pressure (psig): 3.67

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	175	10	10	1.7	1.7	U
91-20-3	Naphthalene	175	16	16	3.0	3.0	U
87-68-3	Hexachlorobutadiene	175	23	23	2.2	2.2	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	70-130	5/21/14 1443	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1403682
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1405598-04

Analytical Method: TO-15

Date Analyzed: 5/21/14 1020

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
67-64-1	Acetone	1000	5.0	5.0	2.1	2.1	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.22	0.22	U
78-93-3	2-Butanone (MEK)	1000	0.65	0.65	0.22	0.22	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
71-43-2	Benzene	1000	0.35	0.35	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
123-91-1	1,4-Dioxane	1000	5.0	5.0	1.4	1.4	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1000	0.90	0.90	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
108-88-3	Toluene	1000	0.41	0.41	0.11	0.11	U
591-78-6	2-Hexanone	1000	0.45	0.45	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
106-93-4	1,2-Dibromoethane (EDB)	1000	0.17	0.17	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
100-42-5	Styrene	1000	0.94	0.94	0.22	0.22	U
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U
541-73-1	1,3-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
106-46-7	1,4-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1403682
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1405598-04

Analytical Method: TO-15

Date Analyzed: 5/21/14 1020

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
91-20-3	Naphthalene	1000	2.0	2.0	0.38	0.38	U
87-68-3	Hexachlorobutadiene	1000	3.0	3.0	0.28	0.28	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	96	70-130	5/21/14 1020	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1403682
Date Analyzed: 5/21/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 394159

	Lab Control Sample RQ1405598-03			
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**
Vinyl Chloride	5.82	6.58	88	70 - 130
Bromomethane	8.41	9.80	86	70 - 130
Acetone	6.30	6.47	97	50 - 150
1,1-Dichloroethene	9.62	10.3	93	70 - 130
Methylene Chloride	9.21	8.94	103	70 - 130
trans-1,2-Dichloroethene	10.3	10.4	99	70 - 130
1,1-Dichloroethane	10.5	10.4	101	70 - 130
Methyl tert-Butyl Ether	9.43	9.55	99	70 - 130
2-Butanone (MEK)	7.76	7.81	99	70 - 130
cis-1,2-Dichloroethene	10.5	10.4	101	70 - 130
Chloroform	12.4	13.2	94	70 - 130
1,2-Dichloroethane	9.85	10.6	93	70 - 130
1,1,1-Trichloroethane (TCA)	12.9	14.3	90	70 - 130
Benzene	8.43	8.38	101	70 - 130
Carbon Tetrachloride	14.7	16.0	92	70 - 130
1,2-Dichloropropane	12.0	12.1	99	70 - 130
Bromodichloromethane	16.9	17.4	97	70 - 130
Trichloroethene (TCE)	13.4	14.0	96	70 - 130
1,4-Dioxane	10.0	9.37	107	50 - 150
cis-1,3-Dichloropropene	12.4	12.5	100	70 - 130
4-Methyl-2-pentanone (MIBK)	9.67	10.5	92	70 - 130
trans-1,3-Dichloropropene	10.7	10.9	98	70 - 130
1,1,2-Trichloroethane	14.1	14.5	97	70 - 130
Toluene	9.89	9.98	99	70 - 130
2-Hexanone	10.4	11.1	94	70 - 130
Dibromochloromethane	22.1	23.4	94	70 - 130
1,2-Dibromoethane (EDB)	19.2	20.0	96	70 - 130
Tetrachloroethene (PCE)	17.3	18.0	96	70 - 130
Chlorobenzene	12.4	12.3	101	70 - 130
Ethylbenzene	11.5	11.5	100	70 - 130
m,p-Xylenes	21.6	22.4	97	70 - 130
Bromoform	27.0	26.6	102	70 - 130
Styrene	10.6	11.1	95	70 - 130
o-Xylene	11.1	11.7	95	70 - 130
1,1,2,2-Tetrachloroethane	17.2	18.5	93	70 - 130
1,3-Dichlorobenzene	13.9	14.7	94	70 - 130
1,4-Dichlorobenzene	13.5	14.9	91	70 - 130
1,2-Dichlorobenzene	13.7	14.6	94	70 - 130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1403682
Date Analyzed: 5/21/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 394159

	Lab Control Sample RQ1405598-03				
Analyte Name	**Result**	**Spike Amount**	**% Rec**		**% Rec Limits**
Naphthalene	15.2	11.0	138		50 - 150
Hexachlorobutadiene	37.0	23.5	158	*	50 - 150

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Environmental

CHAIN OF CUSTODY - AIR

PAGE 1 OF 1

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 585.288.8475 (fax) | www.caslab.com

Requested Turnaround Time in Business Days from Receipt, please circle:
1 Day 2 Day 3 Day 4 Day 5 Day 10 Day-Standard

CAS Project #:

Company Name: CB&I

Project Name: Varian Beverly

CAS Contact:

Address: 150 Royall Street

Project Number:

City, State, Zip: Canton, MA 02021

P.O. #/Billing Information:

Project Manager: Raymond Cadorette

Phone: 617-589-6102 Fax: 617-589-5495

Email (for result reporting): Raymond.Cadorette@Shawgrp.com

Sampler (Print & Sign): Paul Hedouex

Analysis Method and/or Analytes

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID	Flow Controller ID		TO15 (Site List)				Comments Specific Instructions
Bldg 5 SVE influent		5.13.14	1035	SLC00107	NA		1				
Bldg 5 SVE 1		5.13.14	1130	SLC00108	NA		1				
Bldg 5 SVE 2		5.13.14	1105	SLC00123	NA		1				

What State were samples collected in: MA

Report Tier Levels - please select:
Tier I (Results/Default, if not specified) ___ Tier III (CLP Forms Only) ___
Tier II (Results + QC) ___ Tier IV (Data Validation) ___

EDD required: YES / NO
Type: GISKey EDD Units: ug/m3 & ppmv

Project Requirements (MRLs, QAPP, etc.)

QA/QC: MADEP CAM

Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:
	5.13.14	1200		5/20/14	0845
Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:

R1403682 7 Y
CB&I Environmental & Infrastructure
Varian Beverly Air Samples

COC AIR REV 7-11

Cooler Receipt and Preservation Check Form

Project/Client CBI I Folder Number R14-3682

Cooler received on 5/20/14 by: [illegible]

COURIER: ALS (UPS) FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y (N)	5a	Perchlorate samples have required headspace?	Y N (NA)
2	Custody papers properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* bubbles?	Y N (NA)
3	Did all bottles arrive in good condition (unbroken)?	(Y) N	6	Where did the bottles originate?	(ALS/ROC) CLIENT
4	Circle: Wet Ice Dry Ice Gel packs present?	Y (N)	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 5/20/14 Time: 0855 ID: IR#3 IR#4 From: Temp Blank Sample Bottle

Observed Temp (°C)	AIR						
Correction Factor (°C)							
Corrected Temp (°C)	AIR						
Within 0-6°C?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: SMO by [illegible] on 5/20/14 at 0855

5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: JMN 5/20/14

Cooler Breakdown: Date: 5/20/14 Time: 1316 by: [illegible]

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated ~~N/A~~ [illegible] 5/20/14

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**						

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: _____

Other Comments:

PC Secondary Review: JMN 5/22/14

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc
Job Number : 150148-02

Prepared By: Dale Dailey
Date : 7/1/2014

Matrix: Air

Analyte Group : Volatile Organics
Analytical Method : EPA Method TO-15

Completed MADEP CAM Certification Form included: Yes
Laboratory ID No. : 1404674

Chain of Custody included in Data Package ? Yes
Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
6/17/14	VOC TO-15		30 Days	6/20, 6/23/14

Sample temperature within QC limits: NA - Air

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? No

If no, list sample ID where range was exceeded: See Notes

Equipment Field Blank ID : NA
Trip Blank ID : NA

Method Blank: EPA TO-15 6/20/14, 6/23/14

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:

(1) All samples were initially analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method.

(2) Various compounds in BLDG 5-1 and BLDG 5-3 were outside the calibration range of the instrument. The samples were repeated at dilutions and both set of data have been reported out.

(3) All initial and continuing calibrations were compliant.

(4) All LCS and LCSD recoveries were within QC limits except Hexachlorobutadiene was outside limits high in batch 398632 and batch 398637. The data was not impacted since the analytical results were non-detect for this analyte in these batches.

Reviewed By: Pernilla Haley 7/24/14

June 26, 2014

Service Request No: R1404674

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly Air Samples/150148

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on June 19, 2014. For your reference, these analyses have been assigned our service request number **R1404674**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Client Services Manager

CC: Pernilla Haley

ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623 PHONE 585-288-5380 | FAX 585-288-8475
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

ALS Environmental

Client:	CB&I.	**Service Request No.:**	R1404674
Project:	Varian Beverly	**Project No.:**	
Sample Matrix:	Air	**Date Received:**	06/19/14

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS environmental. This report contains analytical results for samples designated for Tier II, MASS. CAM deliverables. When appropriate to the method, blank and LCS results have been reported with each analytical test.

Sample Receipt

CB&I air samples were collected on 06/17/14 and received at ALS in good condition as noted on the receipt and preservation check form. The samples were stored in the laboratory at room temperature prior to analysis. See the ALS case narrative for a cross-reference between Client ID and ALS Job #.

TO - 15 Air Analysis

Three air samples were analyzed for a site list of Volatile Organics by EPA method TO-15.

All samples were initially analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method.

Various compounds for BLDG 5-1 SVE Influent and BLDG 5-3 have been flagged with an "E" as being outside the calibration range of the instrument. The samples were repeated at dilutions and both sets of data have been reported out.

All initial and continuing calibrations were compliant.

All surrogate standard recoveries were within QC limits.

The Method blanks were free of contamination.

The LCS recoveries were all within QC limits of 70 – 130 % except Hexachlorobutadiene was outside limits high on the 06/20/14 and 06/23/14 LCS' and has been flagged with an "*". No data was affected.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental	Project #:
Project Location: Varian Beverly	RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1404674-001-003

Matrices: Groundwater/Surface Water Soil/Sediment Drinking Water Air X Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B X
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes X No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Janice Jaeger **Position:** Client Services Manager

Printed Name: Janice Jaeger **Date:** 06/26/14 00003

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1404674

Lab ID	Client ID
R1404674-001	BLDG 5-1
R1404674-002	BLDG 5-2
R1404674-003	BLDG 5-3

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **LARRY LEWIS**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **08 JAN 2014**

Expires: **30 JUN 2014**

Oscar C. Parcarb

Director, Division of Environmental Analysis

00005

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2013

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2013 Expiration Date 30 JUN 2014

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2013

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2013 Expiration Date 30 JUN 2014

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEF	EPA 608

00008

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Collected: 6/17/14 1505
Date Received: 6/19/14

Sample Name: BLDG 5-1
Lab Code: R1404674-001

Analytical Method: TO-15

Date Analyzed: 6/20/14 1348
Canister Dilution Factor: 1.63

Initial Pressure (psig): -3.44 Final Pressure (psig): 3.64

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	5	20	20	7.7	7.7	U
74-83-9	Bromomethane	5	140	140	36	36	U
67-64-1	**Acetone**	5	**4100**	1600	**1700**	690	D
75-35-4	1,1-Dichloroethene	5	140	140	36	36	U
75-09-2	Methylene Chloride	5	120	120	36	36	U
156-60-5	trans-1,2-Dichloroethene	5	140	140	36	36	U
75-34-3	1,1-Dichloroethane	5	150	150	36	36	U
1634-04-4	Methyl tert-Butyl Ether	5	260	260	71	71	U
78-93-3	**2-Butanone (MEK)**	5	**210**	210	**72**	72	D
156-59-2	cis-1,2-Dichloroethene	5	140	140	36	36	U
67-66-3	Chloroform	5	180	180	36	36	U
107-06-2	1,2-Dichloroethane	5	150	150	36	36	U
71-55-6	1,1,1-Trichloroethane (TCA)	5	200	200	36	36	U
71-43-2	Benzene	5	110	110	36	36	U
56-23-5	Carbon Tetrachloride	5	23	23	3.6	3.6	U
78-87-5	1,2-Dichloropropane	5	170	170	36	36	U
75-27-4	Bromodichloromethane	5	49	49	7.3	7.3	U
79-01-6	Trichloroethene (TCE)	5	20	20	3.6	3.6	U
123-91-1	1,4-Dioxane	5	1600	1600	450	450	U
10061-01-5	cis-1,3-Dichloropropene	5	330	330	72	72	U
108-10-1	4-Methyl-2-pentanone (MIBK)	5	290	290	72	72	U
10061-02-6	trans-1,3-Dichloropropene	5	160	160	36	36	U
79-00-5	1,1,2-Trichloroethane	5	200	200	36	36	U
108-88-3	Toluene	5	130	130	35	35	U
591-78-6	2-Hexanone	5	150	150	36	36	U
124-48-1	Dibromochloromethane	5	62	62	7.3	7.3	U
106-93-4	1,2-Dibromoethane (EDB)	5	55	55	7.2	7.2	U
127-18-4	Tetrachloroethene (PCE)	5	26	26	3.8	3.8	U
108-90-7	Chlorobenzene	5	170	170	36	36	U
100-41-4	Ethylbenzene	5	310	310	71	71	U
179601-23-1	m,p-Xylenes	5	620	620	140	140	U
75-25-2	Bromoform	5	370	370	36	36	U
100-42-5	Styrene	5	310	310	72	72	U
95-47-6	o-Xylene	5	310	310	71	71	U
79-34-5	1,1,2,2-Tetrachloroethane	5	49	49	7.1	7.1	U
541-73-1	1,3-Dichlorobenzene	5	430	430	72	72	U
106-46-7	1,4-Dichlorobenzene	5	430	430	72	72	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Collected: 6/17/14 1505
Date Received: 6/19/14

Sample Name: BLDG 5-1
Lab Code: R1404674-001

Analytical Method: TO-15

Date Analyzed: 6/20/14 1348
Canister Dilution Factor: 1.63

Initial Pressure (psig): -3.44 Final Pressure (psig): 3.64

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	5	430	430	72	72	U
91-20-3	Naphthalene	5	650	650	120	120	U
87-68-3	Hexachlorobutadiene	5	980	980	92	92	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	102	70-130	6/20/14 1348	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Collected: 6/17/14 1505
Date Received: 6/19/14

Sample Name: BLDG 5-1
Lab Code: R1404674-001
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 6/23/14 1618
Canister Dilution Factor: 1.63

Initial Pressure (psig): -3.44 Final Pressure (psig): 3.64

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	50	2.0	2.0	0.77	0.77	U
74-83-9	Bromomethane	50	14	14	3.6	3.6	U
67-64-1	**Acetone**	50	**4100**	160	**1700**	69	E
75-35-4	1,1-Dichloroethene	50	14	14	3.6	3.6	U
75-09-2	Methylene Chloride	50	12	12	3.6	3.6	U
156-60-5	trans-1,2-Dichloroethene	50	14	14	3.6	3.6	U
75-34-3	1,1-Dichloroethane	50	15	15	3.6	3.6	U
1634-04-4	Methyl tert-Butyl Ether	50	26	26	7.1	7.1	U
78-93-3	**2-Butanone (MEK)**	50	**220**	21	**76**	7.2	
156-59-2	cis-1,2-Dichloroethene	50	14	14	3.6	3.6	U
67-66-3	Chloroform	50	18	18	3.6	3.6	U
107-06-2	1,2-Dichloroethane	50	15	15	3.6	3.6	U
71-55-6	1,1,1-Trichloroethane (TCA)	50	20	20	3.6	3.6	U
71-43-2	Benzene	50	11	11	3.6	3.6	U
56-23-5	Carbon Tetrachloride	50	2.3	2.3	0.36	0.36	U
78-87-5	1,2-Dichloropropane	50	17	17	3.6	3.6	U
75-27-4	Bromodichloromethane	50	4.9	4.9	0.73	0.73	U
79-01-6	**Trichloroethene (TCE)**	50	**7.2**	2.0	**1.3**	0.36	
123-91-1	1,4-Dioxane	50	160	160	45	45	U
10061-01-5	cis-1,3-Dichloropropene	50	33	33	7.2	7.2	U
108-10-1	**4-Methyl-2-pentanone (MIBK)**	50	**49**	29	**12**	7.2	
10061-02-6	trans-1,3-Dichloropropene	50	16	16	3.6	3.6	U
79-00-5	1,1,2-Trichloroethane	50	20	20	3.6	3.6	U
108-88-3	Toluene	50	13	13	3.5	3.5	U
591-78-6	2-Hexanone	50	15	15	3.6	3.6	U
124-48-1	Dibromochloromethane	50	6.2	6.2	0.73	0.73	U
106-93-4	1,2-Dibromoethane (EDB)	50	5.5	5.5	0.72	0.72	U
127-18-4	**Tetrachloroethene (PCE)**	50	**6.9**	2.6	**1.0**	0.38	
108-90-7	Chlorobenzene	50	17	17	3.6	3.6	U
100-41-4	Ethylbenzene	50	31	31	7.1	7.1	U
179601-23-1	m,p-Xylenes	50	62	62	14	14	U
75-25-2	Bromoform	50	37	37	3.6	3.6	U
100-42-5	Styrene	50	31	31	7.2	7.2	U
95-47-6	o-Xylene	50	31	31	7.1	7.1	U
79-34-5	1,1,2,2-Tetrachloroethane	50	4.9	4.9	0.71	0.71	U
541-73-1	1,3-Dichlorobenzene	50	43	43	7.2	7.2	U
106-46-7	1,4-Dichlorobenzene	50	43	43	7.2	7.2	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Collected: 6/17/14 1505
Date Received: 6/19/14

Sample Name: BLDG 5-1
Lab Code: R1404674-001
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 6/23/14 1618
Canister Dilution Factor: 1.63

Initial Pressure (psig): -3.44 Final Pressure (psig): 3.64

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	50	43	43	7.2	7.2	U
91-20-3	Naphthalene	50	65	65	12	12	U
87-68-3	Hexachlorobutadiene	50	98	98	9.2	9.2	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	100	70-130	6/23/14 1618	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Collected: 6/17/14 1504
Date Received: 6/19/14

Sample Name: BLDG 5-2
Lab Code: R1404674-002

Analytical Method: TO-15

Date Analyzed: 6/23/14 1701
Canister Dilution Factor: 1.50

Initial Pressure (psig): -2.60 Final Pressure (psig): 3.51

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	50	1.8	1.8	0.70	0.70	U
74-83-9	Bromomethane	50	13	13	3.3	3.3	U
67-64-1	**Acetone**	50	**660**	150	**280**	63	
75-35-4	1,1-Dichloroethene	50	13	13	3.3	3.3	U
75-09-2	Methylene Chloride	50	11	11	3.3	3.3	U
156-60-5	trans-1,2-Dichloroethene	50	13	13	3.3	3.3	U
75-34-3	1,1-Dichloroethane	50	14	14	3.3	3.3	U
1634-04-4	Methyl tert-Butyl Ether	50	24	24	6.6	6.6	U
78-93-3	**2-Butanone (MEK)**	50	**270**	20	**93**	6.6	
156-59-2	cis-1,2-Dichloroethene	50	13	13	3.3	3.3	U
67-66-3	Chloroform	50	16	16	3.3	3.3	U
107-06-2	1,2-Dichloroethane	50	14	14	3.3	3.3	U
71-55-6	1,1,1-Trichloroethane (TCA)	50	18	18	3.3	3.3	U
71-43-2	Benzene	50	11	11	3.3	3.3	U
56-23-5	Carbon Tetrachloride	50	2.1	2.1	0.33	0.33	U
78-87-5	1,2-Dichloropropane	50	15	15	3.3	3.3	U
75-27-4	Bromodichloromethane	50	4.5	4.5	0.67	0.67	U
79-01-6	**Trichloroethene (TCE)**	50	**11**	1.8	**2.0**	0.34	
123-91-1	1,4-Dioxane	50	150	150	42	42	U
10061-01-5	cis-1,3-Dichloropropene	50	30	30	6.6	6.6	U
108-10-1	**4-Methyl-2-pentanone (MIBK)**	50	**62**	27	**15**	6.6	
10061-02-6	trans-1,3-Dichloropropene	50	15	15	3.3	3.3	U
79-00-5	1,1,2-Trichloroethane	50	18	18	3.3	3.3	U
108-88-3	Toluene	50	12	12	3.3	3.3	U
591-78-6	2-Hexanone	50	14	14	3.3	3.3	U
124-48-1	Dibromochloromethane	50	5.7	5.7	0.67	0.67	U
106-93-4	1,2-Dibromoethane (EDB)	50	5.1	5.1	0.66	0.66	U
127-18-4	**Tetrachloroethene (PCE)**	50	**11**	2.4	**1.6**	0.35	
108-90-7	Chlorobenzene	50	15	15	3.3	3.3	U
100-41-4	Ethylbenzene	50	29	29	6.6	6.6	U
179601-23-1	m,p-Xylenes	50	57	57	13	13	U
75-25-2	Bromoform	50	34	34	3.3	3.3	U
100-42-5	Styrene	50	28	28	6.6	6.6	U
95-47-6	o-Xylene	50	29	29	6.6	6.6	U
79-34-5	1,1,2,2-Tetrachloroethane	50	4.5	4.5	0.66	0.66	U
541-73-1	1,3-Dichlorobenzene	50	40	40	6.6	6.6	U
106-46-7	1,4-Dichlorobenzene	50	40	40	6.6	6.6	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Collected: 6/17/14 1504
Date Received: 6/19/14

Sample Name: BLDG 5-2
Lab Code: R1404674-002

Analytical Method: TO-15

Date Analyzed: 6/23/14 1701
Canister Dilution Factor: 1.50

Initial Pressure (psig): -2.60 Final Pressure (psig): 3.51

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	50	40	40	6.6	6.6	U
91-20-3	Naphthalene	50	60	60	11	11	U
87-68-3	Hexachlorobutadiene	50	90	90	8.4	8.4	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	70-130	6/23/14 1701	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Collected: 6/17/14 1503
Date Received: 6/19/14

Sample Name: BLDG 5-3
Lab Code: R1404674-003

Analytical Method: TO-15

Date Analyzed: 6/20/14 1521
Canister Dilution Factor: 1.66

Initial Pressure (psig): -3.73 Final Pressure (psig): 3.47

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	19	5.2	5.2	2.1	2.1	U
74-83-9	Bromomethane	19	38	38	9.7	9.7	U
67-64-1	**Acetone**	19	**1000**	440	**430**	180	D
75-35-4	1,1-Dichloroethene	19	38	38	9.7	9.7	U
75-09-2	Methylene Chloride	19	33	33	9.6	9.6	U
156-60-5	trans-1,2-Dichloroethene	19	38	38	9.7	9.7	U
75-34-3	1,1-Dichloroethane	19	39	39	9.7	9.7	U
1634-04-4	Methyl tert-Butyl Ether	19	69	69	19	19	U
78-93-3	**2-Butanone (MEK)**	19	**300**	57	**100**	19	D
156-59-2	cis-1,2-Dichloroethene	19	38	38	9.7	9.7	U
67-66-3	Chloroform	19	47	47	9.7	9.7	U
107-06-2	1,2-Dichloroethane	19	39	39	9.7	9.7	U
71-55-6	1,1,1-Trichloroethane (TCA)	19	52	52	9.6	9.6	U
71-43-2	Benzene	19	31	31	9.6	9.6	U
56-23-5	Carbon Tetrachloride	19	6.1	6.1	0.97	0.97	U
78-87-5	1,2-Dichloropropane	19	45	45	9.6	9.6	U
75-27-4	Bromodichloromethane	19	13	13	2.0	2.0	U
79-01-6	Trichloroethene (TCE)	19	5.2	5.2	0.98	0.98	U
123-91-1	1,4-Dioxane	19	440	440	120	120	U
10061-01-5	cis-1,3-Dichloropropene	19	87	87	19	19	U
108-10-1	4-Methyl-2-pentanone (MIBK)	19	79	79	19	19	U
10061-02-6	trans-1,3-Dichloropropene	19	44	44	9.6	9.6	U
79-00-5	1,1,2-Trichloroethane	19	52	52	9.6	9.6	U
108-88-3	Toluene	19	36	36	9.5	9.5	U
591-78-6	2-Hexanone	19	39	39	9.6	9.6	U
124-48-1	Dibromochloromethane	19	17	17	1.9	1.9	U
106-93-4	1,2-Dibromoethane (EDB)	19	15	15	1.9	1.9	U
127-18-4	Tetrachloroethene (PCE)	19	7.0	7.0	1.0	1.0	U
108-90-7	Chlorobenzene	19	45	45	9.7	9.7	U
100-41-4	Ethylbenzene	19	83	83	19	19	U
179601-23-1	m,p-Xylenes	19	170	170	38	38	U
75-25-2	Bromoform	19	100	100	9.6	9.6	U
100-42-5	Styrene	19	82	82	19	19	U
95-47-6	o-Xylene	19	83	83	19	19	U
79-34-5	1,1,2,2-Tetrachloroethane	19	13	13	1.9	1.9	U
541-73-1	1,3-Dichlorobenzene	19	120	120	19	19	U
106-46-7	1,4-Dichlorobenzene	19	120	120	19	19	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Collected: 6/17/14 1503
Date Received: 6/19/14

Sample Name: BLDG 5-3
Lab Code: R1404674-003

Analytical Method: TO-15

Date Analyzed: 6/20/14 1521
Canister Dilution Factor: 1.66

Initial Pressure (psig): -3.73 Final Pressure (psig): 3.47

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	19	120	120	19	19	U
91-20-3	Naphthalene	19	170	170	33	33	U
87-68-3	Hexachlorobutadiene	19	260	260	25	25	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	101	70-130	6/20/14 1521	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Collected: 6/17/14 1503
Date Received: 6/19/14

Sample Name: BLDG 5-3
Lab Code: R1404674-003
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 6/23/14 1743
Canister Dilution Factor: 1.66

Initial Pressure (psig): -3.73 Final Pressure (psig): 3.47

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	100	1.0	1.0	0.39	0.39	U
74-83-9	Bromomethane	100	7.1	7.1	1.8	1.8	U
67-64-1	**Acetone**	100	**1100**	83	**480**	35	E
75-35-4	1,1-Dichloroethene	100	7.3	7.3	1.8	1.8	U
75-09-2	Methylene Chloride	100	6.3	6.3	1.8	1.8	U
156-60-5	trans-1,2-Dichloroethene	100	7.3	7.3	1.8	1.8	U
75-34-3	1,1-Dichloroethane	100	7.5	7.5	1.8	1.8	U
1634-04-4	Methyl tert-Butyl Ether	100	13	13	3.6	3.6	U
78-93-3	**2-Butanone (MEK)**	100	**380**	11	**130**	3.7	
156-59-2	cis-1,2-Dichloroethene	100	7.3	7.3	1.8	1.8	U
67-66-3	Chloroform	100	9.0	9.0	1.8	1.8	U
107-06-2	1,2-Dichloroethane	100	7.5	7.5	1.8	1.8	U
71-55-6	1,1,1-Trichloroethane (TCA)	100	10	10	1.8	1.8	U
71-43-2	Benzene	100	5.8	5.8	1.8	1.8	U
56-23-5	Carbon Tetrachloride	100	1.2	1.2	0.18	0.18	U
78-87-5	1,2-Dichloropropane	100	8.5	8.5	1.8	1.8	U
75-27-4	Bromodichloromethane	100	2.5	2.5	0.37	0.37	U
79-01-6	**Trichloroethene (TCE)**	100	**3.5**	1.0	**0.65**	0.19	
123-91-1	1,4-Dioxane	100	83	83	23	23	U
10061-01-5	cis-1,3-Dichloropropene	100	17	17	3.7	3.7	U
108-10-1	**4-Methyl-2-pentanone (MIBK)**	100	**91**	15	**22**	3.6	
10061-02-6	trans-1,3-Dichloropropene	100	8.3	8.3	1.8	1.8	U
79-00-5	1,1,2-Trichloroethane	100	10	10	1.8	1.8	U
108-88-3	Toluene	100	6.8	6.8	1.8	1.8	U
591-78-6	2-Hexanone	100	7.5	7.5	1.8	1.8	U
124-48-1	Dibromochloromethane	100	3.2	3.2	0.37	0.37	U
106-93-4	1,2-Dibromoethane (EDB)	100	2.8	2.8	0.37	0.37	U
127-18-4	**Tetrachloroethene (PCE)**	100	**3.3**	1.3	**0.49**	0.20	
108-90-7	Chlorobenzene	100	8.5	8.5	1.8	1.8	U
100-41-4	Ethylbenzene	100	16	16	3.6	3.6	U
179601-23-1	m,p-Xylenes	100	32	32	7.3	7.3	U
75-25-2	Bromoform	100	19	19	1.8	1.8	U
100-42-5	Styrene	100	16	16	3.7	3.7	U
95-47-6	o-Xylene	100	16	16	3.6	3.6	U
79-34-5	1,1,2,2-Tetrachloroethane	100	2.5	2.5	0.36	0.36	U
541-73-1	1,3-Dichlorobenzene	100	22	22	3.6	3.6	U
106-46-7	1,4-Dichlorobenzene	100	22	22	3.6	3.6	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Collected: 6/17/14 1503
Date Received: 6/19/14

Sample Name: BLDG 5-3
Lab Code: R1404674-003
Run Type: Dilution

Analytical Method: TO-15

Date Analyzed: 6/23/14 1743
Canister Dilution Factor: 1.66

Initial Pressure (psig): -3.73 Final Pressure (psig): 3.47

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	100	22	22	3.6	3.6	U
91-20-3	Naphthalene	100	33	33	6.3	6.3	U
87-68-3	Hexachlorobutadiene	100	50	50	4.7	4.7	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	70-130	6/23/14 1743	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1407123-04

Analytical Method: TO-15

Date Analyzed: 6/20/14 1015

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
67-64-1	Acetone	1000	5.0	5.0	2.1	2.1	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.22	0.22	U
78-93-3	2-Butanone (MEK)	1000	0.65	0.65	0.22	0.22	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
71-43-2	Benzene	1000	0.35	0.35	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
123-91-1	1,4-Dioxane	1000	5.0	5.0	1.4	1.4	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1000	0.90	0.90	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
108-88-3	Toluene	1000	0.41	0.41	0.11	0.11	U
591-78-6	2-Hexanone	1000	0.45	0.45	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
106-93-4	1,2-Dibromoethane (EDB)	1000	0.17	0.17	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
100-42-5	Styrene	1000	0.94	0.94	0.22	0.22	U
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U
541-73-1	1,3-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
106-46-7	1,4-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1407123-04

Analytical Method: TO-15

Date Analyzed: 6/20/14 1015

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
91-20-3	Naphthalene	1000	2.0	2.0	0.38	0.38	U
87-68-3	Hexachlorobutadiene	1000	3.0	3.0	0.28	0.28	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	102	70-130	6/20/14 1015	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1407121-04

Analytical Method: TO-15

Date Analyzed: 6/23/14 1424

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
67-64-1	Acetone	1000	5.0	5.0	2.1	2.1	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.22	0.22	U
78-93-3	2-Butanone (MEK)	1000	0.65	0.65	0.22	0.22	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
71-43-2	Benzene	1000	0.35	0.35	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
123-91-1	1,4-Dioxane	1000	5.0	5.0	1.4	1.4	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1000	0.90	0.90	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
108-88-3	Toluene	1000	0.41	0.41	0.11	0.11	U
591-78-6	2-Hexanone	1000	0.45	0.45	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
106-93-4	1,2-Dibromoethane (EDB)	1000	0.17	0.17	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
100-42-5	Styrene	1000	0.94	0.94	0.22	0.22	U
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U
541-73-1	1,3-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
106-46-7	1,4-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1407121-04

Analytical Method: TO-15

Date Analyzed: 6/23/14 1424

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
91-20-3	Naphthalene	1000	2.0	2.0	0.38	0.38	U
87-68-3	Hexachlorobutadiene	1000	3.0	3.0	0.28	0.28	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	98	70-130	6/23/14 1424	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Analyzed: 6/20/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 398637

Analyte Name	Lab Control Sample RQ1407123-03 Result	Spike Amount	% Rec	% Rec Limits
Vinyl Chloride	5.89	6.58	90	70 - 130
Bromomethane	8.21	9.80	84	70 - 130
Acetone	6.54	6.47	101	50 - 150
1,1-Dichloroethene	10.2	10.3	99	70 - 130
Methylene Chloride	9.06	8.94	101	70 - 130
trans-1,2-Dichloroethene	10.5	10.4	101	70 - 130
1,1-Dichloroethane	10.8	10.4	104	70 - 130
Methyl tert-Butyl Ether	9.24	9.55	97	70 - 130
2-Butanone (MEK)	8.32	7.81	107	70 - 130
cis-1,2-Dichloroethene	9.99	10.4	96	70 - 130
Chloroform	13.3	13.2	101	70 - 130
1,2-Dichloroethane	11.5	10.6	108	70 - 130
1,1,1-Trichloroethane (TCA)	14.2	14.3	99	70 - 130
Benzene	8.27	8.38	99	70 - 130
Carbon Tetrachloride	16.7	16.0	104	70 - 130
1,2-Dichloropropane	11.9	12.1	98	70 - 130
Bromodichloromethane	18.5	17.4	106	70 - 130
Trichloroethene (TCE)	13.2	14.0	95	70 - 130
1,4-Dioxane	8.33	9.37	89	50 - 150
cis-1,3-Dichloropropene	12.3	12.5	98	70 - 130
4-Methyl-2-pentanone (MIBK)	9.75	10.5	92	70 - 130
trans-1,3-Dichloropropene	10.9	10.9	101	70 - 130
1,1,2-Trichloroethane	13.9	14.5	96	70 - 130
Toluene	9.55	9.98	96	70 - 130
2-Hexanone	10.5	11.1	95	70 - 130
Dibromochloromethane	23.5	23.4	100	70 - 130
1,2-Dibromoethane (EDB)	18.9	20.0	95	70 - 130
Tetrachloroethene (PCE)	17.4	18.0	97	70 - 130
Chlorobenzene	12.1	12.3	98	70 - 130
Ethylbenzene	11.0	11.5	95	70 - 130
m,p-Xylenes	20.8	22.4	93	70 - 130
Bromoform	28.3	26.6	106	70 - 130
Styrene	10.3	11.1	93	70 - 130
o-Xylene	10.6	11.7	91	70 - 130
1,1,2,2-Tetrachloroethane	16.8	18.5	90	70 - 130
1,3-Dichlorobenzene	14.3	14.7	97	70 - 130
1,4-Dichlorobenzene	14.0	14.9	94	70 - 130
1,2-Dichlorobenzene	13.9	14.6	95	70 - 130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Analyzed: 6/20/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 398637

Analyte Name	Lab Control Sample RQ1407123-03 Result	Spike Amount	% Rec		% Rec Limits
Naphthalene	16.3	11.0	148		50 - 150
Hexachlorobutadiene	40.9	23.5	174	*	50 - 150

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Analyzed: 6/23/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 398632

Analyte Name	Lab Control Sample RQ1407121-03 Result	Spike Amount	% Rec	% Rec Limits
Vinyl Chloride	5.83	6.58	89	70 - 130
Bromomethane	8.65	9.80	88	70 - 130
Acetone	5.69	6.47	88	50 - 150
1,1-Dichloroethene	9.31	10.3	90	70 - 130
Methylene Chloride	9.12	8.94	102	70 - 130
trans-1,2-Dichloroethene	9.80	10.4	94	70 - 130
1,1-Dichloroethane	10.2	10.4	98	70 - 130
Methyl tert-Butyl Ether	8.84	9.55	93	70 - 130
2-Butanone (MEK)	7.22	7.81	92	70 - 130
cis-1,2-Dichloroethene	10.2	10.4	98	70 - 130
Chloroform	12.3	13.2	93	70 - 130
1,2-Dichloroethane	9.62	10.6	91	70 - 130
1,1,1-Trichloroethane (TCA)	12.7	14.3	88	70 - 130
Benzene	8.32	8.38	99	70 - 130
Carbon Tetrachloride	14.5	16.0	90	70 - 130
1,2-Dichloropropane	11.8	12.1	97	70 - 130
Bromodichloromethane	16.9	17.4	97	70 - 130
Trichloroethene (TCE)	13.3	14.0	95	70 - 130
1,4-Dioxane	10.4	9.37	111	50 - 150
cis-1,3-Dichloropropene	12.1	12.5	97	70 - 130
4-Methyl-2-pentanone (MIBK)	9.33	10.5	89	70 - 130
trans-1,3-Dichloropropene	10.4	10.9	96	70 - 130
1,1,2-Trichloroethane	14.1	14.5	97	70 - 130
Toluene	9.66	9.98	97	70 - 130
2-Hexanone	10.2	11.1	92	70 - 130
Dibromochloromethane	22.4	23.4	96	70 - 130
1,2-Dibromoethane (EDB)	19.3	20.0	97	70 - 130
Tetrachloroethene (PCE)	17.4	18.0	97	70 - 130
Chlorobenzene	12.3	12.3	100	70 - 130
Ethylbenzene	11.0	11.5	95	70 - 130
m,p-Xylenes	20.7	22.4	92	70 - 130
Bromoform	26.8	26.6	101	70 - 130
Styrene	10.2	11.1	92	70 - 130
o-Xylene	10.5	11.7	89	70 - 130
1,1,2,2-Tetrachloroethane	17.0	18.5	92	70 - 130
1,3-Dichlorobenzene	13.9	14.7	94	70 - 130
1,4-Dichlorobenzene	13.7	14.9	92	70 - 130
1,2-Dichlorobenzene	13.5	14.6	93	70 - 130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404674
Date Analyzed: 6/23/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 398632

Analyte Name	Lab Control Sample RQ1407121-03 Result	Spike Amount	% Rec		% Rec Limits
Naphthalene	14.7	11.0	133		50 - 150
Hexachlorobutadiene	35.4	23.5	151	*	50 - 150

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Columbia Analytical Services™

CHAIN OF CUSTODY - AIR

PAGE 1 OF 1

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 585.288.8475 (fax) | www.caslab.com

Requested Turnaround Time in Business Days from Receipt, please circle:
1 Day 2 Day (3 Day) 4 Day 5 Day 10 Day-Standard

CAS Project #:

Company Name: CB&I

Project Name: Varian

CAS Contact:

Address: 450 Raynall St

Project Number: 150454

City, State, Zip: Canton, MA 02021

P.O. #/Billing Information: 876613

Project Manager: Ray Cadorette

Phone: 617-589-6102 Fax:

Email (for result reporting): raymond.cadorette@cbi.com

Sampler (Print & Sign): Dale Dailey

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID	Flow Controller ID	Analysis Method and/or Analytes: TO-15 Site List				Comments Specific Instructions
Bldg 5-1		6/11/14	15:05	SUC00256	FC00869	X				
Bldg 5-2		↓	15:04	SUC00184	FC00729	X				
Bldg 5-3		↓	15:03	SUC00258	FC00740	X				

R1404674 7 Y
CB&I Environmental & Infrastructure
Varian Beverly Air Samples

What State were samples collected in: Massachusetts

Report Tier Levels - please select:
Tier I (Results/Default, if not specified) ___ Tier III (CLP Forms Only) ___
Tier II (Results + QC) X Tier IV (Data Validation) ___

EDD required: YES / NO
Type: _____ EDD Units: _____

Project Requirements (MRLs, QAPP, etc.)
· MADEP CAM
· Complete 2nd Run

Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time
	6/17/14	15:40	Fedex	6/17/14	15:40
Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:
				6/19/14	1220
Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:

Cooler Receipt and Preservation Check Form

Project/Client CBF Folder Number R14-4674 ground

Cooler received on 6/19/14 by: [illegible]

COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	(ALS/ROC) CLIENT
4	Circle: **Wet Ice Dry Ice Gel packs** present?	Y (N)	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date:_____ Time:_____ ID: IR#3 IR#4 From: Temp Blank Sample Bottle

Observed Temp (°C)	AIR						
Correction Factor (°C)	↓						
Corrected Temp (°C)	↓						
Within 0-6°C?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: SMO by [illegible] on 6/19/14 at 1220

5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: [illegible] 6/19/14

Cooler Breakdown: Date: 6/19/14 Time: 1418 by: [illegible]

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
2. Did all bottle labels and tags agree with custody papers? (YES) NO
3. Were correct containers used for the tests indicated? (YES) NO
4. Air Samples: Cassettes / Tubes Intact (Canisters Pressurized) Tedlar® Bags Inflated N/A

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**						

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: _____

Other Comments:

PC Secondary Review: [illegible] 6/22/14

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc
Job Number : 150148-02

Prepared By: Dale Dailey
Date : 7/1/2014

Matrix: Air

Analyte Group : Volatile Organics
Analytical Method : EPA Method TO-15

Completed MADEP CAM Certification Form included: Yes
Laboratory ID No. : 1404675

Chain of Custody included in Data Package ? Yes
Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
6/17/14	VOC TO-15		30 Days	6/20, 6/23/14

Sample temperature within QC limits: NA - Air

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? No

If no, list sample ID where range was exceeded: See Notes

Equipment Field Blank ID : NA
Trip Blank ID : NA

Method Blank: EPA TO-15 6/20/14, 6/23/14

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:

(1) All samples were initially analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method.

(2) All initial and continuing calibrations were compliant.

(3) All LCS and LCSD recoveries were within QC limits except Hexachlorobutadiene was outside limits high in batch 398632 and batch 398637. The data was not impacted since the analytical results were non-detect for this analyte in these batches.

Reviewed By: Pernilla Haley 7/24/14

June 27, 2014

Service Request No: R1404675

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly Air Samples/150148

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on June 19, 2014. For your reference, these analyses have been assigned our service request number **R1404675**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Client Services Manager

CC: Pernilla Haley

ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623 PHONE 585-288-5380 | FAX 585-288-8475
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

ALS Environmental

Client:	CB&I.	**Service Request No.:**	R1404675
Project:	Varian Beverly	**Project No.:**	
Sample Matrix:	Air	**Date Received:**	06/19/14

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS environmental. This report contains analytical results for samples designated for Tier II, MASS. CAM deliverables. When appropriate to the method, blank and LCS results have been reported with each analytical test.

Sample Receipt

CB&I air samples were collected on 06/17/14 and received at ALS in good condition as noted on the receipt and preservation check form. The samples were stored in the laboratory at room temperature prior to analysis. See the ALS case narrative for a cross-reference between Client ID and ALS Job #.

TO - 15 Air Analysis

Six air samples were analyzed for a site list of Volatile Organics by EPA method TO-15.

All samples were initially analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method.

All initial and continuing calibrations were compliant.

All surrogate standard recoveries were within QC limits.

The Method blanks were free of contamination.

The LCS recoveries were all within QC limits of 70 – 130 % except Hexachlorobutadiene was outside limits high on the 06/20/14 and 06/23/14 LCS' and has been flagged with an "*". No data was affected.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental	Project #:
Project Location: Varian Beverly	RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1404675-001-006

Matrices: Groundwater/Surface Water Soil/Sediment Drinking Water Air X Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B X
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes X No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

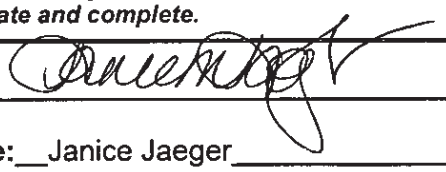
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: 

Position: Client Services Manager

Printed Name: Janice Jaeger

Date: 06/27/14

00003

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1404675

Lab ID	Client ID
R1404675-001	BLDG 5-SV1
R1404675-002	BLDG 5-SV2
R1404675-003	BLDG 5-SV3
R1404675-004	BLDG 5-SV4
R1404675-005	BLDG 5-SV5
R1404675-006	BLDG 5-SV6

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **LARRY LEWIS**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **08 JAN 2014**

Expires: **30 JUN 2014**

Director, Division of Environmental Analysis

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2013

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2013 Expiration Date 30 JUN 2014

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2013

M-NY032 **ALS ENVIRONMENTAL ROCHESTER**
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) **Effective Date** **01 JUL 2013** **Expiration Date** **30 JUN 2014**

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEF	EPA 608

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Collected: 6/17/14 1212
Date Received: 6/19/14

Sample Name: BLDG 5-SV1
Lab Code: R1404675-001

Analytical Method: TO-15

Date Analyzed: 6/20/14 1608
Canister Dilution Factor: 1.64

Initial Pressure (psig): -3.59 Final Pressure (psig): 3.49

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	24	4.1	4.1	1.6	1.6	U
74-83-9	Bromomethane	24	29	29	7.6	7.6	U
67-64-1	**Acetone**	24	**960**	340	**400**	140	
75-35-4	1,1-Dichloroethene	24	30	30	7.6	7.6	U
75-09-2	Methylene Chloride	24	26	26	7.5	7.5	U
156-60-5	trans-1,2-Dichloroethene	24	30	30	7.6	7.6	U
75-34-3	1,1-Dichloroethane	24	31	31	7.6	7.6	U
1634-04-4	Methyl tert-Butyl Ether	24	54	54	15	15	U
78-93-3	**2-Butanone (MEK)**	24	**45**	44	**15**	15	
156-59-2	cis-1,2-Dichloroethene	24	30	30	7.6	7.6	U
67-66-3	Chloroform	24	37	37	7.6	7.6	U
107-06-2	1,2-Dichloroethane	24	31	31	7.6	7.6	U
71-55-6	1,1,1-Trichloroethane (TCA)	24	41	41	7.5	7.5	U
71-43-2	Benzene	24	24	24	7.5	7.5	U
56-23-5	Carbon Tetrachloride	24	4.8	4.8	0.76	0.76	U
78-87-5	1,2-Dichloropropane	24	35	35	7.5	7.5	U
75-27-4	Bromodichloromethane	24	10	10	1.5	1.5	U
79-01-6	**Trichloroethene (TCE)**	24	**8.7**	4.1	**1.6**	0.76	
123-91-1	1,4-Dioxane	24	340	340	95	95	U
10061-01-5	cis-1,3-Dichloropropene	24	68	68	15	15	U
108-10-1	4-Methyl-2-pentanone (MIBK)	24	62	62	15	15	U
10061-02-6	trans-1,3-Dichloropropene	24	34	34	7.5	7.5	U
79-00-5	1,1,2-Trichloroethane	24	41	41	7.5	7.5	U
108-88-3	Toluene	24	28	28	7.4	7.4	U
591-78-6	2-Hexanone	24	31	31	7.5	7.5	U
124-48-1	Dibromochloromethane	24	13	13	1.5	1.5	U
106-93-4	1,2-Dibromoethane (EDB)	24	12	12	1.5	1.5	U
127-18-4	**Tetrachloroethene (PCE)**	24	**8.2**	5.5	**1.2**	0.81	
108-90-7	Chlorobenzene	24	35	35	7.6	7.6	U
100-41-4	Ethylbenzene	24	65	65	15	15	U
179601-23-1	m,p-Xylenes	24	130	130	30	30	U
75-25-2	Bromoform	24	78	78	7.5	7.5	U
100-42-5	Styrene	24	64	64	15	15	U
95-47-6	o-Xylene	24	65	65	15	15	U
79-34-5	1,1,2,2-Tetrachloroethane	24	10	10	1.5	1.5	U
541-73-1	1,3-Dichlorobenzene	24	90	90	15	15	U
106-46-7	1,4-Dichlorobenzene	24	90	90	15	15	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Collected: 6/17/14 1212
Date Received: 6/19/14

Sample Name: BLDG 5-SV1
Lab Code: R1404675-001

Analytical Method: TO-15

Date Analyzed: 6/20/14 1608
Canister Dilution Factor: 1.64

Initial Pressure (psig): -3.59 Final Pressure (psig): 3.49

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	24	90	90	15	15	U
91-20-3	Naphthalene	24	140	140	26	26	U
87-68-3	Hexachlorobutadiene	24	210	210	19	19	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	101	70-130	6/20/14 1608	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Collected: 6/17/14 1211
Date Received: 6/19/14

Sample Name: BLDG 5-SV2
Lab Code: R1404675-002

Analytical Method: TO-15

Date Analyzed: 6/23/14 1910
Canister Dilution Factor: 1.80

Initial Pressure (psig): -4.57 Final Pressure (psig): 3.58

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	270	0.40	0.40	0.16	0.16	U
74-83-9	Bromomethane	270	2.9	2.9	0.74	0.74	U
67-64-1	**Acetone**	270	**91**	33	**38**	14	
75-35-4	1,1-Dichloroethene	270	2.9	2.9	0.74	0.74	U
75-09-2	Methylene Chloride	270	2.5	2.5	0.73	0.73	U
156-60-5	trans-1,2-Dichloroethene	270	2.9	2.9	0.74	0.74	U
75-34-3	1,1-Dichloroethane	270	3.0	3.0	0.74	0.74	U
1634-04-4	Methyl tert-Butyl Ether	270	5.3	5.3	1.5	1.5	U
78-93-3	**2-Butanone (MEK)**	270	**200**	4.3	**68**	1.5	
156-59-2	cis-1,2-Dichloroethene	270	2.9	2.9	0.74	0.74	U
67-66-3	Chloroform	270	3.6	3.6	0.74	0.74	U
107-06-2	1,2-Dichloroethane	270	3.0	3.0	0.74	0.74	U
71-55-6	1,1,1-Trichloroethane (TCA)	270	4.0	4.0	0.73	0.73	U
71-43-2	Benzene	270	2.3	2.3	0.73	0.73	U
56-23-5	**Carbon Tetrachloride**	270	**0.49**	0.47	**0.077**	0.074	
78-87-5	1,2-Dichloropropane	270	3.4	3.4	0.74	0.74	U
75-27-4	Bromodichloromethane	270	1.0	1.0	0.15	0.15	U
79-01-6	**Trichloroethene (TCE)**	270	**10**	0.40	**1.9**	0.074	
123-91-1	1,4-Dioxane	270	33	33	9.3	9.3	U
10061-01-5	cis-1,3-Dichloropropene	270	6.7	6.7	1.5	1.5	U
108-10-1	**4-Methyl-2-pentanone (MIBK)**	270	**98**	6.0	**24**	1.5	
10061-02-6	trans-1,3-Dichloropropene	270	3.3	3.3	0.73	0.73	U
79-00-5	1,1,2-Trichloroethane	270	4.0	4.0	0.73	0.73	U
108-88-3	**Toluene**	270	**15**	2.7	**4.0**	0.73	
591-78-6	**2-Hexanone**	270	**15**	3.0	**3.7**	0.73	
124-48-1	Dibromochloromethane	270	1.3	1.3	0.15	0.15	U
106-93-4	1,2-Dibromoethane (EDB)	270	1.1	1.1	0.15	0.15	U
127-18-4	**Tetrachloroethene (PCE)**	270	**8.1**	0.53	**1.2**	0.079	
108-90-7	Chlorobenzene	270	3.4	3.4	0.74	0.74	U
100-41-4	Ethylbenzene	270	6.3	6.3	1.5	1.5	U
179601-23-1	**m,p-Xylenes**	270	**19**	13	**4.5**	2.9	
75-25-2	Bromoform	270	7.6	7.6	0.74	0.74	U
100-42-5	Styrene	270	6.3	6.3	1.5	1.5	U
95-47-6	**o-Xylene**	270	**6.4**	6.3	1.5	1.5	
79-34-5	1,1,2,2-Tetrachloroethane	270	1.0	1.0	0.15	0.15	U
541-73-1	1,3-Dichlorobenzene	270	8.8	8.8	1.5	1.5	U
106-46-7	1,4-Dichlorobenzene	270	8.8	8.8	1.5	1.5	U

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Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Collected: 6/17/14 1211
Date Received: 6/19/14

Sample Name: BLDG 5-SV2
Lab Code: R1404675-002

Analytical Method: TO-15

Date Analyzed: 6/23/14 1910
Canister Dilution Factor: 1.80

Initial Pressure (psig): -4.57 Final Pressure (psig): 3.58

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	270	8.8	8.8	1.5	1.5	U
91-20-3	Naphthalene	270	13	13	2.5	2.5	U
87-68-3	Hexachlorobutadiene	270	20	20	1.9	1.9	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	97	70-130	6/23/14 1910	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Collected: 6/17/14 1215
Date Received: 6/19/14

Sample Name: BLDG 5-SV3
Lab Code: R1404675-003

Analytical Method: TO-15

Date Analyzed: 6/23/14 1952
Canister Dilution Factor: 1.69

Initial Pressure (psig): -3.93 Final Pressure (psig): 3.48

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	60	1.7	1.7	0.66	0.66	U
74-83-9	Bromomethane	60	12	12	3.1	3.1	U
67-64-1	**Acetone**	60	**360**	140	**150**	59	
75-35-4	1,1-Dichloroethene	60	12	12	3.1	3.1	U
75-09-2	Methylene Chloride	60	11	11	3.1	3.1	U
156-60-5	trans-1,2-Dichloroethene	60	12	12	3.1	3.1	U
75-34-3	1,1-Dichloroethane	60	13	13	3.1	3.1	U
1634-04-4	Methyl tert-Butyl Ether	60	22	22	6.2	6.2	U
78-93-3	**2-Butanone (MEK)**	60	**36**	18	**12**	6.2	
156-59-2	cis-1,2-Dichloroethene	60	12	12	3.1	3.1	U
67-66-3	Chloroform	60	15	15	3.1	3.1	U
107-06-2	1,2-Dichloroethane	60	13	13	3.1	3.1	U
71-55-6	1,1,1-Trichloroethane (TCA)	60	17	17	3.1	3.1	U
71-43-2	Benzene	60	9.9	9.9	3.1	3.1	U
56-23-5	Carbon Tetrachloride	60	2.0	2.0	0.31	0.31	U
78-87-5	1,2-Dichloropropane	60	14	14	3.1	3.1	U
75-27-4	Bromodichloromethane	60	4.2	4.2	0.63	0.63	U
79-01-6	**Trichloroethene (TCE)**	60	**580**	1.7	**110**	0.31	
123-91-1	1,4-Dioxane	60	140	140	39	39	U
10061-01-5	cis-1,3-Dichloropropene	60	28	28	6.2	6.2	U
108-10-1	4-Methyl-2-pentanone (MIBK)	60	25	25	6.2	6.2	U
10061-02-6	trans-1,3-Dichloropropene	60	14	14	3.1	3.1	U
79-00-5	1,1,2-Trichloroethane	60	17	17	3.1	3.1	U
108-88-3	**Toluene**	60	**24**	12	**6.3**	3.1	
591-78-6	2-Hexanone	60	13	13	3.1	3.1	U
124-48-1	Dibromochloromethane	60	5.4	5.4	0.63	0.63	U
106-93-4	1,2-Dibromoethane (EDB)	60	4.8	4.8	0.62	0.62	U
127-18-4	**Tetrachloroethene (PCE)**	60	**210**	2.3	**31**	0.33	
108-90-7	Chlorobenzene	60	14	14	3.1	3.1	U
100-41-4	Ethylbenzene	60	27	27	6.2	6.2	U
179601-23-1	m,p-Xylenes	60	54	54	12	12	U
75-25-2	Bromoform	60	32	32	3.1	3.1	U
100-42-5	Styrene	60	26	26	6.2	6.2	U
95-47-6	o-Xylene	60	27	27	6.2	6.2	U
79-34-5	1,1,2,2-Tetrachloroethane	60	4.2	4.2	0.62	0.62	U
541-73-1	1,3-Dichlorobenzene	60	37	37	6.2	6.2	U
106-46-7	1,4-Dichlorobenzene	60	37	37	6.2	6.2	U

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Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Collected: 6/17/14 1215
Date Received: 6/19/14

Sample Name: BLDG 5-SV3
Lab Code: R1404675-003

Analytical Method: TO-15

Date Analyzed: 6/23/14 1952
Canister Dilution Factor: 1.69

Initial Pressure (psig): -3.93 Final Pressure (psig): 3.48

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	60	37	37	6.2	6.2	U
91-20-3	Naphthalene	60	56	56	11	11	U
87-68-3	Hexachlorobutadiene	60	85	85	7.9	7.9	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	101	70-130	6/23/14 1952	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Collected: 6/17/14 1214
Date Received: 6/19/14

Sample Name: BLDG 5-SV4
Lab Code: R1404675-004

Analytical Method: TO-15

Date Analyzed: 6/23/14 2036
Canister Dilution Factor: 1.45

Initial Pressure (psig): -2.06 Final Pressure (psig): 3.58

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	100	0.87	0.87	0.34	0.34	U
74-83-9	Bromomethane	100	6.2	6.2	1.6	1.6	U
67-64-1	Acetone	100	73	73	31	31	U
75-35-4	1,1-Dichloroethene	100	6.4	6.4	1.6	1.6	U
75-09-2	Methylene Chloride	100	5.5	5.5	1.6	1.6	U
156-60-5	trans-1,2-Dichloroethene	100	6.4	6.4	1.6	1.6	U
75-34-3	1,1-Dichloroethane	100	6.5	6.5	1.6	1.6	U
1634-04-4	Methyl tert-Butyl Ether	100	11	11	3.2	3.2	U
78-93-3	2-Butanone (MEK)	100	9.4	9.4	3.2	3.2	U
156-59-2	cis-1,2-Dichloroethene	100	6.4	6.4	1.6	1.6	U
67-66-3	Chloroform	100	7.8	7.8	1.6	1.6	U
107-06-2	1,2-Dichloroethane	100	6.5	6.5	1.6	1.6	U
71-55-6	1,1,1-Trichloroethane (TCA)	100	8.7	8.7	1.6	1.6	U
71-43-2	Benzene	100	5.1	5.1	1.6	1.6	U
56-23-5	Carbon Tetrachloride	100	1.0	1.0	0.16	0.16	U
78-87-5	1,2-Dichloropropane	100	7.4	7.4	1.6	1.6	U
75-27-4	Bromodichloromethane	100	2.2	2.2	0.32	0.32	U
79-01-6	**Trichloroethene (TCE)**	100	**14**	0.87	**2.5**	0.16	
123-91-1	1,4-Dioxane	100	73	73	20	20	U
10061-01-5	cis-1,3-Dichloropropene	100	15	15	3.2	3.2	U
108-10-1	4-Methyl-2-pentanone (MIBK)	100	13	13	3.2	3.2	U
10061-02-6	trans-1,3-Dichloropropene	100	7.3	7.3	1.6	1.6	U
79-00-5	1,1,2-Trichloroethane	100	8.7	8.7	1.6	1.6	U
108-88-3	Toluene	100	5.9	5.9	1.6	1.6	U
591-78-6	2-Hexanone	100	6.5	6.5	1.6	1.6	U
124-48-1	Dibromochloromethane	100	2.8	2.8	0.32	0.32	U
106-93-4	1,2-Dibromoethane (EDB)	100	2.5	2.5	0.32	0.32	U
127-18-4	**Tetrachloroethene (PCE)**	100	**24**	1.2	**3.6**	0.17	
108-90-7	Chlorobenzene	100	7.4	7.4	1.6	1.6	U
100-41-4	Ethylbenzene	100	14	14	3.2	3.2	U
179601-23-1	m,p-Xylenes	100	28	28	6.4	6.4	U
75-25-2	Bromoform	100	17	17	1.6	1.6	U
100-42-5	Styrene	100	14	14	3.2	3.2	U
95-47-6	o-Xylene	100	14	14	3.2	3.2	U
79-34-5	1,1,2,2-Tetrachloroethane	100	2.2	2.2	0.32	0.32	U
541-73-1	1,3-Dichlorobenzene	100	19	19	3.2	3.2	U
106-46-7	1,4-Dichlorobenzene	100	19	19	3.2	3.2	U

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Analytical Report

Client:	CB&I	**Service Request:**	R1404675
Project:	Varian Beverly Air Samples/150148	**Date Collected:**	6/17/14 1214
Sample Matrix:	Air	**Date Received:**	6/19/14
Sample Name:	BLDG 5-SV4		
Lab Code:	R1404675-004		

Analytical Method: TO-15

Date Analyzed: 6/23/14 2036
Canister Dilution Factor: 1.45

Initial Pressure (psig): -2.06 Final Pressure (psig): 3.58

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	100	19	19	3.2	3.2	U
91-20-3	Naphthalene	100	29	29	5.5	5.5	U
87-68-3	Hexachlorobutadiene	100	44	44	4.1	4.1	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	97	70-130	6/23/14 2036	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Collected: 6/17/14 1213
Date Received: 6/19/14

Sample Name: BLDG 5-SV5
Lab Code: R1404675-005

Analytical Method: TO-15

Date Analyzed: 6/23/14 2122
Canister Dilution Factor: 1.47

Initial Pressure (psig): -2.36 Final Pressure (psig): 3.48

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	400	0.22	0.22	0.086	0.086	U
74-83-9	Bromomethane	400	1.6	1.6	0.41	0.41	U
67-64-1	**Acetone**	400	**41**	18	**17**	7.7	
75-35-4	1,1-Dichloroethene	400	1.6	1.6	0.41	0.41	U
75-09-2	Methylene Chloride	400	1.4	1.4	0.40	0.40	U
156-60-5	trans-1,2-Dichloroethene	400	1.6	1.6	0.41	0.41	U
75-34-3	1,1-Dichloroethane	400	1.7	1.7	0.41	0.41	U
1634-04-4	Methyl tert-Butyl Ether	400	2.9	2.9	0.81	0.81	U
78-93-3	**2-Butanone (MEK)**	400	**27**	2.4	**9.0**	0.81	
156-59-2	cis-1,2-Dichloroethene	400	1.6	1.6	0.41	0.41	U
67-66-3	Chloroform	400	2.0	2.0	0.41	0.41	U
107-06-2	1,2-Dichloroethane	400	1.7	1.7	0.41	0.41	U
71-55-6	1,1,1-Trichloroethane (TCA)	400	2.2	2.2	0.40	0.40	U
71-43-2	Benzene	400	1.3	1.3	0.40	0.40	U
56-23-5	**Carbon Tetrachloride**	400	**0.49**	0.26	**0.077**	0.041	
78-87-5	1,2-Dichloropropane	400	1.9	1.9	0.41	0.41	U
75-27-4	Bromodichloromethane	400	0.55	0.55	0.082	0.082	U
79-01-6	**Trichloroethene (TCE)**	400	**6.0**	0.22	**1.1**	0.041	
123-91-1	1,4-Dioxane	400	18	18	5.1	5.1	U
10061-01-5	cis-1,3-Dichloropropene	400	3.7	3.7	0.81	0.81	U
108-10-1	**4-Methyl-2-pentanone (MIBK)**	400	**7.2**	3.3	**1.8**	0.81	
10061-02-6	trans-1,3-Dichloropropene	400	1.8	1.8	0.40	0.40	U
79-00-5	1,1,2-Trichloroethane	400	2.2	2.2	0.40	0.40	U
108-88-3	**Toluene**	400	**21**	1.5	**5.6**	0.40	
591-78-6	2-Hexanone	400	1.7	1.7	0.40	0.40	U
124-48-1	Dibromochloromethane	400	0.70	0.70	0.082	0.082	U
106-93-4	1,2-Dibromoethane (EDB)	400	0.62	0.62	0.081	0.081	U
127-18-4	**Tetrachloroethene (PCE)**	400	**64**	0.29	**9.5**	0.043	
108-90-7	Chlorobenzene	400	1.9	1.9	0.41	0.41	U
100-41-4	**Ethylbenzene**	400	**10**	3.5	**2.4**	0.80	
179601-23-1	**m,p-Xylenes**	400	**35**	7.0	**8.1**	1.6	
75-25-2	Bromoform	400	4.2	4.2	0.41	0.41	U
100-42-5	**Styrene**	400	**18**	3.5	**4.1**	0.81	
95-47-6	**o-Xylene**	400	**15**	3.5	**3.5**	0.80	
79-34-5	1,1,2,2-Tetrachloroethane	400	0.55	0.55	0.080	0.080	U
541-73-1	1,3-Dichlorobenzene	400	4.9	4.9	0.81	0.81	U
106-46-7	1,4-Dichlorobenzene	400	4.9	4.9	0.81	0.81	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Collected: 6/17/14 1213
Date Received: 6/19/14

Sample Name: BLDG 5-SV5
Lab Code: R1404675-005

Analytical Method: TO-15

Date Analyzed: 6/23/14 2122
Canister Dilution Factor: 1.47

Initial Pressure (psig): -2.36 Final Pressure (psig): 3.48

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	400	4.9	4.9	0.81	0.81	U
91-20-3	Naphthalene	400	7.4	7.4	1.4	1.4	U
87-68-3	Hexachlorobutadiene	400	11	11	1.0	1.0	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	70-130	6/23/14 2122	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Collected: 6/17/14 1213
Date Received: 6/19/14

Sample Name: BLDG 5-SV6
Lab Code: R1404675-006

Analytical Method: TO-15

Date Analyzed: 6/20/14 1654
Canister Dilution Factor: 1.59

Initial Pressure (psig): -3.24 Final Pressure (psig): 3.51

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	**Vinyl Chloride**	27	**19**	3.5	**7.3**	1.4	
74-83-9	Bromomethane	27	25	25	6.5	6.5	U
67-64-1	Acetone	27	290	290	120	120	U
75-35-4	**1,1-Dichloroethene**	27	**280**	26	**71**	6.5	
75-09-2	Methylene Chloride	27	22	22	6.4	6.4	U
156-60-5	trans-1,2-Dichloroethene	27	26	26	6.5	6.5	U
75-34-3	**1,1-Dichloroethane**	27	**1600**	27	**390**	6.6	
1634-04-4	Methyl tert-Butyl Ether	27	47	47	13	13	U
78-93-3	2-Butanone (MEK)	27	38	38	13	13	U
156-59-2	**cis-1,2-Dichloroethene**	27	**950**	26	**240**	6.5	
67-66-3	Chloroform	27	32	32	6.5	6.5	U
107-06-2	1,2-Dichloroethane	27	27	27	6.6	6.6	U
71-55-6	**1,1,1-Trichloroethane (TCA)**	27	**680**	35	**130**	6.5	
71-43-2	Benzene	27	21	21	6.5	6.5	U
56-23-5	Carbon Tetrachloride	27	4.1	4.1	0.66	0.66	U
78-87-5	1,2-Dichloropropane	27	30	30	6.5	6.5	U
75-27-4	Bromodichloromethane	27	8.8	8.8	1.3	1.3	U
79-01-6	**Trichloroethene (TCE)**	27	**970**	3.5	**180**	0.66	
123-91-1	1,4-Dioxane	27	290	290	82	82	U
10061-01-5	cis-1,3-Dichloropropene	27	59	59	13	13	U
108-10-1	4-Methyl-2-pentanone (MIBK)	27	53	53	13	13	U
10061-02-6	trans-1,3-Dichloropropene	27	29	29	6.5	6.5	U
79-00-5	1,1,2-Trichloroethane	27	35	35	6.5	6.5	U
108-88-3	Toluene	27	24	24	6.4	6.4	U
591-78-6	2-Hexanone	27	27	27	6.5	6.5	U
124-48-1	Dibromochloromethane	27	11	11	1.3	1.3	U
106-93-4	1,2-Dibromoethane (EDB)	27	10	10	1.3	1.3	U
127-18-4	**Tetrachloroethene (PCE)**	27	**420**	4.7	**61**	0.70	
108-90-7	Chlorobenzene	27	30	30	6.5	6.5	U
100-41-4	Ethylbenzene	27	56	56	13	13	U
179601-23-1	m,p-Xylenes	27	110	110	26	26	U
75-25-2	Bromoform	27	67	67	6.5	6.5	U
100-42-5	Styrene	27	55	55	13	13	U
95-47-6	o-Xylene	27	56	56	13	13	U
79-34-5	1,1,2,2-Tetrachloroethane	27	8.8	8.8	1.3	1.3	U
541-73-1	1,3-Dichlorobenzene	27	78	78	13	13	U
106-46-7	1,4-Dichlorobenzene	27	78	78	13	13	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Collected: 6/17/14 1213
Date Received: 6/19/14

Sample Name: BLDG 5-SV6
Lab Code: R1404675-006

Analytical Method: TO-15

Date Analyzed: 6/20/14 1654
Canister Dilution Factor: 1.59

Initial Pressure (psig): -3.24 Final Pressure (psig): 3.51

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	27	78	78	13	13	U
91-20-3	Naphthalene	27	120	120	22	22	U
87-68-3	Hexachlorobutadiene	27	180	180	17	17	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	100	70-130	6/20/14 1654	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1407123-04

Analytical Method: TO-15

Date Analyzed: 6/20/14 1015

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
67-64-1	Acetone	1000	5.0	5.0	2.1	2.1	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.22	0.22	U
78-93-3	2-Butanone (MEK)	1000	0.65	0.65	0.22	0.22	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
71-43-2	Benzene	1000	0.35	0.35	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
123-91-1	1,4-Dioxane	1000	5.0	5.0	1.4	1.4	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1000	0.90	0.90	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
108-88-3	Toluene	1000	0.41	0.41	0.11	0.11	U
591-78-6	2-Hexanone	1000	0.45	0.45	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
106-93-4	1,2-Dibromoethane (EDB)	1000	0.17	0.17	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
100-42-5	Styrene	1000	0.94	0.94	0.22	0.22	U
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U
541-73-1	1,3-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
106-46-7	1,4-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1407123-04

Analytical Method: TO-15

Date Analyzed: 6/20/14 1015

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
91-20-3	Naphthalene	1000	2.0	2.0	0.38	0.38	U
87-68-3	Hexachlorobutadiene	1000	3.0	3.0	0.28	0.28	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	102	70-130	6/20/14 1015	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1407121-04

Analytical Method: TO-15

Date Analyzed: 6/23/14 1424

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
67-64-1	Acetone	1000	5.0	5.0	2.1	2.1	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.22	0.22	U
78-93-3	2-Butanone (MEK)	1000	0.65	0.65	0.22	0.22	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
71-43-2	Benzene	1000	0.35	0.35	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
123-91-1	1,4-Dioxane	1000	5.0	5.0	1.4	1.4	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1000	0.90	0.90	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
108-88-3	Toluene	1000	0.41	0.41	0.11	0.11	U
591-78-6	2-Hexanone	1000	0.45	0.45	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
106-93-4	1,2-Dibromoethane (EDB)	1000	0.17	0.17	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
100-42-5	Styrene	1000	0.94	0.94	0.22	0.22	U
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U
541-73-1	1,3-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
106-46-7	1,4-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1407121-04

Analytical Method: TO-15

Date Analyzed: 6/23/14 1424

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
91-20-3	Naphthalene	1000	2.0	2.0	0.38	0.38	U
87-68-3	Hexachlorobutadiene	1000	3.0	3.0	0.28	0.28	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	98	70-130	6/23/14 1424	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Analyzed: 6/20/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 398637

	Lab Control Sample RQ1407123-03			
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**
Vinyl Chloride	5.89	6.58	90	70 - 130
Bromomethane	8.21	9.80	84	70 - 130
Acetone	6.54	6.47	101	50 - 150
1,1-Dichloroethene	10.2	10.3	99	70 - 130
Methylene Chloride	9.06	8.94	101	70 - 130
trans-1,2-Dichloroethene	10.5	10.4	101	70 - 130
1,1-Dichloroethane	10.8	10.4	104	70 - 130
Methyl tert-Butyl Ether	9.24	9.55	97	70 - 130
2-Butanone (MEK)	8.32	7.81	107	70 - 130
cis-1,2-Dichloroethene	9.99	10.4	96	70 - 130
Chloroform	13.3	13.2	101	70 - 130
1,2-Dichloroethane	11.5	10.6	108	70 - 130
1,1,1-Trichloroethane (TCA)	14.2	14.3	99	70 - 130
Benzene	8.27	8.38	99	70 - 130
Carbon Tetrachloride	16.7	16.0	104	70 - 130
1,2-Dichloropropane	11.9	12.1	98	70 - 130
Bromodichloromethane	18.5	17.4	106	70 - 130
Trichloroethene (TCE)	13.2	14.0	95	70 - 130
1,4-Dioxane	8.33	9.37	89	50 - 150
cis-1,3-Dichloropropene	12.3	12.5	98	70 - 130
4-Methyl-2-pentanone (MIBK)	9.75	10.5	92	70 - 130
trans-1,3-Dichloropropene	10.9	10.9	101	70 - 130
1,1,2-Trichloroethane	13.9	14.5	96	70 - 130
Toluene	9.55	9.98	96	70 - 130
2-Hexanone	10.5	11.1	95	70 - 130
Dibromochloromethane	23.5	23.4	100	70 - 130
1,2-Dibromoethane (EDB)	18.9	20.0	95	70 - 130
Tetrachloroethene (PCE)	17.4	18.0	97	70 - 130
Chlorobenzene	12.1	12.3	98	70 - 130
Ethylbenzene	11.0	11.5	95	70 - 130
m,p-Xylenes	20.8	22.4	93	70 - 130
Bromoform	28.3	26.6	106	70 - 130
Styrene	10.3	11.1	93	70 - 130
o-Xylene	10.6	11.7	91	70 - 130
1,1,2,2-Tetrachloroethane	16.8	18.5	90	70 - 130
1,3-Dichlorobenzene	14.3	14.7	97	70 - 130
1,4-Dichlorobenzene	14.0	14.9	94	70 - 130
1,2-Dichlorobenzene	13.9	14.6	95	70 - 130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Analyzed: 6/20/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 398637

	Lab Control Sample RQ1407123-03				
Analyte Name	**Result**	**Spike Amount**	**% Rec**		**% Rec Limits**
Naphthalene	16.3	11.0	148		50 - 150
Hexachlorobutadiene	40.9	23.5	174	*	50 - 150

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Analyzed: 6/23/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 398632

Analyte Name	Lab Control Sample RQ1407121-03 Result	Spike Amount	% Rec	% Rec Limits
Vinyl Chloride	5.83	6.58	89	70 - 130
Bromomethane	8.65	9.80	88	70 - 130
Acetone	5.69	6.47	88	50 - 150
1,1-Dichloroethene	9.31	10.3	90	70 - 130
Methylene Chloride	9.12	8.94	102	70 - 130
trans-1,2-Dichloroethene	9.80	10.4	94	70 - 130
1,1-Dichloroethane	10.2	10.4	98	70 - 130
Methyl tert-Butyl Ether	8.84	9.55	93	70 - 130
2-Butanone (MEK)	7.22	7.81	92	70 - 130
cis-1,2-Dichloroethene	10.2	10.4	98	70 - 130
Chloroform	12.3	13.2	93	70 - 130
1,2-Dichloroethane	9.62	10.6	91	70 - 130
1,1,1-Trichloroethane (TCA)	12.7	14.3	88	70 - 130
Benzene	8.32	8.38	99	70 - 130
Carbon Tetrachloride	14.5	16.0	90	70 - 130
1,2-Dichloropropane	11.8	12.1	97	70 - 130
Bromodichloromethane	16.9	17.4	97	70 - 130
Trichloroethene (TCE)	13.3	14.0	95	70 - 130
1,4-Dioxane	10.4	9.37	111	50 - 150
cis-1,3-Dichloropropene	12.1	12.5	97	70 - 130
4-Methyl-2-pentanone (MIBK)	9.33	10.5	89	70 - 130
trans-1,3-Dichloropropene	10.4	10.9	96	70 - 130
1,1,2-Trichloroethane	14.1	14.5	97	70 - 130
Toluene	9.66	9.98	97	70 - 130
2-Hexanone	10.2	11.1	92	70 - 130
Dibromochloromethane	22.4	23.4	96	70 - 130
1,2-Dibromoethane (EDB)	19.3	20.0	97	70 - 130
Tetrachloroethene (PCE)	17.4	18.0	97	70 - 130
Chlorobenzene	12.3	12.3	100	70 - 130
Ethylbenzene	11.0	11.5	95	70 - 130
m,p-Xylenes	20.7	22.4	92	70 - 130
Bromoform	26.8	26.6	101	70 - 130
Styrene	10.2	11.1	92	70 - 130
o-Xylene	10.5	11.7	89	70 - 130
1,1,2,2-Tetrachloroethane	17.0	18.5	92	70 - 130
1,3-Dichlorobenzene	13.9	14.7	94	70 - 130
1,4-Dichlorobenzene	13.7	14.9	92	70 - 130
1,2-Dichlorobenzene	13.5	14.6	93	70 - 130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1404675
Date Analyzed: 6/23/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 398632

Lab Control Sample
RQ1407121-03

Analyte Name	Result	Spike Amount	% Rec		% Rec Limits
Naphthalene	14.7	11.0	133		50 - 150
Hexachlorobutadiene	35.4	23.5	151	*	50 - 150

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Columbia Analytical Services

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PAGE 1 OF 1

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Requested Turnaround Time in Business Days from Receipt, please circle:
1 Day 2 Day 3 Day 4 Day 5 Day (10 Day-Standard)

CAS Project #:

Company Name: CB&I

Project Name: Varian

CAS Contact:

Address: 150 Royall St

Project Number: 150148

City, State, Zip: Canton, MA 02021

P.O. #/Billing Information: 876613

Project Manager: Ray Cadorette

Phone: 617-589-6102

Fax:

Email (for result reporting): raymond.cadorette@cbi.com

Sampler (Print & Sign): Dale Dailey

Analysis Method and/or Analytes

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID	Flow Controller ID	TO-15 Site List				**Comments** Specific Instructions
Bldg 5-SV1		6/17/14	12:12	SLC00233	FC00855	X				
Bldg 5-SV2			12:11	SLC00228	FC00862	X				
Bldg 5-SV3			12:15	SLC00187	FC00863	X				
~~Bldg 5-SV4~~ (DO)										
Bldg 5-SV4			12:14	SLC00242	FC00864	X				
Bldg 5-SV5			12:13	SLC00235	FC00853	X				
Bldg 5-SV6			12:13	SLC00257	FC00852	X				

What State were samples collected in: Massachusetts

Report Tier Levels - please select:
Tier I (Results/Default, if not specified) ___
Tier II (Results + QC) X
Tier III (CLP Forms Only) ___
Tier IV (Data Validation) ___

EDD required: YES / NO
Type: _____ EDD Units: _____

Project Requirements (MRLs, QAPP, etc.)
MADEP CAM
Complete 2nd Run.

Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:
	6/17/14	15:40	Fedex	6/17/14	15:40
Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:
				6/19/14	1220
Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:

R1404675 7 Y
CB&I Environmental & Infrastructure
Varian Beverly Air Samples

V 7-11

Cooler Receipt and Preservation Check Form

Project/Client CB+F Folder Number R14-4675 ~~4575~~ ground

Cooler received on 6/19/14 by: (M)

COURIER: ALS UPS (FEDEX) VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	(ALS/ROC) CLIENT
4	Circle: **Wet Ice Dry Ice Gel packs** present?	Y (N)	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date:_____ Time:_____ ID: IR#3 IR#4 From: Temp Blank Sample Bottle

Observed Temp (°C)	AIR						
Correction Factor (°C)	↓						
Corrected Temp (°C)	↓						
Within 0-6°C?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples:_____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: SM0 by (M) on 6/19/14 at 1220
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: JMS 6/19/14

Cooler Breakdown: Date: 6/19/14 Time: 1420 by: (M)

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
2. Did all bottle labels and tags agree with custody papers? (YES) NO
3. Were correct containers used for the tests indicated? (YES) NO
4. Air Samples: Cassettes / Tubes Intact (Canisters Pressurized) Tedlar® Bags Inflated N/A

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**						

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers:_____
Other Comments:

PC Secondary Review: JMS 6/23/14 *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc
Job Number : 150148-01

Prepared By: Dale Dailey
Date : 7/25/2014

Matrix: Air

Analyte Group : Volatile Organics
Analytical Method : EPA Method TO-15

Completed MADEP CAM Certification Form included: Yes
Laboratory ID No. : 1405214

Chain of Custody included in Data Package ? Yes
Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
7/8/14	VOC TO-15		30 Days	7/15/14

Sample temperature within QC limits: NA - Air

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? No

If no, list sample ID where range was exceeded: See Notes

Equipment Field Blank ID : NA
Trip Blank ID : NA

Method Blank: EPA TO-15 7/15/2014

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:

(1) All samples were initially analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method.

(2) The pressure in BLD3-SVE1 was received at -23.9 Deg Hg, so it appears the can did not have much sample in it. The sample was pressurized to the standard 3.5 psi and analyzed along with the other samples received (which were at -1.7 and 2.3). The filters were checked and tested and were performing properly. The results for this sample should be considered highly diluted due to the low volume of air present in the canister. Data was given a J or UJ qualifier.

(3) All initial and continuing calibrations were compliant.

(4) All LCS recoveries were within QC limits except Hexachlorobutadiene was outside limits high in batch 401924.
The data was not impacted since the analytical results were non-detect for this analyte in this batch.

Reviewed By: Pernilla Haley 10/15/14

July 17, 2014

Service Request No: R1405214

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly Air Samples/150148

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on July 9, 2014. For your reference, these analyses have been assigned our service request number **R1405214.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Client Services Manager

CC: Pernilla Haley

ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623 PHONE 585-288-5380 | FAX 585-288-8475
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

ALS Environmental

Client:	CB&I.	**Service Request No.:**	R1405214
Project:	Varian Beverly	**Project No.:**	
Sample Matrix:	Air	**Date Received:**	07/09/14

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS environmental. This report contains analytical results for samples designated for Tier II, MASS. CAM deliverables. When appropriate to the method, blank and LCS results have been reported with each analytical test.

Sample Receipt

CB&I air samples were collected on 07/08/14 and received at ALS in good condition as noted on the receipt and preservation check form. The samples were stored in the laboratory at room temperature prior to analysis. See the ALS case narrative for a cross-reference between Client ID and ALS Job #.

TO - 15 Air Analysis

Three air samples were analyzed for a site list of Volatile Organics by EPA method TO-15.

The Pressure was checked for BLDG3-SVE1 upon receipt. The pressure when the summa canister was shipped was -29.2" Hg and the pressure upon receipt was -23.9"Hg so it appears the can did not have much sample in it. The sample was pressurized to the standard 3.5psi and analyzed along with the other samples received (which were at -1.7" and 2.3"). The filters were checked and tested and were performing properly. The results for this sample should be considered as highly diluted due to the low volume of air present in the canister.

All samples were initially analyzed at appropriate dilutions based on prescreening of the samples and/or historical data to bring the target analytes within the calibration range of the method.

All initial and continuing calibrations were compliant.

All surrogate standard recoveries were within QC limits.

The Method blanks were free of contamination.

The LCS recoveries were all within QC limits of 70 – 130 % except Hexachlorobutadiene was outside limits high on the 07/15/14 LCS and has been flagged with an "*". No data was affected.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental | Project #: 150148

Project Location: Varian Beverly | RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1405214-001-003

Matrices: Groundwater/Surface Water | Soil/Sediment | Drinking Water | Air X | Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B X
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes X No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Janice Jaeger **Position:** Client Services Manager

Printed Name: Janice Jaeger **Date:** 06/27/14

00003

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1405214

Lab ID	Client ID
R1405214-001	BLDG3-SVE1
R1405214-002	BLDG3-SVE2
R1405214-003	BLDG3-SVE INFLUENT

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: LARRY LEWIS

for the analysis of NON POTABLE WATER (CHEMISTRY)

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: 01 JUL 2014

Expires: 30 JUN 2015

Oscar C. Parcabe

Director, Division of Environmental Analysis

00006

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2014 Expiration Date 30 JUN 2015

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2014 Expiration Date 30 JUN 2015

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEI	EPA 608

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1405214
Date Collected: 7/ 8/14 1200
Date Received: 7/ 9/14

Sample Name: BLDG3-SVE1
Lab Code: R1405214-001

Analytical Method: TO-15

Date Analyzed: 7/15/14 1219
Canister Dilution Factor: 6.15

Initial Pressure (psig): -11.74 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.37	0.37	0.14	0.14	U
74-83-9	Bromomethane	1000	2.6	2.6	0.68	0.68	U
67-64-1	**Acetone**	1000	**39**	31	**16**	13	
75-35-4	1,1-Dichloroethene	1000	2.7	2.7	0.68	0.68	U
75-09-2	Methylene Chloride	1000	2.3	2.3	0.67	0.67	U
156-60-5	trans-1,2-Dichloroethene	1000	2.7	2.7	0.68	0.68	U
75-34-3	1,1-Dichloroethane	1000	2.8	2.8	0.68	0.68	U
1634-04-4	Methyl tert-Butyl Ether	1000	4.9	4.9	1.3	1.3	U
78-93-3	2-Butanone (MEK)	1000	4.0	4.0	1.4	1.4	U
156-59-2	cis-1,2-Dichloroethene	1000	2.7	2.7	0.68	0.68	U
67-66-3	Chloroform	1000	3.3	3.3	0.68	0.68	U
107-06-2	1,2-Dichloroethane	1000	2.8	2.8	0.68	0.68	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	3.7	3.7	0.68	0.68	U
71-43-2	Benzene	1000	2.2	2.2	0.67	0.67	U
56-23-5	**Carbon Tetrachloride**	1000	**0.47**	0.43	**0.074**	0.068	
78-87-5	1,2-Dichloropropane	1000	3.1	3.1	0.68	0.68	U
75-27-4	Bromodichloromethane	1000	0.92	0.92	0.14	0.14	U
79-01-6	Trichloroethene (TCE)	1000	0.37	0.37	0.069	0.069	U
123-91-1	1,4-Dioxane	1000	31	31	8.5	8.5	U
10061-01-5	cis-1,3-Dichloropropene	1000	6.2	6.2	1.4	1.4	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1000	5.5	5.5	1.4	1.4	U
10061-02-6	trans-1,3-Dichloropropene	1000	3.1	3.1	0.68	0.68	U
79-00-5	1,1,2-Trichloroethane	1000	3.7	3.7	0.68	0.68	U
108-88-3	Toluene	1000	2.5	2.5	0.67	0.67	U
591-78-6	2-Hexanone	1000	2.8	2.8	0.68	0.68	U
124-48-1	Dibromochloromethane	1000	1.2	1.2	0.14	0.14	U
106-93-4	1,2-Dibromoethane (EDB)	1000	1.0	1.0	0.14	0.14	U
127-18-4	Tetrachloroethene (PCE)	1000	0.49	0.49	0.073	0.073	U
108-90-7	Chlorobenzene	1000	3.1	3.1	0.68	0.68	U
100-41-4	Ethylbenzene	1000	5.8	5.8	1.3	1.3	U
179601-23-1	m,p-Xylenes	1000	12	12	2.7	2.7	U
75-25-2	Bromoform	1000	7.0	7.0	0.68	0.68	U
100-42-5	Styrene	1000	5.8	5.8	1.4	1.4	U
95-47-6	o-Xylene	1000	5.8	5.8	1.3	1.3	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.92	0.92	0.13	0.13	U
541-73-1	1,3-Dichlorobenzene	1000	8.1	8.1	1.4	1.4	U
106-46-7	1,4-Dichlorobenzene	1000	8.1	8.1	1.4	1.4	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1405214
Project:	Varian Beverly Air Samples/150148	**Date Collected:**	7/ 8/14 1200
Sample Matrix:	Air	**Date Received:**	7/ 9/14
Sample Name:	BLDG3-SVE1		
Lab Code:	R1405214-001		

Analytical Method: TO-15

Date Analyzed: 7/15/14 1219
Canister Dilution Factor: 6.15

Initial Pressure (psig): -11.74 Final Pressure (psig): 3.50

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	1000	8.1	8.1	1.4	1.4	U
91-20-3	Naphthalene	1000	12	12	2.3	2.3	U
87-68-3	Hexachlorobutadiene	1000	18	18	1.7	1.7	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	100	70-130	7/15/14 1219	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1405214
Date Collected: 7/ 8/14 1230
Date Received: 7/ 9/14

Sample Name: BLDG3-SVE2
Lab Code: R1405214-002

Analytical Method: TO-15

Date Analyzed: 7/15/14 1041
Canister Dilution Factor: 1.31

Initial Pressure (psig): -0.83 Final Pressure (psig): 3.53

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	0.50	160	160	62	62	U
74-83-9	Bromomethane	0.50	1100	1100	290	290	U
67-64-1	Acetone	0.50	13000	13000	5500	5500	U
75-35-4	1,1-Dichloroethene	0.50	1200	1200	290	290	U
75-09-2	Methylene Chloride	0.50	1000	1000	290	290	U
156-60-5	trans-1,2-Dichloroethene	0.50	1200	1200	290	290	U
75-34-3	1,1-Dichloroethane	0.50	1200	1200	290	290	U
1634-04-4	Methyl tert-Butyl Ether	0.50	2100	2100	570	570	U
78-93-3	2-Butanone (MEK)	0.50	1700	1700	580	580	U
156-59-2	cis-1,2-Dichloroethene	0.50	1200	1200	290	290	U
67-66-3	Chloroform	0.50	1400	1400	290	290	U
107-06-2	1,2-Dichloroethane	0.50	1200	1200	290	290	U
71-55-6	1,1,1-Trichloroethane (TCA)	0.50	1600	1600	290	290	U
71-43-2	Benzene	0.50	920	920	290	290	U
56-23-5	Carbon Tetrachloride	0.50	180	180	29	29	U
78-87-5	1,2-Dichloropropane	0.50	1300	1300	290	290	U
75-27-4	Bromodichloromethane	0.50	390	390	59	59	U
79-01-6	**Trichloroethene (TCE)**	0.50	**2900**	160	**540**	29	
123-91-1	1,4-Dioxane	0.50	13000	13000	3600	3600	U
10061-01-5	cis-1,3-Dichloropropene	0.50	2600	2600	580	580	U
108-10-1	4-Methyl-2-pentanone (MIBK)	0.50	2400	2400	580	580	U
10061-02-6	trans-1,3-Dichloropropene	0.50	1300	1300	290	290	U
79-00-5	1,1,2-Trichloroethane	0.50	1600	1600	290	290	U
108-88-3	Toluene	0.50	1100	1100	290	290	U
591-78-6	2-Hexanone	0.50	1200	1200	290	290	U
124-48-1	Dibromochloromethane	0.50	500	500	58	58	U
106-93-4	1,2-Dibromoethane (EDB)	0.50	450	450	58	58	U
127-18-4	**Tetrachloroethene (PCE)**	0.50	**99000**	210	**15000**	31	
108-90-7	Chlorobenzene	0.50	1300	1300	290	290	U
100-41-4	Ethylbenzene	0.50	2500	2500	570	570	U
179601-23-1	m,p-Xylenes	0.50	5000	5000	1200	1200	U
75-25-2	Bromoform	0.50	3000	3000	290	290	U
100-42-5	Styrene	0.50	2500	2500	580	580	U
95-47-6	o-Xylene	0.50	2500	2500	570	570	U
79-34-5	1,1,2,2-Tetrachloroethane	0.50	390	390	57	57	U
541-73-1	1,3-Dichlorobenzene	0.50	3500	3500	580	580	U
106-46-7	1,4-Dichlorobenzene	0.50	3500	3500	580	580	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1405214
Project:	Varian Beverly Air Samples/150148	**Date Collected:**	7/ 8/14 1230
Sample Matrix:	Air	**Date Received:**	7/ 9/14
Sample Name:	BLDG3-SVE2		
Lab Code:	R1405214-002		

Analytical Method: TO-15 **Date Analyzed:** 7/15/14 1041

Canister Dilution Factor: 1.31

Initial Pressure (psig): -0.83 Final Pressure (psig): 3.53

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	0.50	3500	3500	580	580	U
91-20-3	Naphthalene	0.50	5200	5200	1000	1000	U
87-68-3	Hexachlorobutadiene	0.50	7900	7900	740	740	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	98	70-130	7/15/14 1041	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1405214
Date Collected: 7/ 8/14 1300
Date Received: 7/ 9/14

Sample Name: BLDG3-SVE INFLUENT
Lab Code: R1405214-003

Analytical Method: TO-15

Date Analyzed: 7/15/14 1542
Canister Dilution Factor: 1.34

Initial Pressure (psig): -1.13 Final Pressure (psig): 3.53

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.080	0.080	0.031	0.031	U
74-83-9	Bromomethane	1000	0.58	0.58	0.15	0.15	U
67-64-1	**Acetone**	1000	**21**	6.7	**8.8**	2.8	
75-35-4	1,1-Dichloroethene	1000	0.59	0.59	0.15	0.15	U
75-09-2	Methylene Chloride	1000	0.51	0.51	0.15	0.15	U
156-60-5	trans-1,2-Dichloroethene	1000	0.59	0.59	0.15	0.15	U
75-34-3	1,1-Dichloroethane	1000	0.60	0.60	0.15	0.15	U
1634-04-4	Methyl tert-Butyl Ether	1000	1.1	1.1	0.29	0.29	U
78-93-3	**2-Butanone (MEK)**	1000	**0.96**	0.87	**0.32**	0.30	
156-59-2	cis-1,2-Dichloroethene	1000	0.59	0.59	0.15	0.15	U
67-66-3	Chloroform	1000	0.72	0.72	0.15	0.15	U
107-06-2	1,2-Dichloroethane	1000	0.60	0.60	0.15	0.15	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.80	0.80	0.15	0.15	U
71-43-2	Benzene	1000	0.47	0.47	0.15	0.15	U
56-23-5	Carbon Tetrachloride	1000	0.094	0.094	0.015	0.015	U
78-87-5	1,2-Dichloropropane	1000	0.68	0.68	0.15	0.15	U
75-27-4	Bromodichloromethane	1000	0.20	0.20	0.030	0.030	U
79-01-6	Trichloroethene (TCE)	1000	0.080	0.080	0.015	0.015	U
123-91-1	1,4-Dioxane	1000	6.7	6.7	1.9	1.9	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.3	1.3	0.30	0.30	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1000	1.2	1.2	0.29	0.29	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.67	0.67	0.15	0.15	U
79-00-5	1,1,2-Trichloroethane	1000	0.80	0.80	0.15	0.15	U
108-88-3	Toluene	1000	0.55	0.55	0.15	0.15	U
591-78-6	2-Hexanone	1000	0.60	0.60	0.15	0.15	U
124-48-1	Dibromochloromethane	1000	0.25	0.25	0.030	0.030	U
106-93-4	1,2-Dibromoethane (EDB)	1000	0.23	0.23	0.030	0.030	U
127-18-4	**Tetrachloroethene (PCE)**	1000	**3.6**	0.11	**0.53**	0.016	
108-90-7	Chlorobenzene	1000	0.68	0.68	0.15	0.15	U
100-41-4	Ethylbenzene	1000	1.3	1.3	0.29	0.29	U
179601-23-1	m,p-Xylenes	1000	2.6	2.6	0.59	0.59	U
75-25-2	Bromoform	1000	1.5	1.5	0.15	0.15	U
100-42-5	Styrene	1000	1.3	1.3	0.30	0.30	U
95-47-6	o-Xylene	1000	1.3	1.3	0.29	0.29	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.20	0.20	0.029	0.029	U
541-73-1	1,3-Dichlorobenzene	1000	1.8	1.8	0.29	0.29	U
106-46-7	1,4-Dichlorobenzene	1000	1.8	1.8	0.29	0.29	U

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1405214
Project:	Varian Beverly Air Samples/150148	**Date Collected:**	7/ 8/14 1300
Sample Matrix:	Air	**Date Received:**	7/ 9/14
Sample Name:	BLDG3-SVE INFLUENT		
Lab Code:	R1405214-003		

Analytical Method: TO-15 **Date Analyzed:** 7/15/14 1542

Canister Dilution Factor: 1.34

Initial Pressure (psig): -1.13 Final Pressure (psig): 3.53

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	1000	1.8	1.8	0.29	0.29	U
91-20-3	Naphthalene	1000	2.7	2.7	0.51	0.51	U
87-68-3	Hexachlorobutadiene	1000	4.0	4.0	0.38	0.38	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	99	70-130	7/15/14 1542	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1405214
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1408218-04

Analytical Method: TO-15

Date Analyzed: 7/15/14 0955

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
75-01-4	Vinyl Chloride	1000	0.060	0.060	0.023	0.023	U
74-83-9	Bromomethane	1000	0.43	0.43	0.11	0.11	U
67-64-1	Acetone	1000	5.0	5.0	2.1	2.1	U
75-35-4	1,1-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-09-2	Methylene Chloride	1000	0.38	0.38	0.11	0.11	U
156-60-5	trans-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
75-34-3	1,1-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
1634-04-4	Methyl tert-Butyl Ether	1000	0.79	0.79	0.22	0.22	U
78-93-3	2-Butanone (MEK)	1000	0.65	0.65	0.22	0.22	U
156-59-2	cis-1,2-Dichloroethene	1000	0.44	0.44	0.11	0.11	U
67-66-3	Chloroform	1000	0.54	0.54	0.11	0.11	U
107-06-2	1,2-Dichloroethane	1000	0.45	0.45	0.11	0.11	U
71-55-6	1,1,1-Trichloroethane (TCA)	1000	0.60	0.60	0.11	0.11	U
71-43-2	Benzene	1000	0.35	0.35	0.11	0.11	U
56-23-5	Carbon Tetrachloride	1000	0.070	0.070	0.011	0.011	U
78-87-5	1,2-Dichloropropane	1000	0.51	0.51	0.11	0.11	U
75-27-4	Bromodichloromethane	1000	0.15	0.15	0.022	0.022	U
79-01-6	Trichloroethene (TCE)	1000	0.060	0.060	0.011	0.011	U
123-91-1	1,4-Dioxane	1000	5.0	5.0	1.4	1.4	U
10061-01-5	cis-1,3-Dichloropropene	1000	1.0	1.0	0.22	0.22	U
108-10-1	4-Methyl-2-pentanone (MIBK)	1000	0.90	0.90	0.22	0.22	U
10061-02-6	trans-1,3-Dichloropropene	1000	0.50	0.50	0.11	0.11	U
79-00-5	1,1,2-Trichloroethane	1000	0.60	0.60	0.11	0.11	U
108-88-3	Toluene	1000	0.41	0.41	0.11	0.11	U
591-78-6	2-Hexanone	1000	0.45	0.45	0.11	0.11	U
124-48-1	Dibromochloromethane	1000	0.19	0.19	0.022	0.022	U
106-93-4	1,2-Dibromoethane (EDB)	1000	0.17	0.17	0.022	0.022	U
127-18-4	Tetrachloroethene (PCE)	1000	0.080	0.080	0.012	0.012	U
108-90-7	Chlorobenzene	1000	0.51	0.51	0.11	0.11	U
100-41-4	Ethylbenzene	1000	0.95	0.95	0.22	0.22	U
179601-23-1	m,p-Xylenes	1000	1.9	1.9	0.44	0.44	U
75-25-2	Bromoform	1000	1.1	1.1	0.11	0.11	U
100-42-5	Styrene	1000	0.94	0.94	0.22	0.22	U
95-47-6	o-Xylene	1000	0.95	0.95	0.22	0.22	U
79-34-5	1,1,2,2-Tetrachloroethane	1000	0.15	0.15	0.022	0.022	U
541-73-1	1,3-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
106-46-7	1,4-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1405214
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1408218-04

Analytical Method: TO-15

Date Analyzed: 7/15/14 0955

CAS #	Analyte Name	Sample Amount mL	Result µg/m³	MRL µg/m³	Result ppbv	MRL ppbv	Data Qualifier
95-50-1	1,2-Dichlorobenzene	1000	1.3	1.3	0.22	0.22	U
91-20-3	Naphthalene	1000	2.0	2.0	0.38	0.38	U
87-68-3	Hexachlorobutadiene	1000	3.0	3.0	0.28	0.28	U

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
4-Bromofluorobenzene	98	70-130	7/15/14 0955	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1405214
Date Analyzed: 7/15/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 401924

Analyte Name	Lab Control Sample RQ1408218-03 Result	Spike Amount	% Rec	% Rec Limits
Vinyl Chloride	5.88	6.58	89	70 - 130
Bromomethane	8.65	9.80	88	70 - 130
Acetone	5.73	6.47	89	50 - 150
1,1-Dichloroethene	9.13	10.3	89	70 - 130
Methylene Chloride	9.05	8.94	101	70 - 130
trans-1,2-Dichloroethene	9.78	10.4	94	70 - 130
1,1-Dichloroethane	10.2	10.4	97	70 - 130
Methyl tert-Butyl Ether	8.68	9.55	91	70 - 130
2-Butanone (MEK)	7.20	7.81	92	70 - 130
cis-1,2-Dichloroethene	10.1	10.4	97	70 - 130
Chloroform	12.2	13.2	92	70 - 130
1,2-Dichloroethane	9.60	10.6	90	70 - 130
1,1,1-Trichloroethane (TCA)	12.7	14.3	89	70 - 130
Benzene	8.35	8.38	100	70 - 130
Carbon Tetrachloride	14.6	16.0	91	70 - 130
1,2-Dichloropropane	11.7	12.1	97	70 - 130
Bromodichloromethane	17.1	17.4	98	70 - 130
Trichloroethene (TCE)	13.4	14.0	96	70 - 130
1,4-Dioxane	9.55	9.37	102	50 - 150
cis-1,3-Dichloropropene	11.8	12.5	94	70 - 130
4-Methyl-2-pentanone (MIBK)	9.07	10.5	86	70 - 130
trans-1,3-Dichloropropene	10.2	10.9	94	70 - 130
1,1,2-Trichloroethane	14.0	14.5	97	70 - 130
Toluene	9.52	9.98	95	70 - 130
2-Hexanone	9.80	11.1	89	70 - 130
Dibromochloromethane	22.3	23.4	95	70 - 130
1,2-Dibromoethane (EDB)	19.0	20.0	95	70 - 130
Tetrachloroethene (PCE)	17.5	18.0	97	70 - 130
Chlorobenzene	12.2	12.3	99	70 - 130
Ethylbenzene	11.0	11.5	95	70 - 130
m,p-Xylenes	20.8	22.4	93	70 - 130
Bromoform	27.0	26.6	102	70 - 130
Styrene	10.2	11.1	92	70 - 130
o-Xylene	10.6	11.7	90	70 - 130
1,1,2,2-Tetrachloroethane	17.1	18.5	92	70 - 130
1,3-Dichlorobenzene	13.9	14.7	95	70 - 130
1,4-Dichlorobenzene	13.8	14.9	93	70 - 130
1,2-Dichlorobenzene	13.7	14.6	94	70 - 130

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly Air Samples/150148
Sample Matrix: Air

Service Request: R1405214
Date Analyzed: 7/15/14

Lab Control Sample Summary
Volatile Organic Compounds in Air Collected In SUMMA Passivated Canisters and Analyzed By GC/MS

Analytical Method: TO-15

Units: µg/m³
Basis: NA

Analysis Lot: 401924

Analyte Name	Lab Control Sample RQ1408218-03 Result	Spike Amount	% Rec		% Rec Limits
Naphthalene	15.6	11.0	142		50 - 150
Hexachlorobutadiene	38.1	23.5	162	*	50 - 150

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Columbia Analytical Services™

CHAIN OF CUSTODY - AIR

PAGE 1 OF 1

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 585.288.8475 (fax) | www.caslab.com

Requested Turnaround Time in Business Days from Receipt, please circle:
1 Day 2 Day 3 Day 4 Day 5 Day 10 Day-Standard

CAS Project #:

Company Name: CB + I

Project Name: Varian

CAS Contact:

Address: 150 Royall St

Project Number: 877613

City, State, Zip: Canton MA 02021

P.O. #/Billing Information:

Project Manager: Ray Cadorette

Phone: 617 589 6102

Fax: 617 589 5496

Email (for result reporting): raymond.cadorette@cbi.com

Sampler (Print & Sign): DANIEL C. LEARY

Analysis Method and/or Analytes

Comments
Specific Instructions
CALL RAY CADORETTE FOR ANALYSIS, TAT, & REPORTS

Client Sample ID	Laboratory ID Number	Date Collected	Time Collected	Canister ID	Flow Controller ID
BLDG3-SVE1		7/8/14	1200	SLC00189	N/A
BLDG3-SVE2		7/8/14	1230	SLC00147	
BLDG3-SVE-Influent		7/8/14	1300	SLC00055	

What State were samples collected in: MASS

Report Tier Levels - please select:
Tier I (Results/Default, if not specified) ___ Tier III (CLP Forms Only) ___
Tier II (Results + QC) ___ Tier IV (Data Validation) ___

EDD required: (YES) / NO
Type: _____ EDD Units: _____

Project Requirements (MRLs, QAPP, etc.)

Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:
	7/8/14	1305		7-9-14	9:15
Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Date:	Time	Received by: (Signature)	Date:	Time:

R1405214 7 Y
CB&I Environmental & Infrastructure
Varian Beverly Air Samples

COC AIR REV 7-11

Cooler Receipt and Preservation Check Form

Project/Client CBHI Folder Number 14-5214

Cooler received on 7-9-14 by: ME COURIER: ALS (UPS) FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N (NA)
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	(ALS/ROC) CLIENT
4	Circle: **Wet Ice Dry Ice Gel packs** present?	Y (N)	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: Air Canisters Time: _____ ID: IR#3 IR#4 From: Temp Blank Sample Bottle

Observed Temp (°C)	NA						
Correction Factor (°C)							
Corrected Temp (°C)							
Within 0-6°C?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: SMO by ME on 7-9-14 at 09:53
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: JMS 7/9/14

Cooler Breakdown: Date: 7/10/14 Time: 2124 by: JMS

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact (Canisters Pressurized) Tedlar® Bags Inflated N/A

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**						

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: _____

Other Comments:

PC Secondary Review: JMS 7/14/14 *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 152728.05

Prepared By: Dale Dailey

Date : 8/26/2014

Matrix: Groundwater

Analyte Group : Volatile Organics
Hydrocarbon Gases
Total Organic Carbon
Metals

Analytical Method : SW-846 8260C
RSK-175
SM20 5310C
Method 6010C

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : R1406092

Chain of Custody included in Data Package ? Yes

Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
8/6/14	SW-846 8260C	14 days	10 days	8/15, 8/18/14
8/6/14	RSK-175	7 Days	7 Days	8/7, 8/8/14
8/6/14	6010C	14 Days	180 Days	8/12, 8/13/14
8/6/14	SM20 5310C	28 Days	28 Days	8/13, 8/14/14

Sample temperature within QC limits: Yes, 2.4 C

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? See Notes

If no, list sample ID where range was exceeded: NA

Equipment Field Blank ID : 8/6/2014
Trip Blank ID : 8/6/2014

Method Blank:	SM20 5310C	8/7, 8/13, 8/14/2014
	RSK 175	8/8/2014
	6010C	8/12/2014
	8260C	8/15, 8/18/2014

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:
(1) Several VOC samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. RW-1 (36), AP35-DO (46), AP35-DO (33), AP24-DO (46), AP25-DO (44) and OB9-S were re-analyzed to bring target analytes within the calibration range of the method.
Both dilutions were reported with analytes over the range flagged with an "E" and the diluted analytes flagged with a "D".
(2) All LCS/LCSD recoveries were within QC limits except 1,2-dichloroethane was outside limits high on 8/14/14 and 8/15/14 LCS/LCSD's. No data was affected since the batches were non-detect for this analyte.
(3) Several Dissolved Gas Samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. Samples OB15-2 (17), RW-1 (36), and AP33-DO (35) were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the range flagged with an "E" and the diluted analytes flagged with a "D".

Reviewed By: Pernilla Haley 10/15/14

August 19, 2014

Service Request No: R1406092

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly/150151

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on August 7, 2014. For your reference, these analyses have been assigned our service request number **R1406092**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Client Services Manager

CC: Pernilla Haley

ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623 PHONE 585-288-5380 | FAX 585-288-8475
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company
www.alsglobal.com

CASE NARRATIVE

Client:	CB&I	**Service Request No.:**	R1406092
Project:	Varian Beverly	**Project Number:**	150151-03000000
Sample Matrix:	Water	**Date Received:**	08/07/14

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II, deliverables with Massachusetts CAM analyses reporting. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 04/08-09/14 and received at ALS in good condition at cooler temperatures of 2.4 – 4.0 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the second page of the Case Narrative for a cross-reference between Client ID and ALS Job #. All Soluble parameters were filtered by field personnel.

Volatile Organics

Fifteen water samples were analyzed for a site list of Volatile Organics by SW-846 Method 8260C.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. Samples RW-1 (36'), AP23-DO (46'), AP35-DO (33'), AP24-DO (46'), AP25-DO (44') and OB9-S (18') were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All initial calibrations were compliant.

All the continuing calibration criteria were met for all analytes.

All Surrogate Standard recoveries were within QC limits.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were within QC limits except 1,2-Dichloroethane was outside limits high on the 08/14/14 LCS/LCSD and 08/15/14 LCSD and has been flagged with an "*". No data was affected. All RPD's were acceptable.

All samples were analyzed within the required holding time of 14 days.

Dissolved Gases

Ten water samples were analyzed for a site list of Volatile Organics by SW-846 Method 8260C.

Several samples were initially analyzed at dilutions to bring target analytes within the calibration range of the method. Samples OB15-S (17'), RW-1 (36') and AP33-DO (35') were re-analyzed at larger dilutions to bring target analytes within the calibration range of the method. Both dilutions were reported with analytes over the calibration range flagged with an "E" and the diluted analytes flagged with a "D".

All initial calibrations were compliant.

All the continuing calibration criteria were met for all analytes.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were within QC limits.

All samples were analyzed within the required holding time of 14 days.

Inorganic Analyses

Ten water samples were analyzed for a site specific list of inorganics. Please attached data pages for method numbers.

The initial and continuing calibration criteria were met for all analytes.

All Blank Spike (LCS) recoveries were within QC limits.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental | Project #: 150151

Project Location: Varian Beverly | RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1403116-001-004

Matrices: Groundwater/Surface Water X Soil/Sediment Drinking Water Air Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A X	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A X	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

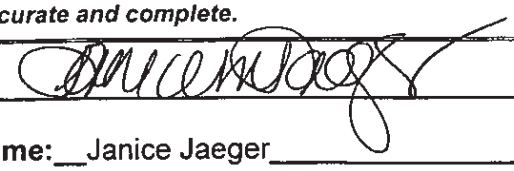
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: 

Position: Client Services Manager

Printed Name: Janice Jaeger

Date: 08/20/14

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1406092

Lab ID	Client ID
R1406092-001	OB25-DO (65')
R1406092-002	AP30R-DO (50')
R1406092-003	MW-9 (19')
R1406092-004	OB15-S (17')
R1406092-005	RW-1 (36')
R1406092-006	AP23-DO (46')
R1406092-007	AP35-DO (33')
R1406092-008	AP34-DO (33')
R1406092-009	AP24-DO (46')
R1406092-010	AP13-DO (49')
R1406092-011	AP33-DO (35')
R1406092-012	AP25-DO (44')
R1406092-013	OB9-S (18')
R1406092-014	EB-1
R1406092-015	TB-1

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **LARRY LEWIS**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **01 JUL 2014**

Expires: **30 JUN 2015**

Oscar C. Parcells

Director, Division of Environmental Analysis

00006A

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2014 Expiration Date 30 JUN 2015

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

0000eB

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2014 Expiration Date 30 JUN 2015

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEF	EPA 608

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INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	3010A
200.8	ILM05.3
6010C	3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3010A
6010 SPLP (1312) extract	3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 0845
Date Received: 8/ 7/14
Date Analyzed: 8/15/14 05:50

Sample Name: OB25-DO (65')
Lab Code: R1406092-001

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\081414\M8218.D\

Analysis Lot: 406690
Instrument Name: R-MS-12
Dilution Factor: 100

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	200	U	200	
79-34-5	1,1,2,2-Tetrachloroethane	200	U	200	
79-00-5	1,1,2-Trichloroethane	200	U	200	
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	U	200	
75-35-4	1,1-Dichloroethene (1,1-DCE)	200	U	200	
107-06-2	1,2-Dichloroethane	200	U	200	
78-87-5	1,2-Dichloropropane	200	U	200	
67-64-1	Acetone	1000	U	1000	
75-27-4	Bromodichloromethane	200	U	200	
75-25-2	Bromoform	200	U	200	
74-83-9	Bromomethane	200	U	200	
56-23-5	Carbon Tetrachloride	200	U	200	
108-90-7	Chlorobenzene	200	U	200	
75-00-3	Chloroethane	200	U	200	
67-66-3	Chloroform	200	U	200	
74-87-3	Chloromethane	200	U	200	
124-48-1	Dibromochloromethane	200	U	200	
75-09-2	Methylene Chloride	200	U	200	
127-18-4	Tetrachloroethene (PCE)	**560**		200	
79-01-6	Trichloroethene (TCE)	**16000**		200	
75-69-4	Trichlorofluoromethane (CFC 11)	200	U	200	
75-01-4	Vinyl Chloride	200	U	200	
156-59-2	cis-1,2-Dichloroethene	**450**		200	
10061-01-5	cis-1,3-Dichloropropene	200	U	200	
156-60-5	trans-1,2-Dichloroethene	200	U	200	
10061-02-6	trans-1,3-Dichloropropene	200	U	200	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	8/15/14 05:50	
Dibromofluoromethane	107	70-130	8/15/14 05:50	
Toluene-d8	100	70-130	8/15/14 05:50	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 0820
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/15/14 04:45
Sample Name:	AP30R-DO (50')	**Units:**	µg/L
Lab Code:	R1406092-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	406690
Data File Name:	I:\ACQUDATA\msvoa12\Data\081414\M8216.D\	**Instrument Name:**	R-MS-12
		Dilution Factor:	50

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**270**		100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
67-64-1	Acetone	500	U	500	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
56-23-5	Carbon Tetrachloride	**230**		100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	**1200**		100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Methylene Chloride	100	U	100	
127-18-4	Tetrachloroethene (PCE)	**1100**		100	
79-01-6	Trichloroethene (TCE)	**8300**		100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	100	U	100	
156-59-2	cis-1,2-Dichloroethene	**710**		100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	8/15/14 04:45	
Dibromofluoromethane	110	70-130	8/15/14 04:45	
Toluene-d8	102	70-130	8/15/14 04:45	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 0930
Sample Matrix:	Water	**Date Received:**	8/ 7/14
Sample Name:	MW-9 (19')		
Lab Code:	R1406092-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	890		mg/L	100	100	NA	8/13/14 21:55	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 0930
Date Received: 8/ 7/14
Date Analyzed: 8/18/14 14:08

Sample Name: MW-9 (19')
Lab Code: R1406092-003

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\081814\M8260.D\

Analysis Lot: 407142
Instrument Name: R-MS-12
Dilution Factor: 20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	40	U	40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	40	U	40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	U	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	40	U	40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	40	U	40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	40	U	40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	40	U	40	
79-01-6	Trichloroethene (TCE)	40	U	40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	**690**		40	
156-59-2	cis-1,2-Dichloroethene	**2600**		40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	40	U	40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	8/18/14 14:08	
Dibromofluoromethane	108	70-130	8/18/14 14:08	
Toluene-d8	99	70-130	8/18/14 14:08	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 0930
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/8/14 10:32
Sample Name:	MW-9 (19')	**Units:**	µg/L
Lab Code:	R1406092-003	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	405651
Data File Name:	1005.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	125

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**540**		130	
74-85-1	Ethene	**1500**		130	
74-82-8	Methane	**9600**		130	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 0900
Sample Matrix:	Water	**Date Received:**	8/ 7/14
Sample Name:	OB15-S (17')		
Lab Code:	R1406092-004	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	36.5		mg/L	4.0	4	NA	8/13/14 22:58	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 0900
Date Received: 8/ 7/14
Date Analyzed: 8/15/14 03:08

Sample Name: OB15-S (17')
Lab Code: R1406092-004

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\081414\M8213.D\

Analysis Lot: 406690
Instrument Name: R-MS-12
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**2.2**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	**2.9**		2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**3.8**		2.0	
156-59-2	cis-1,2-Dichloroethene	**6.0**		2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	8/15/14 03:08	
Dibromofluoromethane	111	70-130	8/15/14 03:08	
Toluene-d8	101	70-130	8/15/14 03:08	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 0900
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/8/14 10:42
Sample Name:	OB15-S (17')	**Units:**	µg/L
Lab Code:	R1406092-004	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	405651
Data File Name:	1006.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	125

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**440**		130	
74-85-1	Ethene	130	U	130	
74-82-8	Methane	**15000**	E	130	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 0900
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/8/14 10:52
Sample Name:	OB15-S (17')	**Units:**	µg/L
Lab Code:	R1406092-004	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	405651
Data File Name:	1007.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	250

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	440		250	
74-85-1	Ethene	250	U	250	
74-82-8	Methane	15000	D	250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1000
Date Received: 8/ 7/14

Sample Name: RW-1 (36')
Lab Code: R1406092-005

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	**15.7**		mg/L	1.0	1	NA	8/14/14 17:43	

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Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1000
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/15/14 04:13
Sample Name:	RW-1 (36')	**Units:**	µg/L
Lab Code:	R1406092-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	406690
Data File Name:	I:\ACQUDATA\msvoa12\Data\081414\M8215.D\	**Instrument Name:**	R-MS-12
		Dilution Factor:	25

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	50	U	50	
79-34-5	1,1,2,2-Tetrachloroethane	50	U	50	
79-00-5	1,1,2-Trichloroethane	50	U	50	
75-34-3	1,1-Dichloroethane (1,1-DCA)	50	U	50	
75-35-4	1,1-Dichloroethene (1,1-DCE)	50	U	50	
107-06-2	1,2-Dichloroethane	50	U	50	
78-87-5	1,2-Dichloropropane	50	U	50	
67-64-1	Acetone	250	U	250	
75-27-4	Bromodichloromethane	50	U	50	
75-25-2	Bromoform	50	U	50	
74-83-9	Bromomethane	50	U	50	
56-23-5	Carbon Tetrachloride	50	U	50	
108-90-7	Chlorobenzene	50	U	50	
75-00-3	Chloroethane	50	U	50	
67-66-3	Chloroform	50	U	50	
74-87-3	Chloromethane	50	U	50	
124-48-1	Dibromochloromethane	50	U	50	
75-09-2	Methylene Chloride	50	U	50	
127-18-4	Tetrachloroethene (PCE)	**770**		50	
79-01-6	Trichloroethene (TCE)	**450**		50	
75-69-4	Trichlorofluoromethane (CFC 11)	50	U	50	
75-01-4	Vinyl Chloride	**490**		50	
156-59-2	cis-1,2-Dichloroethene	**7900**	E	50	
10061-01-5	cis-1,3-Dichloropropene	50	U	50	
156-60-5	trans-1,2-Dichloroethene	**78**		50	
10061-02-6	trans-1,3-Dichloropropene	50	U	50	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	8/15/14 04:13	
Dibromofluoromethane	110	70-130	8/15/14 04:13	
Toluene-d8	101	70-130	8/15/14 04:13	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1000
Date Received: 8/ 7/14
Date Analyzed: 8/15/14 19:19

Sample Name: RW-1 (36')
Lab Code: R1406092-005
Run Type: Dilution

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\081514\M8243.D\

Analysis Lot: 406845
Instrument Name: R-MS-12
Dilution Factor: 50

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	100	U	100	
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	
79-00-5	1,1,2-Trichloroethane	100	U	100	
75-34-3	1,1-Dichloroethane (1,1-DCA)	100	U	100	
75-35-4	1,1-Dichloroethene (1,1-DCE)	100	U	100	
107-06-2	1,2-Dichloroethane	100	U	100	
78-87-5	1,2-Dichloropropane	100	U	100	
67-64-1	Acetone	500	U	500	
75-27-4	Bromodichloromethane	100	U	100	
75-25-2	Bromoform	100	U	100	
74-83-9	Bromomethane	100	U	100	
56-23-5	Carbon Tetrachloride	100	U	100	
108-90-7	Chlorobenzene	100	U	100	
75-00-3	Chloroethane	100	U	100	
67-66-3	Chloroform	100	U	100	
74-87-3	Chloromethane	100	U	100	
124-48-1	Dibromochloromethane	100	U	100	
75-09-2	Methylene Chloride	100	U	100	
127-18-4	Tetrachloroethene (PCE)	**710**	D	100	
79-01-6	Trichloroethene (TCE)	**410**	D	100	
75-69-4	Trichlorofluoromethane (CFC 11)	100	U	100	
75-01-4	Vinyl Chloride	**480**	D	100	
156-59-2	cis-1,2-Dichloroethene	**7700**	D	100	
10061-01-5	cis-1,3-Dichloropropene	100	U	100	
156-60-5	trans-1,2-Dichloroethene	100	U	100	
10061-02-6	trans-1,3-Dichloropropene	100	U	100	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	8/15/14 19:19	
Dibromofluoromethane	111	70-130	8/15/14 19:19	
Toluene-d8	102	70-130	8/15/14 19:19	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1000
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/8/14 11:02
Sample Name:	RW-1 (36')	**Units:**	µg/L
Lab Code:	R1406092-005	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	405651
Data File Name:	1008.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	5.0	U	5.0	
74-85-1	Ethene	5.0	U	5.0	
74-82-8	Methane	710	E	5.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1000
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/8/14 11:12
Sample Name:	RW-1 (36')	**Units:**	µg/L
Lab Code:	R1406092-005	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	405651
Data File Name:	1009.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	10	U	10	
74-85-1	Ethene	10	U	10	
74-82-8	Methane	710	D	10	

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1030
Date Received: 8/ 7/14

Sample Name: AP23-DO (46')
Lab Code: R1406092-006

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	231		mg/L	40	40	NA	8/14/14 00:42	
Nitrate as Nitrogen	300.0	1.0	U	mg/L	1.0	10	NA	8/7/14 20:45	
Sulfate	300.0	6.6		mg/L	2.0	10	NA	8/7/14 20:45	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1030
Date Received: 8/ 7/14

Sample Name: AP23-DO (46')
Lab Code: R1406092-006

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	**570**		µg/L	100	1	8/11/14	8/12/14 20:37	
Manganese, Dissolved	6010C	**7560**		µg/L	50	5	8/11/14	8/13/14 20:50	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1030
Date Received: 8/ 7/14
Date Analyzed: 8/15/14 07:26

Sample Name: AP23-DO (46')
Lab Code: R1406092-006

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\081414\M8221.D\

Analysis Lot: 406690
Instrument Name: R-MS-12
Dilution Factor: 2000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	4000	U	4000	
79-34-5	1,1,2,2-Tetrachloroethane	4000	U	4000	
79-00-5	1,1,2-Trichloroethane	4000	U	4000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4000	U	4000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4000	U	4000	
107-06-2	1,2-Dichloroethane	4000	U	4000	
78-87-5	1,2-Dichloropropane	4000	U	4000	
67-64-1	Acetone	**76000**		20000	
75-27-4	Bromodichloromethane	4000	U	4000	
75-25-2	Bromoform	4000	U	4000	
74-83-9	Bromomethane	4000	U	4000	
56-23-5	Carbon Tetrachloride	4000	U	4000	
108-90-7	Chlorobenzene	4000	U	4000	
75-00-3	Chloroethane	4000	U	4000	
67-66-3	Chloroform	4000	U	4000	
74-87-3	Chloromethane	4000	U	4000	
124-48-1	Dibromochloromethane	4000	U	4000	
75-09-2	Methylene Chloride	4000	U	4000	
127-18-4	Tetrachloroethene (PCE)	**61000**		4000	
79-01-6	Trichloroethene (TCE)	**520000**	E	4000	
75-69-4	Trichlorofluoromethane (CFC 11)	4000	U	4000	
75-01-4	Vinyl Chloride	4000	U	4000	
156-59-2	cis-1,2-Dichloroethene	4000	U	4000	
10061-01-5	cis-1,3-Dichloropropene	4000	U	4000	
156-60-5	trans-1,2-Dichloroethene	4000	U	4000	
10061-02-6	trans-1,3-Dichloropropene	4000	U	4000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	8/15/14 07:26	
Dibromofluoromethane	110	70-130	8/15/14 07:26	
Toluene-d8	101	70-130	8/15/14 07:26	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1030
Date Received: 8/ 7/14
Date Analyzed: 8/15/14 20:57

Sample Name: AP23-DO (46')
Lab Code: R1406092-006
Run Type: Dilution

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\081514\M8246.D\

Analysis Lot: 406845
Instrument Name: R-MS-12
Dilution Factor: 5000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10000	U	10000	
79-34-5	1,1,2,2-Tetrachloroethane	10000	U	10000	
79-00-5	1,1,2-Trichloroethane	10000	U	10000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10000	U	10000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10000	U	10000	
107-06-2	1,2-Dichloroethane	10000	U	10000	
78-87-5	1,2-Dichloropropane	10000	U	10000	
67-64-1	Acetone	**57000**	D	50000	
75-27-4	Bromodichloromethane	10000	U	10000	
75-25-2	Bromoform	10000	U	10000	
74-83-9	Bromomethane	10000	U	10000	
56-23-5	Carbon Tetrachloride	10000	U	10000	
108-90-7	Chlorobenzene	10000	U	10000	
75-00-3	Chloroethane	10000	U	10000	
67-66-3	Chloroform	10000	U	10000	
74-87-3	Chloromethane	10000	U	10000	
124-48-1	Dibromochloromethane	10000	U	10000	
75-09-2	Methylene Chloride	10000	U	10000	
127-18-4	Tetrachloroethene (PCE)	**49000**	D	10000	
79-01-6	Trichloroethene (TCE)	**440000**	D	10000	
75-69-4	Trichlorofluoromethane (CFC 11)	10000	U	10000	
75-01-4	Vinyl Chloride	10000	U	10000	
156-59-2	cis-1,2-Dichloroethene	10000	U	10000	
10061-01-5	cis-1,3-Dichloropropene	10000	U	10000	
156-60-5	trans-1,2-Dichloroethene	10000	U	10000	
10061-02-6	trans-1,3-Dichloropropene	10000	U	10000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	8/15/14 20:57	
Dibromofluoromethane	110	70-130	8/15/14 20:57	
Toluene-d8	102	70-130	8/15/14 20:57	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1030
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/8/14 11:24
Sample Name:	AP23-DO (46')	**Units:**	µg/L
Lab Code:	R1406092-006	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	405651
Data File Name:	1010.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	10	U	10	
74-85-1	Ethene	**750**		10	
74-82-8	Methane	**110**		10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1100
Date Received: 8/ 7/14

Sample Name: AP35-DO (33')
Lab Code: R1406092-007

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	7.7		mg/L	1.0	1	NA	8/14/14 18:04	
Nitrate as Nitrogen	300.0	1.8		mg/L	1.0	10	NA	8/7/14 20:33	
Sulfate	300.0	2.2		mg/L	2.0	10	NA	8/7/14 20:33	

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1100
Date Received: 8/ 7/14

Sample Name: AP35-DO (33')
Lab Code: R1406092-007

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	**820**		µg/L	100	1	8/11/14	8/12/14 20:44	
Manganese, Dissolved	6010C	**313**		µg/L	10	1	8/11/14	8/12/14 20:44	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1100
Date Received: 8/ 7/14
Date Analyzed: 8/15/14 20:24

Sample Name: AP35-DO (33')
Lab Code: R1406092-007

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\081514\M8245.D\

Analysis Lot: 406845
Instrument Name: R-MS-12
Dilution Factor: 200

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**810**		400	
79-34-5	1,1,2,2-Tetrachloroethane	400	U	400	
79-00-5	1,1,2-Trichloroethane	400	U	400	
75-34-3	1,1-Dichloroethane (1,1-DCA)	400	U	400	
75-35-4	1,1-Dichloroethene (1,1-DCE)	400	U	400	
107-06-2	1,2-Dichloroethane	400	U	400	
78-87-5	1,2-Dichloropropane	400	U	400	
67-64-1	Acetone	2000	U	2000	
75-27-4	Bromodichloromethane	400	U	400	
75-25-2	Bromoform	400	U	400	
74-83-9	Bromomethane	400	U	400	
56-23-5	Carbon Tetrachloride	400	U	400	
108-90-7	Chlorobenzene	400	U	400	
75-00-3	Chloroethane	400	U	400	
67-66-3	Chloroform	**590**		400	
74-87-3	Chloromethane	400	U	400	
124-48-1	Dibromochloromethane	400	U	400	
75-09-2	Methylene Chloride	400	U	400	
127-18-4	Tetrachloroethene (PCE)	**1800**		400	
79-01-6	Trichloroethene (TCE)	**63000**	E	400	
75-69-4	Trichlorofluoromethane (CFC 11)	400	U	400	
75-01-4	Vinyl Chloride	**530**		400	
156-59-2	cis-1,2-Dichloroethene	**250000**	E	400	
10061-01-5	cis-1,3-Dichloropropene	400	U	400	
156-60-5	trans-1,2-Dichloroethene	**1800**		400	
10061-02-6	trans-1,3-Dichloropropene	400	U	400	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	8/15/14 20:24	
Dibromofluoromethane	113	70-130	8/15/14 20:24	
Toluene-d8	102	70-130	8/15/14 20:24	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1100
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/18/14 14:41
Sample Name:	AP35-DO (33')	**Units:**	µg/L
Lab Code:	R1406092-007	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	407142
Data File Name:	I:\ACQUDATA\msvoa12\Data\081814\M8261.D\	**Instrument Name:**	R-MS-12
		Dilution Factor:	2500

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5000	U	5000	
79-34-5	1,1,2,2-Tetrachloroethane	5000	U	5000	
79-00-5	1,1,2-Trichloroethane	5000	U	5000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5000	U	5000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5000	U	5000	
107-06-2	1,2-Dichloroethane	5000	U	5000	
78-87-5	1,2-Dichloropropane	5000	U	5000	
67-64-1	Acetone	25000	U	25000	
75-27-4	Bromodichloromethane	5000	U	5000	
75-25-2	Bromoform	5000	U	5000	
74-83-9	Bromomethane	5000	U	5000	
56-23-5	Carbon Tetrachloride	5000	U	5000	
108-90-7	Chlorobenzene	5000	U	5000	
75-00-3	Chloroethane	5000	U	5000	
67-66-3	Chloroform	5000	U	5000	
74-87-3	Chloromethane	5000	U	5000	
124-48-1	Dibromochloromethane	5000	U	5000	
75-09-2	Methylene Chloride	5000	U	5000	
127-18-4	Tetrachloroethene (PCE)	5000	U	5000	
79-01-6	Trichloroethene (TCE)	**46000**	D	5000	
75-69-4	Trichlorofluoromethane (CFC 11)	5000	U	5000	
75-01-4	Vinyl Chloride	5000	U	5000	
156-59-2	cis-1,2-Dichloroethene	**230000**	D	5000	
10061-01-5	cis-1,3-Dichloropropene	5000	U	5000	
156-60-5	trans-1,2-Dichloroethene	5000	U	5000	
10061-02-6	trans-1,3-Dichloropropene	5000	U	5000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	8/18/14 14:41	
Dibromofluoromethane	110	70-130	8/18/14 14:41	
Toluene-d8	101	70-130	8/18/14 14:41	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1100
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/8/14 11:35
Sample Name:	AP35-DO (33')	**Units:**	µg/L
Lab Code:	R1406092-007	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	405651
Data File Name:	1011.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**1.0**		1.0	
74-85-1	Ethene	**5.6**		1.0	
74-82-8	Methane	**19**		1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1130
Date Received: 8/ 7/14

Sample Name: AP34-DO (33')
Lab Code: R1406092-008

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	112		mg/L	10	10	NA	8/14/14 01:24	
Nitrate as Nitrogen	300.0	1.0	U	mg/L	1.0	10	NA	8/7/14 17:39	
Sulfate	300.0	3.1		mg/L	2.0	10	NA	8/7/14 17:39	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1130
Date Received: 8/ 7/14

Sample Name: AP34-DO (33')
Lab Code: R1406092-008

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	**890**		µg/L	100	1	8/11/14	8/12/14 21:03	
Manganese, Dissolved	6010C	**9090**		µg/L	50	5	8/11/14	8/13/14 20:56	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1130
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/15/14 06:22
Sample Name:	AP34-DO (33')	**Units:**	µg/L
Lab Code:	R1406092-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	406690
Data File Name:	I:\ACQUDATA\msvoa12\Data\081414\M8219.D\	**Instrument Name:**	R-MS-12
		Dilution Factor:	500

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**1100**		1000	
79-34-5	1,1,2,2-Tetrachloroethane	1000	U	1000	
79-00-5	1,1,2-Trichloroethane	1000	U	1000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1000	U	1000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1000	U	1000	
107-06-2	1,2-Dichloroethane	1000	U	1000	
78-87-5	1,2-Dichloropropane	1000	U	1000	
67-64-1	Acetone	5000	U	5000	
75-27-4	Bromodichloromethane	1000	U	1000	
75-25-2	Bromoform	1000	U	1000	
74-83-9	Bromomethane	1000	U	1000	
56-23-5	Carbon Tetrachloride	1000	U	1000	
108-90-7	Chlorobenzene	1000	U	1000	
75-00-3	Chloroethane	1000	U	1000	
67-66-3	Chloroform	1000	U	1000	
74-87-3	Chloromethane	1000	U	1000	
124-48-1	Dibromochloromethane	1000	U	1000	
75-09-2	Methylene Chloride	1000	U	1000	
127-18-4	Tetrachloroethene (PCE)	1000	U	1000	
79-01-6	Trichloroethene (TCE)	1000	U	1000	
75-69-4	Trichlorofluoromethane (CFC 11)	1000	U	1000	
75-01-4	Vinyl Chloride	1000	U	1000	
156-59-2	cis-1,2-Dichloroethene	**77000**		1000	
10061-01-5	cis-1,3-Dichloropropene	1000	U	1000	
156-60-5	trans-1,2-Dichloroethene	1000	U	1000	
10061-02-6	trans-1,3-Dichloropropene	1000	U	1000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	8/15/14 06:22	
Dibromofluoromethane	110	70-130	8/15/14 06:22	
Toluene-d8	100	70-130	8/15/14 06:22	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1130
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/8/14 11:55
Sample Name:	AP34-DO (33')	**Units:**	µg/L
Lab Code:	R1406092-008	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	405651
Data File Name:	1013.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	
74-85-1	Ethene	**42**		1.0	
74-82-8	Methane	**43**		1.0	

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1200
Date Received: 8/ 7/14

Sample Name: AP24-DO (46')
Lab Code: R1406092-009

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	**13.6**		mg/L	1.0	1	NA	8/14/14 01:45	
Nitrate as Nitrogen	300.0	1.0	U	mg/L	1.0	10	NA	8/7/14 17:52	
Sulfate	300.0	**13.4**		mg/L	2.0	10	NA	8/7/14 17:52	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1200
Date Received: 8/ 7/14

Sample Name: AP24-DO (46')
Lab Code: R1406092-009

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	**1670**		µg/L	100	1	8/11/14	8/12/14 21:10	
Manganese, Dissolved	6010C	**1190**		µg/L	10	1	8/11/14	8/12/14 21:10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1200
Date Received: 8/ 7/14
Date Analyzed: 8/15/14 07:58

Sample Name: AP24-DO (46')
Lab Code: R1406092-009

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\081414\M8222.D\

Analysis Lot: 406690
Instrument Name: R-MS-12
Dilution Factor: 2000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**120000**		4000	
79-34-5	1,1,2,2-Tetrachloroethane	4000	U	4000	
79-00-5	1,1,2-Trichloroethane	4000	U	4000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4000	U	4000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4000	U	4000	
107-06-2	1,2-Dichloroethane	4000	U	4000	
78-87-5	1,2-Dichloropropane	4000	U	4000	
67-64-1	Acetone	20000	U	20000	
75-27-4	Bromodichloromethane	4000	U	4000	
75-25-2	Bromoform	4000	U	4000	
74-83-9	Bromomethane	4000	U	4000	
56-23-5	Carbon Tetrachloride	4000	U	4000	
108-90-7	Chlorobenzene	4000	U	4000	
75-00-3	Chloroethane	4000	U	4000	
67-66-3	Chloroform	4000	U	4000	
74-87-3	Chloromethane	4000	U	4000	
124-48-1	Dibromochloromethane	4000	U	4000	
75-09-2	Methylene Chloride	4000	U	4000	
127-18-4	Tetrachloroethene (PCE)	**39000**		4000	
79-01-6	Trichloroethene (TCE)	**490000**	E	4000	
75-69-4	Trichlorofluoromethane (CFC 11)	4000	U	4000	
75-01-4	Vinyl Chloride	4000	U	4000	
156-59-2	cis-1,2-Dichloroethene	**12000**		4000	
10061-01-5	cis-1,3-Dichloropropene	4000	U	4000	
156-60-5	trans-1,2-Dichloroethene	4000	U	4000	
10061-02-6	trans-1,3-Dichloropropene	4000	U	4000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	99	70-130	8/15/14 07:58	
Dibromofluoromethane	109	70-130	8/15/14 07:58	
Toluene-d8	101	70-130	8/15/14 07:58	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1200
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/15/14 21:29
Sample Name:	AP24-DO (46')	**Units:**	µg/L
Lab Code:	R1406092-009	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	406845
Data File Name:	I:\ACQUDATA\msvoa12\Data\081514\M8247.D\	**Instrument Name:**	R-MS-12
		Dilution Factor:	5000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**140000**	D	10000	
79-34-5	1,1,2,2-Tetrachloroethane	10000	U	10000	
79-00-5	1,1,2-Trichloroethane	10000	U	10000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10000	U	10000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10000	U	10000	
107-06-2	1,2-Dichloroethane	10000	U	10000	
78-87-5	1,2-Dichloropropane	10000	U	10000	
67-64-1	Acetone	50000	U	50000	
75-27-4	Bromodichloromethane	10000	U	10000	
75-25-2	Bromoform	10000	U	10000	
74-83-9	Bromomethane	10000	U	10000	
56-23-5	Carbon Tetrachloride	10000	U	10000	
108-90-7	Chlorobenzene	10000	U	10000	
75-00-3	Chloroethane	10000	U	10000	
67-66-3	Chloroform	10000	U	10000	
74-87-3	Chloromethane	10000	U	10000	
124-48-1	Dibromochloromethane	10000	U	10000	
75-09-2	Methylene Chloride	10000	U	10000	
127-18-4	Tetrachloroethene (PCE)	**44000**	D	10000	
79-01-6	Trichloroethene (TCE)	**560000**	D	10000	
75-69-4	Trichlorofluoromethane (CFC 11)	10000	U	10000	
75-01-4	Vinyl Chloride	10000	U	10000	
156-59-2	cis-1,2-Dichloroethene	**15000**	D	10000	
10061-01-5	cis-1,3-Dichloropropene	10000	U	10000	
156-60-5	trans-1,2-Dichloroethene	10000	U	10000	
10061-02-6	trans-1,3-Dichloropropene	10000	U	10000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	8/15/14 21:29	
Dibromofluoromethane	110	70-130	8/15/14 21:29	
Toluene-d8	102	70-130	8/15/14 21:29	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1200
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/8/14 12:05
Sample Name:	AP24-DO (46')	**Units:**	µg/L
Lab Code:	R1406092-009	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	405651
Data File Name:	1014.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	
74-85-1	Ethene	**10**		1.0	
74-82-8	Methane	1.0	U	1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1230
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/15/14 08:31
Sample Name:	AP13-DO (49')	**Units:**	µg/L
Lab Code:	R1406092-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	406690
Data File Name:	I:\ACQUDATA\msvoa12\Data\081414\M8223.D\	**Instrument Name:**	R-MS-12
		Dilution Factor:	2000

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**26000**		4000	
79-34-5	1,1,2,2-Tetrachloroethane	4000	U	4000	
79-00-5	1,1,2-Trichloroethane	4000	U	4000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	4000	U	4000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	4000	U	4000	
107-06-2	1,2-Dichloroethane	4000	U	4000	
78-87-5	1,2-Dichloropropane	4000	U	4000	
67-64-1	Acetone	**28000**		20000	
75-27-4	Bromodichloromethane	4000	U	4000	
75-25-2	Bromoform	4000	U	4000	
74-83-9	Bromomethane	4000	U	4000	
56-23-5	Carbon Tetrachloride	4000	U	4000	
108-90-7	Chlorobenzene	4000	U	4000	
75-00-3	Chloroethane	4000	U	4000	
67-66-3	Chloroform	4000	U	4000	
74-87-3	Chloromethane	4000	U	4000	
124-48-1	Dibromochloromethane	4000	U	4000	
75-09-2	Methylene Chloride	4000	U	4000	
127-18-4	Tetrachloroethene (PCE)	**92000**		4000	
79-01-6	Trichloroethene (TCE)	**320000**		4000	
75-69-4	Trichlorofluoromethane (CFC 11)	4000	U	4000	
75-01-4	Vinyl Chloride	4000	U	4000	
156-59-2	cis-1,2-Dichloroethene	**11000**		4000	
10061-01-5	cis-1,3-Dichloropropene	4000	U	4000	
156-60-5	trans-1,2-Dichloroethene	4000	U	4000	
10061-02-6	trans-1,3-Dichloropropene	4000	U	4000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	8/15/14 08:31	
Dibromofluoromethane	109	70-130	8/15/14 08:31	
Toluene-d8	101	70-130	8/15/14 08:31	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1300
Date Received: 8/ 7/14

Sample Name: AP33-DO (35')
Lab Code: R1406092-011

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	177		mg/L	10	10	NA	8/14/14 18:25	
Nitrate as Nitrogen	300.0	1.0	U	mg/L	1.0	10	NA	8/7/14 18:04	
Sulfate	300.0	2.0	U	mg/L	2.0	10	NA	8/7/14 18:04	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1300
Sample Matrix:	Water	**Date Received:**	8/ 7/14
Sample Name:	AP33-DO (35')		
Lab Code:	R1406092-011	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	**4300**		µg/L	100	1	8/11/14	8/12/14 21:16	
Manganese, Dissolved	6010C	**1890**		µg/L	50	5	8/11/14	8/13/14 21:02	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1300
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/15/14 09:03
Sample Name:	AP33-DO (35')	**Units:**	µg/L
Lab Code:	R1406092-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	406690
Data File Name:	I:\ACQUDATA\msvoa12\Data\081414\M8224.D\	**Instrument Name:**	R-MS-12
		Dilution Factor:	2500

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**82000**		5000	
79-34-5	1,1,2,2-Tetrachloroethane	5000	U	5000	
79-00-5	1,1,2-Trichloroethane	5000	U	5000	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5000	U	5000	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5000	U	5000	
107-06-2	1,2-Dichloroethane	5000	U	5000	
78-87-5	1,2-Dichloropropane	5000	U	5000	
67-64-1	Acetone	25000	U	25000	
75-27-4	Bromodichloromethane	5000	U	5000	
75-25-2	Bromoform	5000	U	5000	
74-83-9	Bromomethane	5000	U	5000	
56-23-5	Carbon Tetrachloride	5000	U	5000	
108-90-7	Chlorobenzene	5000	U	5000	
75-00-3	Chloroethane	5000	U	5000	
67-66-3	Chloroform	5000	U	5000	
74-87-3	Chloromethane	5000	U	5000	
124-48-1	Dibromochloromethane	5000	U	5000	
75-09-2	Methylene Chloride	5000	U	5000	
127-18-4	Tetrachloroethene (PCE)	**66000**		5000	
79-01-6	Trichloroethene (TCE)	**330000**		5000	
75-69-4	Trichlorofluoromethane (CFC 11)	5000	U	5000	
75-01-4	Vinyl Chloride	**5600**		5000	
156-59-2	cis-1,2-Dichloroethene	**170000**		5000	
10061-01-5	cis-1,3-Dichloropropene	5000	U	5000	
156-60-5	trans-1,2-Dichloroethene	5000	U	5000	
10061-02-6	trans-1,3-Dichloropropene	5000	U	5000	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	8/15/14 09:03	
Dibromofluoromethane	108	70-130	8/15/14 09:03	
Toluene-d8	101	70-130	8/15/14 09:03	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1300
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/8/14 12:55
Sample Name:	AP33-DO (35')	**Units:**	µg/L
Lab Code:	R1406092-011	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	405651
Data File Name:	1018.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**13**		2.0	
74-85-1	Ethene	**850**	E	2.0	
74-82-8	Methane	**24**		2.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1300
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/8/14 13:06
Sample Name:	AP33-DO (35')	**Units:**	µg/L
Lab Code:	R1406092-011	**Basis:**	NA
Run Type:	Dilution		

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	405651
Data File Name:	1019.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	**11**	D	10	
74-85-1	Ethene	**850**	D	10	
74-82-8	Methane	**24**	D	10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1330
Date Received: 8/ 7/14

Sample Name: AP25-DO (44')
Lab Code: R1406092-012

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	**4.4**		mg/L	1.0	1	NA	8/14/14 02:26	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1330
Date Received: 8/ 7/14
Date Analyzed: 8/15/14 03:41

Sample Name: AP25-DO (44')
Lab Code: R1406092-012

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\081414\M8214.D\

Analysis Lot: 406690
Instrument Name: R-MS-12
Dilution Factor: 20

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**110**		40	
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	
79-00-5	1,1,2-Trichloroethane	40	U	40	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	U	40	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**50**		40	
107-06-2	1,2-Dichloroethane	40	U	40	
78-87-5	1,2-Dichloropropane	40	U	40	
67-64-1	Acetone	200	U	200	
75-27-4	Bromodichloromethane	40	U	40	
75-25-2	Bromoform	40	U	40	
74-83-9	Bromomethane	40	U	40	
56-23-5	Carbon Tetrachloride	40	U	40	
108-90-7	Chlorobenzene	40	U	40	
75-00-3	Chloroethane	40	U	40	
67-66-3	Chloroform	40	U	40	
74-87-3	Chloromethane	40	U	40	
124-48-1	Dibromochloromethane	40	U	40	
75-09-2	Methylene Chloride	40	U	40	
127-18-4	Tetrachloroethene (PCE)	40	U	40	
79-01-6	Trichloroethene (TCE)	40	U	40	
75-69-4	Trichlorofluoromethane (CFC 11)	40	U	40	
75-01-4	Vinyl Chloride	**3400**		40	
156-59-2	cis-1,2-Dichloroethene	**11000**	E	40	
10061-01-5	cis-1,3-Dichloropropene	40	U	40	
156-60-5	trans-1,2-Dichloroethene	40	U	40	
10061-02-6	trans-1,3-Dichloropropene	40	U	40	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	8/15/14 03:41	
Dibromofluoromethane	111	70-130	8/15/14 03:41	
Toluene-d8	101	70-130	8/15/14 03:41	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1330
Date Received: 8/ 7/14
Date Analyzed: 8/15/14 19:51

Sample Name: AP25-DO (44')
Lab Code: R1406092-012
Run Type: Dilution

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\081514\M8244.D\

Analysis Lot: 406845
Instrument Name: R-MS-12
Dilution Factor: 100

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	200	U	200	
79-34-5	1,1,2,2-Tetrachloroethane	200	U	200	
79-00-5	1,1,2-Trichloroethane	200	U	200	
75-34-3	1,1-Dichloroethane (1,1-DCA)	200	U	200	
75-35-4	1,1-Dichloroethene (1,1-DCE)	200	U	200	
107-06-2	1,2-Dichloroethane	200	U	200	
78-87-5	1,2-Dichloropropane	200	U	200	
67-64-1	Acetone	1000	U	1000	
75-27-4	Bromodichloromethane	200	U	200	
75-25-2	Bromoform	200	U	200	
74-83-9	Bromomethane	200	U	200	
56-23-5	Carbon Tetrachloride	200	U	200	
108-90-7	Chlorobenzene	200	U	200	
75-00-3	Chloroethane	200	U	200	
67-66-3	Chloroform	200	U	200	
74-87-3	Chloromethane	200	U	200	
124-48-1	Dibromochloromethane	200	U	200	
75-09-2	Methylene Chloride	200	U	200	
127-18-4	Tetrachloroethene (PCE)	200	U	200	
79-01-6	Trichloroethene (TCE)	200	U	200	
75-69-4	Trichlorofluoromethane (CFC 11)	200	U	200	
75-01-4	Vinyl Chloride	**3300**	D	200	
156-59-2	cis-1,2-Dichloroethene	**11000**	D	200	
10061-01-5	cis-1,3-Dichloropropene	200	U	200	
156-60-5	trans-1,2-Dichloroethene	200	U	200	
10061-02-6	trans-1,3-Dichloropropene	200	U	200	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	8/15/14 19:51	
Dibromofluoromethane	110	70-130	8/15/14 19:51	
Toluene-d8	102	70-130	8/15/14 19:51	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1330
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/8/14 12:46
Sample Name:	AP25-DO (44')	**Units:**	µg/L
Lab Code:	R1406092-012	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	405651
Data File Name:	1017.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	
74-85-1	Ethene	1.0	U	1.0	
74-82-8	Methane	1.0	U	1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1400
Sample Matrix:	Water	**Date Received:**	8/ 7/14
Sample Name:	OB9-S (18')		
Lab Code:	R1406092-013	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	**29.8**		mg/L	4.0	4	NA	8/14/14 02:47	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: 8/ 6/14 1400
Date Received: 8/ 7/14
Date Analyzed: 8/15/14 02:36

Sample Name: OB9-S (18')
Lab Code: R1406092-013

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\081414\M8212.D\

Analysis Lot: 406690
Instrument Name: R-MS-12
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**4.3**		2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**2.3**		2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	**110**		2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	**140**		2.0	
156-59-2	cis-1,2-Dichloroethene	**410**	E	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	8/15/14 02:36	
Dibromofluoromethane	111	70-130	8/15/14 02:36	
Toluene-d8	102	70-130	8/15/14 02:36	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1400
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/15/14 18:14
Sample Name:	OB9-S (18')	**Units:**	µg/L
Lab Code:	R1406092-013	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	406845
Data File Name:	I:\ACQUDATA\msvoa12\Data\081514\M8241.D\	**Instrument Name:**	R-MS-12
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	
79-00-5	1,1,2-Trichloroethane	10	U	10	
75-34-3	1,1-Dichloroethane (1,1-DCA)	10	U	10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	10	U	10	
107-06-2	1,2-Dichloroethane	10	U	10	
78-87-5	1,2-Dichloropropane	10	U	10	
67-64-1	Acetone	50	U	50	
75-27-4	Bromodichloromethane	10	U	10	
75-25-2	Bromoform	10	U	10	
74-83-9	Bromomethane	10	U	10	
56-23-5	Carbon Tetrachloride	10	U	10	
108-90-7	Chlorobenzene	10	U	10	
75-00-3	Chloroethane	**99**	D	10	
67-66-3	Chloroform	10	U	10	
74-87-3	Chloromethane	10	U	10	
124-48-1	Dibromochloromethane	10	U	10	
75-09-2	Methylene Chloride	10	U	10	
127-18-4	Tetrachloroethene (PCE)	10	U	10	
79-01-6	Trichloroethene (TCE)	10	U	10	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	
75-01-4	Vinyl Chloride	**120**	D	10	
156-59-2	cis-1,2-Dichloroethene	**370**	D	10	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	
156-60-5	trans-1,2-Dichloroethene	10	U	10	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	103	70-130	8/15/14 18:14	
Dibromofluoromethane	112	70-130	8/15/14 18:14	
Toluene-d8	104	70-130	8/15/14 18:14	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1400
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/8/14 13:17
Sample Name:	OB9-S (18')	**Units:**	µg/L
Lab Code:	R1406092-013	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	405651
Data File Name:	1020.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	250

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	250	U	250	
74-85-1	Ethene	250	U	250	
74-82-8	Methane	**14000**		250	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 0735
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/15/14 02:04
Sample Name:	EB-1	**Units:**	µg/L
Lab Code:	R1406092-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	406690
Data File Name:	I:\ACQUDATA\msvoa12\Data\081414\M8211.D\	**Instrument Name:**	R-MS-12
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	**26**		10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	8/15/14 02:04	
Dibromofluoromethane	109	70-130	8/15/14 02:04	
Toluene-d8	99	70-130	8/15/14 02:04	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	8/ 6/14 1145
Sample Matrix:	Water	**Date Received:**	8/ 7/14
		Date Analyzed:	8/15/14 01:31
Sample Name:	TB-1	**Units:**	µg/L
Lab Code:	R1406092-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	406690
Data File Name:	I:\ACQUDATA\msvoa12\Data\081414\M8210.D\	**Instrument Name:**	R-MS-12
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	98	70-130	8/15/14 01:31	
Dibromofluoromethane	112	70-130	8/15/14 01:31	
Toluene-d8	87	70-130	8/15/14 01:31	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: R1406092-MB1

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	1.0	U	mg/L	1.0	1	NA	8/13/14 11:59	
Nitrate as Nitrogen	300.0	0.10	U	mg/L	0.10	1	NA	8/7/14 16:23	
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	8/7/14 16:23	

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Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1406092-MB2	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	1.0	U	mg/L	1.0	1	NA	8/13/14 23:39	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1406092-MB3	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	1.0	U	mg/L	1.0	1	NA	8/14/14 15:17	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: R1406092-MB

Basis: NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	8/11/14	8/12/14 19:46	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	8/11/14	8/12/14 19:46	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Collected: NA
Date Received: NA
Date Analyzed: 8/15/14 00:59

Sample Name: Method Blank
Lab Code: RQ1409589-05

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\081414\M8209.D\

Analysis Lot: 406690
Instrument Name: R-MS-12
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	8/15/14 00:59	
Dibromofluoromethane	108	70-130	8/15/14 00:59	
Toluene-d8	101	70-130	8/15/14 00:59	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	8/15/14 12:51
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1409619-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	406845
Data File Name:	I:\ACQUDATA\msvoa12\Data\081514\M8231.D\	**Instrument Name:**	R-MS-12
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	8/15/14 12:51	
Dibromofluoromethane	108	70-130	8/15/14 12:51	
Toluene-d8	102	70-130	8/15/14 12:51	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	8/18/14 13:04
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1409718-01	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	407142
Data File Name:	I:\ACQUDATA\msvoa12\Data\081814\M8258.D\	**Instrument Name:**	R-MS-12
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	100	70-130	8/18/14 13:04	
Dibromofluoromethane	108	70-130	8/18/14 13:04	
Toluene-d8	101	70-130	8/18/14 13:04	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406092
Project:	Varian Beverly/150151	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	8/8/14 09:58
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1409264-01	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	405651
Data File Name:	1002.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	
74-85-1	Ethene	1.0	U	1.0	
74-82-8	Methane	1.0	U	1.0	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Analyzed: 8/ 7/14 - 8/13/14

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1406092-LCS1 Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	10.9	10.0	108	76 - 123
Nitrate as Nitrogen	300.0	0.931	1.00	93	90 - 110
Sulfate	300.0	1.87	2.00	93	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Analyzed: 8/14/14

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1406092-LCS2 Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	11.1	10.0	111	76 - 123

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Analyzed: 8/14/14

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1406092-LCS3 Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	10.8	10.0	108	76 - 123

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Analyzed: 8/12/14

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1406092-LCS Result	Spike Amount	% Rec	% Rec Limits
Iron, Dissolved	6010C	994	1000	99	80 - 120
Manganese, Dissolved	6010C	519	500	104	80 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Analyzed: 8/14/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 406690

Analyte Name	Lab Control Sample RQ1409589-03 Result	Spike Amount	% Rec		Duplicate Lab Control Sample RQ1409589-04 Result	Spike Amount	% Rec		% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	24.1	20.0	120		23.9	20.0	119		70 - 130	1	20
1,1,2,2-Tetrachloroethane	21.0	20.0	105		19.8	20.0	99		70 - 130	6	20
1,1,2-Trichloroethane	20.8	20.0	104		20.7	20.0	104		70 - 130	<1	20
1,1-Dichloroethane (1,1-DCA)	21.7	20.0	109		21.9	20.0	110		70 - 130	<1	20
1,1-Dichloroethene (1,1-DCE)	21.7	20.0	109		21.8	20.0	109		70 - 130	<1	20
1,2-Dichloroethane	26.9	20.0	135	*	26.8	20.0	134	*	70 - 130	<1	20
1,2-Dichloropropane	22.5	20.0	112		22.3	20.0	112		70 - 130	<1	20
Acetone	28.1	20.0	140		32.0	20.0	160		40 - 160	13	20
Bromodichloromethane	24.0	20.0	120		23.6	20.0	118		70 - 130	2	20
Bromoform	21.3	20.0	106		20.0	20.0	100		70 - 130	6	20
Bromomethane	20.8	20.0	104		19.1	20.0	96		40 - 160	8	20
Carbon Tetrachloride	24.0	20.0	120		24.3	20.0	121		70 - 130	<1	20
Chlorobenzene	20.9	20.0	105		20.6	20.0	103		70 - 130	2	20
Chloroethane	17.6	20.0	88		17.5	20.0	87		70 - 130	<1	20
Chloroform	23.6	20.0	118		23.4	20.0	117		70 - 130	1	20
Chloromethane	19.7	20.0	99		19.4	20.0	97		40 - 160	1	20
Dibromochloromethane	22.0	20.0	110		23.0	20.0	115		70 - 130	5	20
Methylene Chloride	19.4	20.0	97		19.0	20.0	95		70 - 130	2	20
Tetrachloroethene (PCE)	21.7	20.0	108		22.1	20.0	110		70 - 130	2	20
Trichloroethene (TCE)	21.4	20.0	107		21.1	20.0	106		70 - 130	1	20
Trichlorofluoromethane (CFC 11)	24.7	20.0	123		24.7	20.0	123		70 - 130	<1	20
Vinyl Chloride	18.1	20.0	91		18.1	20.0	91		70 - 130	<1	20
cis-1,2-Dichloroethene	19.6	20.0	98		19.6	20.0	98		70 - 130	<1	20
cis-1,3-Dichloropropene	21.3	20.0	106		21.1	20.0	105		70 - 130	1	20
trans-1,2-Dichloroethene	20.1	20.0	101		20.1	20.0	100		70 - 130	<1	20
trans-1,3-Dichloropropene	22.6	20.0	113		21.9	20.0	109		70 - 130	3	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Analyzed: 8/15/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 406845

Analyte Name	Lab Control Sample RQ1409619-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1409619-04 Result	Spike Amount	% Rec		% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	20.8	20.0	104	24.3	20.0	121		70 - 130	15	20
1,1,2,2-Tetrachloroethane	19.2	20.0	96	20.7	20.0	104		70 - 130	7	20
1,1,2-Trichloroethane	19.2	20.0	96	20.6	20.0	103		70 - 130	7	20
1,1-Dichloroethane (1,1-DCA)	19.5	20.0	97	21.9	20.0	109		70 - 130	12	20
1,1-Dichloroethene (1,1-DCE)	19.0	20.0	95	21.5	20.0	108		70 - 130	13	20
1,2-Dichloroethane	24.2	20.0	121	27.3	20.0	137	*	70 - 130	12	20
1,2-Dichloropropane	19.7	20.0	98	23.1	20.0	116		70 - 130	16	20
Acetone	27.7	20.0	139	29.2	20.0	146		40 - 160	5	20
Bromodichloromethane	21.6	20.0	108	23.9	20.0	120		70 - 130	10	20
Bromoform	17.9	20.0	90	19.6	20.0	98		70 - 130	9	20
Bromomethane	17.1	20.0	85	18.5	20.0	92		40 - 160	8	20
Carbon Tetrachloride	21.2	20.0	106	25.5	20.0	127		70 - 130	19	20
Chlorobenzene	18.6	20.0	93	20.8	20.0	104		70 - 130	11	20
Chloroethane	15.5	20.0	78	17.4	20.0	87		70 - 130	12	20
Chloroform	20.5	20.0	102	23.0	20.0	115		70 - 130	12	20
Chloromethane	17.4	20.0	87	19.9	20.0	99		40 - 160	13	20
Dibromochloromethane	20.4	20.0	102	22.2	20.0	111		70 - 130	8	20
Methylene Chloride	17.0	20.0	85	18.9	20.0	94		70 - 130	10	20
Tetrachloroethene (PCE)	18.7	20.0	93	22.4	20.0	112		70 - 130	18	20
Trichloroethene (TCE)	18.2	20.0	91	20.9	20.0	105		70 - 130	14	20
Trichlorofluoromethane (CFC 11)	21.9	20.0	110	25.0	20.0	125		70 - 130	13	20
Vinyl Chloride	15.9	20.0	79	18.2	20.0	91		70 - 130	14	20
cis-1,2-Dichloroethene	17.2	20.0	86	19.7	20.0	98		70 - 130	13	20
cis-1,3-Dichloropropene	19.3	20.0	96	21.9	20.0	109		70 - 130	12	20
trans-1,2-Dichloroethene	17.4	20.0	87	19.9	20.0	100		70 - 130	14	20
trans-1,3-Dichloropropene	20.5	20.0	102	23.4	20.0	117		70 - 130	13	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Analyzed: 8/18/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 407142

Analyte Name	Lab Control Sample RQ1409718-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1409718-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	20.9	20.0	104	20.7	20.0	103	70 - 130	1	20
1,1,2,2-Tetrachloroethane	20.8	20.0	104	20.6	20.0	103	70 - 130	<1	20
1,1,2-Trichloroethane	21.4	20.0	107	20.9	20.0	105	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	20.0	20.0	100	19.5	20.0	98	70 - 130	2	20
1,1-Dichloroethene (1,1-DCE)	18.9	20.0	95	18.8	20.0	94	70 - 130	<1	20
1,2-Dichloroethane	26.0	20.0	130	25.3	20.0	126	70 - 130	3	20
1,2-Dichloropropane	21.0	20.0	105	20.8	20.0	104	70 - 130	1	20
Acetone	22.5	20.0	112	23.5	20.0	117	40 - 160	4	20
Bromodichloromethane	23.1	20.0	116	22.4	20.0	112	70 - 130	3	20
Bromoform	22.3	20.0	111	21.4	20.0	107	70 - 130	4	20
Bromomethane	15.6	20.0	78	16.4	20.0	82	40 - 160	5	20
Carbon Tetrachloride	22.0	20.0	110	22.1	20.0	110	70 - 130	<1	20
Chlorobenzene	20.0	20.0	100	19.0	20.0	95	70 - 130	5	20
Chloroethane	15.0	20.0	75	15.2	20.0	76	70 - 130	1	20
Chloroform	21.1	20.0	105	20.3	20.0	102	70 - 130	4	20
Chloromethane	16.7	20.0	84	16.9	20.0	85	40 - 160	1	20
Dibromochloromethane	23.4	20.0	117	22.8	20.0	114	70 - 130	3	20
Methylene Chloride	18.1	20.0	90	17.5	20.0	88	70 - 130	3	20
Tetrachloroethene (PCE)	20.2	20.0	101	20.6	20.0	103	70 - 130	2	20
Trichloroethene (TCE)	18.8	20.0	94	19.1	20.0	96	70 - 130	2	20
Trichlorofluoromethane (CFC 11)	20.7	20.0	104	21.2	20.0	106	70 - 130	2	20
Vinyl Chloride	15.4	20.0	77	15.8	20.0	79	70 - 130	2	20
cis-1,2-Dichloroethene	17.8	20.0	89	17.8	20.0	89	70 - 130	<1	20
cis-1,3-Dichloropropene	20.8	20.0	104	20.8	20.0	104	70 - 130	<1	20
trans-1,2-Dichloroethene	17.7	20.0	88	18.0	20.0	90	70 - 130	2	20
trans-1,3-Dichloropropene	22.4	20.0	112	22.5	20.0	112	70 - 130	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406092
Date Analyzed: 8/ 8/14

Lab Control Sample Summary
Dissolved Gases by GC/FID

Analytical Method: RSK 175

Units: µg/L
Basis: NA

Analysis Lot: 405651

Analyte Name	Lab Control Sample RQ1409264-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1409264-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Ethane	26.3	26.1	101	27.8	26.1	107	75 - 118	6	30
Ethene	26.9	24.3	110	28.4	24.3	117	73 - 129	6	30
Methane	24.8	26.2	95	26.6	26.2	101	65 - 126	7	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Columbia Analytical Services – CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax)

Project Name: Varian Beverly	Project Number: 150151-03000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental, Inc. 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name: O. Dailey

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1 2 1 3 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐8260 ☐624 ☐CLP Site specific List	GC/MS SVOA's ☐8270 ☐625	GC VOA's ☐8021 ☐601/602	PESTICIDES ☐8081 ☐608	PCB's ☐8082 ☐608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Methane, Ethane, Ethene	TOC	Nitrate/Sulfate					REMARKS/ ALTERNATE DESCRIPTION
OB25-DO(45')		8/6/14	845	GW	3	X														
AP30R-DO(50')			820		3	X														
MW-9(19')			930		7	X							X	X						
OB15-S(17')			960		7	X							X	X						
~~DUP~~ MW-1(36')			1000		7	X							X	X						
AP23-DO(46')			1030		9	X						X	X	X	X					
AP35-DO~~DUP~~(33')			1100		9	X						X	X	X	X					
AP34-DO(33')			1130		9	X						X	X	X	X					
~~AP15-DO(49')~~ (DO)			~~1200~~ (DO)		~~9~~	~~X~~ (DO)						~~X~~	~~X~~	~~X~~	~~X~~ (DO)					
AP24-DO(46')			1200		9	X						X	X	X	X					

Preservative Key: 0. NONE; 1. HCL; 2. HNO_3; 3. H_2SO_4; 4. NaOH; 5. Zn. Acetate; 6. MeOH; 7. $NaHSO_4$; 8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field Filtered
Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Joe@CBI.com.

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
✓ Standard
REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
Edata ____ Yes ____ No

INVOICE INFORMATION
PO #: 873489
BILL TO: CB&I

R1406092 7 Y
CB&I Environmental & Infrastructure
Varian Beverly

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature:	UPS				
Printed Name: D. Dailey	Printed Name: UPS	Printed Name	Printed Name: J. Sowa	Printed Name	Printed Name
Firm: CBI	Firm: 8/6/14 1600	Firm	Firm:	Firm	Firm
Date/Time: 8/6/14 1600	Date/Time	Date/Time	Date/Time: 8/7/14 0935	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 10/2010

Columbia Analytical Services — CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax)

Project Name: Varian Beverly	Project Number: 150151-03000000
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CB&I Environmental, Inc. 150 Royall Street Canton, MA 02021	
Phone #: 617-589-6102	E-mail: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name: D. Dailey

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 1 — 2 1 3 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's 8260 ☐ 624 ☐ CLP ☐ Site specific list	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below) Mn	Methane, Ethane & Ethene	TOC	Nitrate/Sulfate	REMARKS/ ALTERNATE DESCRIPTION
AP13-00(49')		8/6/14	1230	GW	3	X										
~~AP00~~ AP33-00(35)			1300		9	X						X	X	X	X	
AP25-00(44')			1330		6	X							X	X		
0039-S(18')			1400		6	X							X	X		
EB-1			0935		3	X										
TB-1		~~7/25/14~~ 7/25/14	11:45		3	X										

Preservative Key
0. NONE
1. HCl
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals = Field Filtered
Site specific VOC list.
Massachusetts CAM analyses reporting and QA/QC.
Please email GISKey formatted EDD & PDF of report to:
Catherine.Joe@CBI.com.

See QAPP ☐

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
___ 1 day ___ 2 day ___ 3 day
___ 4 day ___ 5 day
✓ Standard

REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data

Edata ___ Yes ___ No

INVOICE INFORMATION
PO #: 873489
BILL TO: CB&I

R1406092

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: D. Dailey	Signature: UPS	Signature:	Signature: J. Seward	Signature:	Signature:
Printed Name: CBI	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: 8/6/14 1600	Firm: 8/6/14 1600	Firm:	Firm: ALS	Firm:	Firm:
Date/Time:	Date/Time:	Date/Time:	Date/Time: 8/7/14 0935	Date/Time:	Date/Time:

Cooler Receipt and Preservation Check Form

Project/Client CBtI Folder Number 14-6092

Cooler received on 8/7/14 by: JS COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y (N) NA
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	~~ALS/ROC~~ CLIENT
4	Circle: ~~Wet Ice~~ **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 8/7/14 Time: 0953 ID: ~~IR#3~~ IR#4 From: (Temp Blank) Sample Bottle

Observed Temp (°C)	2.6	2.5	4.0				
Correction Factor (°C)	-0.2	+0.1	-				
Corrected Temp (°C)	2.4	2.6	4.6				
Within 0-6°C?	(Y) N	(Y) N	(Y) N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: MMR by JS on 8/7 at 0953
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: MMR 8/7/14

Cooler Breakdown: Date: 8/7/14 Time: 1238 by: JS

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
2. Did all bottle labels and tags agree with custody papers? (YES) NO
3. Were correct containers used for the tests indicated? (YES) NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated (N/A)

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3	✓		B002A036B	5/15				
≤2	H_2SO_4	✓		MC1250250 E	5/15				
<4	$NaHSO_3$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**	4113070	6/15				

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 4-056-003, 112612-2N, 051214-1BMC,
Other Comments:

PC Secondary Review: MMR 8/11/14 *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 152728.05

Prepared By: Dale Dailey

Date : 9/12/2014

Matrix: Groundwater

Analyte Group : Hydrocarbon Gases
Total Organic Carbon
Metals

Analytical Method : RSK-175
SM20 5310C
Method 6010C

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : R1406359

Chain of Custody included in Data Package ? Yes

Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
8/14/14	RSK-175	7 Days	7 Days	8/15, 8/23/14
8/14/14	6010C	14 Days	180 Days	8/19, 8/21/14
8/14/14	SM20 5310C	28 Days	28 Days	8/27/2014

Sample temperature within QC limits: Yes, 1.7 C

Surrogate Recovery
Are all % recoveries within the allowable range ? NA

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? Yes

If no, list sample ID where range was exceeded: NA

Equipment Field Blank ID : NA
Trip Blank ID : NA

Method Blank:	SM20 5310C	8/27, 8/15, 8/23/14
	RSK 175	8/22/2014
	6010C	8/19, 8/22/14

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:
(1) All samples were received in good condition, and LCS and LCSDs within QC limits.

Reviewed By: Pernilla Haley 10/15/14

September 03, 2014

Service Request No: R1406359

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly/150151

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on August 15, 2014. For your reference, these analyses have been assigned our service request number **R1406359**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Client Services Manager

CC: Pernilla Haley

ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623 PHONE 585-288-5380 | FAX 585-288-8475
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1406359

Lab ID	Client ID
R1406359-001	AP13-DO(49)

All samples were received in good condition unless otherwise noted on the cooler receipt and preservation check form located at the end of this report.

All samples were preserved in accordance with approved analytical methods.

All samples have been analyzed by the approved methods cited on the analytical results pages.

All holding times and associated QC were within limits.

No analytical or QC problems were encountered.

All sampling activities performed by ALS personnel have been in accordance with "ALS Field Procedures and Measurements Manual" or by client specifications.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental | Project #: 150151

Project Location: Varian Beverly | RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1406359-001

Matrices: Groundwater/Surface Water | Soil/Sediment X | Drinking Water | Air | Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A X	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

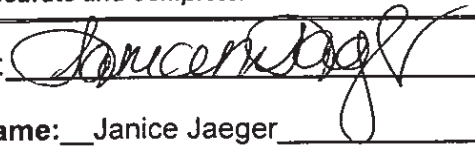
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

***Data User Note:** Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	X Yes No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: 

Position: Client Services Manager

Printed Name: Janice Jaeger

Date: 09/05/14

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **LARRY LEWIS**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **01 JUL 2014**

Expires: **30 JUN 2015**

Oscar C. Parcado

Director, Division of Environmental Analysis

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2014 Expiration Date 30 JUN 2015

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

00006

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2014 Expiration Date 30 JUN 2015

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEI	EPA 608

INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	3010A
200.8	ILM05.3
6010C	3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3010A
6010 SPLP (1312) extract	3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406359
Project:	Varian Beverly/150151	**Date Collected:**	8/14/14 1200
Sample Matrix:	Water	**Date Received:**	8/15/14
Sample Name:	AP13-DO(49)		
Lab Code:	R1406359-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	**616**		mg/L	40	40	NA	8/27/14 06:10	
Nitrate as Nitrogen	300.0	1.0	U	mg/L	1.0	10	NA	8/15/14 21:04	
Sulfate	300.0	**319**		mg/L	8.0	40	NA	8/23/14 07:05	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406359
Project:	Varian Beverly/150151	**Date Collected:**	8/14/14 1200
Sample Matrix:	Water	**Date Received:**	8/15/14
Sample Name:	AP13-DO(49)		
Lab Code:	R1406359-001	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	8/18/14	8/19/14 15:45	
Manganese, Dissolved	6010C	**25300**		µg/L	100	10	8/18/14	8/21/14 15:32	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406359
Project:	Varian Beverly/150151	**Date Collected:**	8/14/14 1200
Sample Matrix:	Water	**Date Received:**	8/15/14
		Date Analyzed:	8/22/14 08:59
Sample Name:	AP13-DO(49)	**Units:**	µg/L
Lab Code:	R1406359-001	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	407937
Data File Name:	1005.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	
74-85-1	Ethene	57		1.0	
74-82-8	Methane	2.3		1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406359
Project:	Varian Beverly/150151	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1406359-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	1.0	U	mg/L	1.0	1	NA	8/27/14 00:57	
Nitrate as Nitrogen	300.0	0.10	U	mg/L	0.10	1	NA	8/15/14 15:29	
Sulfate	300.0	0.20	U	mg/L	0.20	1	NA	8/23/14 05:26	

Client:	CB&I	**Service Request:**	R1406359
Project:	Varian Beverly/150151	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1406359-MB	**Basis:**	NA

Inorganic Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Iron, Dissolved	6010C	100	U	µg/L	100	1	8/18/14	8/19/14 13:52	
Manganese, Dissolved	6010C	10	U	µg/L	10	1	8/18/14	8/21/14 15:20	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406359
Project:	Varian Beverly/150151	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	8/22/14 08:30
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1409909-01	**Basis:**	NA

Dissolved Gases by GC/FID

Analytical Method:	RSK 175	**Analysis Lot:**	407937
Data File Name:	1002.run	**Instrument Name:**	R-GC-02
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
74-84-0	Ethane	1.0	U	1.0	
74-85-1	Ethene	1.0	U	1.0	
74-82-8	Methane	1.0	U	1.0	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406359
Date Analyzed: 8/15/14 - 8/27/14

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1406359-LCS Result	Spike Amount	% Rec	% Rec Limits
Carbon, Total Organic (TOC)	SM 5310B/C-2000(201	11.4	10.0	114	76 - 123
Nitrate as Nitrogen	300.0	0.989	1.00	99	90 - 110
Sulfate	300.0	1.80	2.00	90	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406359
Date Analyzed: 8/19/14 - 8/21/14

Lab Control Sample Summary
Inorganic Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1406359-LCS Result	Spike Amount	% Rec	% Rec Limits
Iron, Dissolved	6010C	1010	1000	101	80 - 120
Manganese, Dissolved	6010C	483	500	97	80 - 120

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly/150151
Sample Matrix: Water

Service Request: R1406359
Date Analyzed: 8/22/14

Lab Control Sample Summary
Dissolved Gases by GC/FID

Analytical Method: RSK 175

Units: µg/L
Basis: NA

Analysis Lot: 407937

Analyte Name	Lab Control Sample RQ1409909-02 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1409909-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Ethane	26.4	26.1	101	26.4	26.1	101	75 - 118	<1	30
Ethene	27.2	24.3	112	27.4	24.3	113	73 - 129	<1	30
Methane	25.0	26.2	96	24.5	26.2	94	65 - 126	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM 7187

ALS Environmental

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 1

Project Name	Project Number
Varian	150151
Project Manager	**Report CC**
R. Cadorette	
Company/Address	
150 Royall St	
Canton, MA 02021	
Phone #	**Email**
(617) 589-6102	raymond.cadorette@cbi.com
Sampler's Signature	**Sampler's Printed Name**
	Dale Darby

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 2 | 0 | 0 | 3

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs ○ 8260 ○ 624 ○ CLP	GC/MS SVOAs ○ 8270 ○ 625	GC VOAs ○ 8021 ○ 601/602	PESTICIDES ○ 8081 ○ 608	PCBs ○ 8082 ○ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Fe+Mn	Methane, Ethane, Ethene	Nitrate + Sulfate	TOC					
AP13-D0(49)		8/14/14	1200	GW	6							X	X	X	X	X					
			1200																		

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

SPECIAL INSTRUCTIONS/COMMENTS
Metals Fe + Mn

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 1 day _____ 2 day _____ 3 day
_____ 4 day _____ 5 day
X Standard
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report
Edata ____ Yes ____

INVOICE INFORMATION
PO #
BILL TO:

R1406359 7 Y
CB&I Environmental & Infrastructure
Varian Beverly

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature Dale Darby	Signature UPS	Signature	Signature	Signature	Signature
Printed Name CBI	Printed Name UPS	Printed Name	Printed Name Gary Lotz	Printed Name	Printed Name
Firm 8/14/14 1400	Firm 8/14/14 1400	Firm	Firm B&S	Firm	Firm
Date/Time	Date/Time	Date/Time	Date/Time 8/15/14 0850	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return to Originator

Cooler Receipt and Preservation Check Form

Project/Client CB+I Folder Number R1406359

Cooler received on 8/15/14 by: R

COURIER: ALS (UPS) FEDEX VELOCITY CLIENT

1	Were **Custody** seals on outside of cooler?	(Y) N	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody** papers properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	(Y) N NA
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	(ALS/ROC) CLIENT
4	Circle: ~~Wet Ice~~ **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 8/15/14 Time: 0858 ID: (IR#3) IR#4 From: (Temp Blank) Sample Bottle

Observed Temp (°C)	1.7						
Correction Factor (°C)	–						
Corrected Temp (°C)	1.7						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R002 by R on 8/15/14 at 0900
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: MM 8/15/14

Cooler Breakdown: Date: 8-15-14 Time: 15:40 by: RE

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
2. Did all bottle labels and tags agree with custody papers? (YES) NO
3. Were correct containers used for the tests indicated? (YES) NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated (N/A)

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3	✓		BDB26136H	06/15				
≤2	H_2SO_4	✓		WC126250E	06/15				
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**	4113070	06/15				

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 4-086-003, 060214-1BML, 071414-2AAD

Other Comments:

headspace : all vials

PC Secondary Review: MM 8/19/14 *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Worksheet

Project Name : Varian Medical Systems, Inc

Job Number : 152728.09

Prepared By: Dale Dailey

Date : 9/12/2014

Matrix: Soil

Analyte Group : Volatile Organics
Total Solids

Analytical Method : SW-846 8260C
Modified EPA 160.3

Completed MADEP CAM Certification Form included: Yes

Laboratory ID No. : 1406468

Chain of Custody included in Data Package ? Yes

Is it Complete ? Yes

Sample Collection Date	Analysis	Allowable Holding Time for extraction	Allowable Holding Time for analysis	Analysis Date
8/19/14	Modified EPA 160.3	14 days	14 Days	8/21, 8/25/14
8/19/14	VOC 8260C	14 days	30 Days	8/21/14

Sample temperature within QC limits: Yes, 3.9 C

Surrogate Recovery
Are all % recoveries within the allowable range ? Yes

If No, List sample ID where range was exceeded: NA

MS/MSD

Are all MS/MSD sample recoveries within the QC limits ? NA

If No, list sample ID, date and compound where limit was exceeded: NA

Laboratory Control Samples
Are all laboratory control sample recoveries within the QC limits ? See Notes

If no, list sample ID where range was exceeded: see notes

Equipment Field Blank ID : NA
Trip Blank ID : TRIP BLANK

Method Blank: 8260C 8/21, 8/25/14

160.3 Modified 8/21/2014

Were any compounds identified in the method blank, field blank or trip blank above detection limits ? No

If so, list Sample ID/Compound/Concentration/Units: NA

Notes:
All samples were initially analyzed at appropriate dilutions.

(1) The RPD was outside limits in the LCS for Carbon tetrachloride, Chlorobenzane, and Tetrachloroethene in batch 407807. The data was not impacted since the analytical results in these batches were non-detect for these analytes.

Reviewed By: Pernilla Haley 6/9/14

August 28, 2014

Service Request No: R1406468

Mr. Ray Cadorette
CB&I Environmental & Infrastructure
150 Royall Street
Canton, MA 02021

Laboratory Results for: Varian Beverly - Soil/146898

Dear Mr. Cadorette:

Enclosed are the results of the sample(s) submitted to our laboratory on August 20, 2014. For your reference, these analyses have been assigned our service request number **R1406468**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Janice Jaeger
Client Services Manager

CC: Pernilla Haley

ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623 PHONE 585-288-5380 | FAX 585-288-8475
ALS GROUP USA, CORP. Part of the ALS Group An ALS Limited Company

CASE NARRATIVE

Client:	CB&I	**Service Request No.:**	R1406468
Project:	Varian Beverly	**Project Number:**	146898
Sample Matrix:	Soil/Water	**Date Received:**	08/20/14

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II, deliverables with Massachusetts CAM analyses reporting. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Soil and water samples were collected on 08/19/14 and received at ALS in good condition at a cooler temperature of 3.9 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the second page of the Case Narrative for a cross-reference between Client ID and ALS Job #.

Volatile Organics

Two soil samples and one water sample were analyzed for a site list of Volatile Organics by SW-846 Method 5035/5030/8260C.

All initial calibrations were compliant.

All the continuing calibration criteria were met for all analytes.

All Surrogate Standard recoveries were within QC limits.

All Blank Spike (LCS)/Blank Spike Duplicate (LCSD) recoveries were within QC limits. Various RPD's were outside limits and hav been flagged with an "*". No data was affected.

All samples were analyzed within the required holding time of 14 days.

MassDEP Analytical Protocol Certification Form

Laboratory Name: ALS Environmental | Project #: 14698

Project Location: Varian Beverly | RTN:

This Form provides certifications for the following data set: list Laboratory Sample ID Number(s):
R1403116-001-004

Matrices: Groundwater/Surface Water | Soil/Sediment X | Drinking Water | Air | Other:

CAM Protocol (check all that apply below):

8260 VOC CAM II A **X**	7470/7471 Hg CAM III B	MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
8270 SVOC CAM II B	7010 Metals CAM III C	MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	X Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	X Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	X Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	X Yes No
E	VPH, EPH, APH, and TO-15 only: a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	X Yes No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	X Yes No[1]

***Data User Note**: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.*

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	X Yes No[1]
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes X No[1]

[1] *All negative responses must be addressed in an attached laboratory narrative.*

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: _____ **Position:** Client Services Manager

Printed Name: Janice Jaeger **Date:** 08/28/14

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1406468

Lab ID	Client ID
R1406468-001	DRUM #1
R1406468-002	DRUM #2
R1406468-003	TRIP BLANK

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

Lab ID # for Massachusetts Certification

M-NY032

Analyses were conducted in accordance with Massachusetts Department of Environmental Protection certification standards, except as noted in the laboratory case narrative provided. A copy of the current Department issued parameter list is included in this report.

The Commonwealth of Massachusetts

Department of Environmental Protection

Division of Environmental Analysis
Senator William X. Wall Experiment Station

certifies

M-NY032

ALS ENVIRONMENTAL ROCHESTER
1565 JEFFERSON RD
BUILDING 300, SUITE 360
ROCHESTER, NY 14623-0000

Laboratory Director: **LARRY LEWIS**

for the analysis of **NON POTABLE WATER (CHEMISTRY)**

pursuant to 310 CMR 42.00

This certificate supersedes all previous Massachusetts certificates issued to this laboratory. The laboratory is regulated by and shall be responsible for being in compliance with Massachusetts regulations at 310 CMR 42.00.

This certificate is valid only when accompanied by the latest dated Certified Parameter List as issued by the Massachusetts D.E.P. Contact the Division of Environmental Analysis to verify the current certification status of the laboratory.

Certification is no guarantee of the validity of the data. This certification is subject to unannounced laboratory inspections.

Issued: **01 JUL 2014**

Expires: **30 JUN 2015**

Oscar C. Parcable

Director, Division of Environmental Analysis

00005A

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2014 Expiration Date 30 JUN 2015

Analytes	Methods
ALUMINUM	EPA 200.7
ANTIMONY	EPA 200.7
ANTIMONY	EPA 200.8
ARSENIC	EPA 200.7
ARSENIC	EPA 200.8
BERYLLIUM	EPA 200.7
BERYLLIUM	EPA 200.8
CADMIUM	EPA 200.7
CADMIUM	EPA 200.8
CHROMIUM	EPA 200.7
CHROMIUM	EPA 200.8
COBALT	EPA 200.7
COBALT	EPA 200.8
COPPER	EPA 200.7
COPPER	EPA 200.8
IRON	EPA 200.7
LEAD	EPA 200.7
LEAD	EPA 200.8
MANGANESE	EPA 200.7
MANGANESE	EPA 200.8
MERCURY	EPA 245.1
MOLYBDENUM	EPA 200.7
MOLYBDENUM	EPA 200.8
NICKEL	EPA 200.7
NICKEL	EPA 200.8
SELENIUM	EPA 200.7
SELENIUM	EPA 200.8
SILVER	EPA 200.7
SILVER	EPA 200.8
THALLIUM	EPA 200.7
THALLIUM	EPA 200.8
VANADIUM	EPA 200.7
VANADIUM	EPA 200.8
ZINC	EPA 200.7
ZINC	EPA 200.8
SPECIFIC CONDUCTIVITY	EPA 120.1
TOTAL DISSOLVED SOLIDS	SM 2540C
HARDNESS (CACO3), TOTAL	SM 2340C
CALCIUM	EPA 200.7
MAGNESIUM	EPA 200.7
SODIUM	EPA 200.7
POTASSIUM	EPA 200.7
ALKALINITY, TOTAL	SM 2320B

00005B

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Certified Parameter List as of: 01 JUL 2014

M-NY032 ALS ENVIRONMENTAL ROCHESTER
ROCHESTER NY

NON POTABLE WATER (CHEMISTRY) Effective Date 01 JUL 2014 Expiration Date 30 JUN 2015

Analytes	Methods
CHLORIDE	SM 4500-CL-E
CHLORIDE	EPA 300.0
FLUORIDE	EPA 300.0
SULFATE	EPA 300.0
AMMONIA-N	EPA 350.1
NITRATE-N	EPA 300.0
NITRATE-N	EPA 353.2
KJELDAHL-N	EPA 351.2
ORTHOPHOSPHATE	EPA 365.1
PHOSPHORUS, TOTAL	EPA 365.1
CHEMICAL OXYGEN DEMAND	EPA 410.4
BIOCHEMICAL OXYGEN DEMAND	SM 5210B
TOTAL ORGANIC CARBON	SM 5310C
CYANIDE, TOTAL	EPA 335.4
NON-FILTERABLE RESIDUE	SM 2540D
OIL AND GREASE	EPA 1664
PHENOLICS, TOTAL	EPA 420.4
VOLATILE HALOCARBONS	EPA 601
VOLATILE HALOCARBONS	EPA 624
VOLATILE AROMATICS	EPA 602
VOLATILE AROMATICS	EPA 624
SVOC-ACID EXTRACTABLES	EPA 625
SVOC-BASE/NEUTRAL EXTRACTABLES	EPA 625
POLYCHLORINATED BIPHENYLS (WATEI	EPA 608

00005C

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406468
Project:	Varian Beverly - Soil/146898	**Date Collected:**	8/19/14 1430
Sample Matrix:	Soil	**Date Received:**	8/20/14
Sample Name:	DRUM #1		
Lab Code:	R1406468-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Solids, Total	160.3 Modified	**86.4**		Percent	1.0	1	NA	8/21/14 10:58	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406468
Project:	Varian Beverly - Soil/146898	**Date Collected:**	8/19/14 1430
Sample Matrix:	Soil	**Date Received:**	8/20/14
		Date Analyzed:	8/21/14 15:12
Sample Name:	DRUM #1	**Units:**	µg/Kg
Lab Code:	R1406468-001	**Basis:**	Dry
		Percent Solids:	86.4

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	407807
Data File Name:	I:\ACQUDATA\MSVOA7\DATA\082114\W0512.D\	**Instrument Name:**	R-MS-07
		Dilution Factor:	.87

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
67-64-1	Acetone	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0	U	5.0	
79-01-6	Trichloroethene (TCE)	5.0	U	5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	8/21/14 15:12	
Dibromofluoromethane	99	70-130	8/21/14 15:12	
Toluene-d8	99	70-130	8/21/14 15:12	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406468
Project:	Varian Beverly - Soil/146898	**Date Collected:**	8/19/14 1400
Sample Matrix:	Soil	**Date Received:**	8/20/14
Sample Name:	DRUM #2		
Lab Code:	R1406468-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Solids, Total	160.3 Modified	**89.1**		Percent	1.0	1	NA	8/21/14 10:58	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406468
Project:	Varian Beverly - Soil/146898	**Date Collected:**	8/19/14 1400
Sample Matrix:	Soil	**Date Received:**	8/20/14
		Date Analyzed:	8/21/14 15:52
Sample Name:	DRUM #2	**Units:**	µg/Kg
Lab Code:	R1406468-002	**Basis:**	Dry
		Percent Solids:	89.1

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	407807
Data File Name:	I:\ACQUDATA\MSVOA7\DATA\082114\W0513.D\	**Instrument Name:**	R-MS-07
		Dilution Factor:	.94

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.3	U	5.3	
79-34-5	1,1,2,2-Tetrachloroethane	5.3	U	5.3	
79-00-5	1,1,2-Trichloroethane	5.3	U	5.3	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.3	U	5.3	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.3	U	5.3	
107-06-2	1,2-Dichloroethane	5.3	U	5.3	
78-87-5	1,2-Dichloropropane	5.3	U	5.3	
67-64-1	Acetone	5.3	U	5.3	
75-27-4	Bromodichloromethane	5.3	U	5.3	
75-25-2	Bromoform	5.3	U	5.3	
74-83-9	Bromomethane	5.3	U	5.3	
56-23-5	Carbon Tetrachloride	5.3	U	5.3	
108-90-7	Chlorobenzene	5.3	U	5.3	
75-00-3	Chloroethane	5.3	U	5.3	
67-66-3	Chloroform	5.3	U	5.3	
74-87-3	Chloromethane	5.3	U	5.3	
124-48-1	Dibromochloromethane	5.3	U	5.3	
75-09-2	Methylene Chloride	5.3	U	5.3	
127-18-4	Tetrachloroethene (PCE)	5.3	U	5.3	
79-01-6	Trichloroethene (TCE)	5.3	U	5.3	
75-69-4	Trichlorofluoromethane (CFC 11)	5.3	U	5.3	
75-01-4	Vinyl Chloride	5.3	U	5.3	
156-59-2	cis-1,2-Dichloroethene	5.3	U	5.3	
10061-01-5	cis-1,3-Dichloropropene	5.3	U	5.3	
156-60-5	trans-1,2-Dichloroethene	5.3	U	5.3	
10061-02-6	trans-1,3-Dichloropropene	5.3	U	5.3	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	101	70-130	8/21/14 15:52	
Dibromofluoromethane	101	70-130	8/21/14 15:52	
Toluene-d8	98	70-130	8/21/14 15:52	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	CB&I	**Service Request:**	R1406468
Project:	Varian Beverly - Soil/146898	**Date Collected:**	8/19/14 1400
Sample Matrix:	Water	**Date Received:**	8/20/14
		Date Analyzed:	8/25/14 13:35
Sample Name:	TRIP BLANK	**Units:**	µg/L
Lab Code:	R1406468-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	8260C	**Analysis Lot:**	408261
Data File Name:	I:\ACQUDATA\msvoa12\Data\082514\M8332.D\	**Instrument Name:**	R-MS-12
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	8/25/14 13:35	
Dibromofluoromethane	110	70-130	8/25/14 13:35	
Toluene-d8	100	70-130	8/25/14 13:35	

Client:	CB&I	**Service Request:**	R1406468
Project:	Varian Beverly - Soil/146898	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1406468-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
Solids, Total	160.3 Modified	1.0		Percent	1.0	1	NA	8/21/14 10:58	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly - Soil/146898
Sample Matrix: Soil

Service Request: R1406468
Date Collected: NA
Date Received: NA
Date Analyzed: 8/21/14 11:43

Sample Name: Method Blank
Lab Code: RQ1409882-05

Units: µg/Kg
Basis: Dry

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\MSVOA7\DATA\082114\W0507.D\

Analysis Lot: 407807
Instrument Name: R-MS-07
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	5.0	U	5.0	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	5.0	U	5.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	5.0	U	5.0	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	
67-64-1	Acetone	5.0	U	5.0	
75-27-4	Bromodichloromethane	5.0	U	5.0	
75-25-2	Bromoform	5.0	U	5.0	
74-83-9	Bromomethane	5.0	U	5.0	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	
108-90-7	Chlorobenzene	5.0	U	5.0	
75-00-3	Chloroethane	5.0	U	5.0	
67-66-3	Chloroform	5.0	U	5.0	
74-87-3	Chloromethane	5.0	U	5.0	
124-48-1	Dibromochloromethane	5.0	U	5.0	
75-09-2	Methylene Chloride	5.0	U	5.0	
127-18-4	Tetrachloroethene (PCE)	5.0	U	5.0	
79-01-6	Trichloroethene (TCE)	5.0	U	5.0	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	
75-01-4	Vinyl Chloride	5.0	U	5.0	
156-59-2	cis-1,2-Dichloroethene	5.0	U	5.0	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	102	70-130	8/21/14 11:43	
Dibromofluoromethane	99	70-130	8/21/14 11:43	
Toluene-d8	98	70-130	8/21/14 11:43	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: CB&I
Project: Varian Beverly - Soil/146898
Sample Matrix: Water

Service Request: R1406468
Date Collected: NA
Date Received: NA
Date Analyzed: 8/25/14 13:03

Sample Name: Method Blank
Lab Code: RQ1409978-05

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 8260C
Data File Name: I:\ACQUDATA\msvoa12\Data\082514\M8331.D\

Analysis Lot: 408261
Instrument Name: R-MS-12
Dilution Factor: 1

CAS No.	Analyte Name	Result	Q	MRL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	2.0	U	2.0	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.0	U	2.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.0	U	2.0	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	
67-64-1	Acetone	10	U	10	
75-27-4	Bromodichloromethane	2.0	U	2.0	
75-25-2	Bromoform	2.0	U	2.0	
74-83-9	Bromomethane	2.0	U	2.0	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	
108-90-7	Chlorobenzene	2.0	U	2.0	
75-00-3	Chloroethane	2.0	U	2.0	
67-66-3	Chloroform	2.0	U	2.0	
74-87-3	Chloromethane	2.0	U	2.0	
124-48-1	Dibromochloromethane	2.0	U	2.0	
75-09-2	Methylene Chloride	2.0	U	2.0	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	
79-01-6	Trichloroethene (TCE)	2.0	U	2.0	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	
75-01-4	Vinyl Chloride	2.0	U	2.0	
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
4-Bromofluorobenzene	104	70-130	8/25/14 13:03	
Dibromofluoromethane	107	70-130	8/25/14 13:03	
Toluene-d8	101	70-130	8/25/14 13:03	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly - Soil/146898
Sample Matrix: Soil

Service Request: R1406468
Date Analyzed: 8/21/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/Kg
Basis: Dry

Analysis Lot: 407807

Analyte Name	Lab Control Sample RQ1409882-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1409882-04 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	21.7	20.0	108	18.6	20.0	93	70 - 130	15	20
1,1,2,2-Tetrachloroethane	20.8	20.0	104	19.7	20.0	99	70 - 130	5	20
1,1,2-Trichloroethane	20.1	20.0	100	19.6	20.0	98	70 - 130	2	20
1,1-Dichloroethane (1,1-DCA)	20.1	20.0	101	19.6	20.0	98	70 - 130	3	20
1,1-Dichloroethene (1,1-DCE)	21.9	20.0	110	22.5	20.0	112	70 - 130	2	20
1,2-Dichloroethane	20.1	20.0	100	20.6	20.0	103	70 - 130	3	20
1,2-Dichloropropane	21.8	20.0	109	20.3	20.0	101	70 - 130	8	20
Acetone	15.2	20.0	76	17.8	20.0	89	40 - 160	16	20
Bromodichloromethane	21.1	20.0	105	20.2	20.0	101	70 - 130	4	20
Bromoform	20.4	20.0	102	19.2	20.0	96	70 - 130	6	20
Bromomethane	16.8	20.0	84	17.1	20.0	86	40 - 160	2	20
Carbon Tetrachloride	22.5	20.0	113	17.7	20.0	88	70 - 130	25 *	20
Chlorobenzene	23.8	20.0	119	18.5	20.0	92	70 - 130	26 *	20
Chloroethane	17.7	20.0	88	17.7	20.0	88	70 - 130	<1	20
Chloroform	20.2	20.0	101	20.9	20.0	104	70 - 130	3	20
Chloromethane	18.8	20.0	94	19.0	20.0	95	40 - 160	1	20
Dibromochloromethane	19.8	20.0	99	18.4	20.0	92	70 - 130	7	20
Methylene Chloride	20.3	20.0	101	20.3	20.0	102	70 - 130	<1	20
Tetrachloroethene (PCE)	25.3	20.0	126	17.3	20.0	87	70 - 130	37 *	20
Trichloroethene (TCE)	22.5	20.0	112	19.3	20.0	97	70 - 130	14	20
Trichlorofluoromethane (CFC 11)	20.0	20.0	100	18.5	20.0	92	70 - 130	8	20
Vinyl Chloride	17.9	20.0	90	18.1	20.0	91	70 - 130	1	20
cis-1,2-Dichloroethene	19.6	20.0	98	20.2	20.0	101	70 - 130	3	20
cis-1,3-Dichloropropene	21.0	20.0	105	19.8	20.0	99	70 - 130	6	20
trans-1,2-Dichloroethene	20.3	20.0	102	20.6	20.0	103	70 - 130	<1	20
trans-1,3-Dichloropropene	21.4	20.0	107	20.2	20.0	101	70 - 130	6	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: CB&I
Project: Varian Beverly - Soil/146898
Sample Matrix: Water

Service Request: R1406468
Date Analyzed: 8/25/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 8260C

Units: µg/L
Basis: NA

Analysis Lot: 408261

Analyte Name	Lab Control Sample RQ1409978-03 Result	Spike Amount	% Rec	Duplicate Lab Control Sample RQ1409978-04 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	23.0	20.0	115	21.9	20.0	110	70 - 130	5	20
1,1,2,2-Tetrachloroethane	20.3	20.0	101	19.8	20.0	99	70 - 130	3	20
1,1,2-Trichloroethane	20.6	20.0	103	20.0	20.0	100	70 - 130	3	20
1,1-Dichloroethane (1,1-DCA)	20.7	20.0	104	19.8	20.0	99	70 - 130	4	20
1,1-Dichloroethene (1,1-DCE)	21.4	20.0	107	19.6	20.0	98	70 - 130	9	20
1,2-Dichloroethane	25.4	20.0	127	25.3	20.0	127	70 - 130	<1	20
1,2-Dichloropropane	21.6	20.0	108	21.0	20.0	105	70 - 130	3	20
Acetone	18.7	20.0	93	19.6	20.0	98	40 - 160	5	20
Bromodichloromethane	23.2	20.0	116	22.7	20.0	113	70 - 130	2	20
Bromoform	21.5	20.0	107	20.3	20.0	102	70 - 130	5	20
Bromomethane	21.4	20.0	107	19.1	20.0	96	40 - 160	11	20
Carbon Tetrachloride	23.8	20.0	119	22.9	20.0	115	70 - 130	4	20
Chlorobenzene	19.8	20.0	99	19.4	20.0	97	70 - 130	2	20
Chloroethane	16.6	20.0	83	16.4	20.0	82	70 - 130	1	20
Chloroform	22.3	20.0	111	21.2	20.0	106	70 - 130	5	20
Chloromethane	18.6	20.0	93	17.3	20.0	86	40 - 160	7	20
Dibromochloromethane	22.1	20.0	110	21.7	20.0	109	70 - 130	2	20
Methylene Chloride	18.4	20.0	92	17.8	20.0	89	70 - 130	4	20
Tetrachloroethene (PCE)	21.3	20.0	106	20.3	20.0	101	70 - 130	5	20
Trichloroethene (TCE)	20.4	20.0	102	19.7	20.0	98	70 - 130	4	20
Trichlorofluoromethane (CFC 11)	23.0	20.0	115	22.4	20.0	112	70 - 130	3	20
Vinyl Chloride	17.1	20.0	85	16.7	20.0	83	70 - 130	2	20
cis-1,2-Dichloroethene	19.1	20.0	96	18.5	20.0	93	70 - 130	3	20
cis-1,3-Dichloropropene	21.3	20.0	106	20.7	20.0	103	70 - 130	3	20
trans-1,2-Dichloroethene	19.2	20.0	96	18.7	20.0	94	70 - 130	3	20
trans-1,3-Dichloropropene	22.1	20.0	110	21.7	20.0	108	70 - 130	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

17720

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 1

Project Name: Varian	Project Number: 152728
Project Manager: Raymond Cadorette	Report CC:
Company/Address: CBI 150 Royall St Canton MA 02021	
Phone #: 617 589 6102	Email: Raymond.Cadorette@CBI.com
Sampler's Signature:	Sampler's Printed Name: Paul LeDuc

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 6

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs ◦ 8260 ◦ 624 ◦ CLP Full List	GC/MS SVOAs ◦ 8270 ◦ 625	GC VOAs ◦ 8021 ◦ 601/602	PESTICIDES ◦ 8081 ◦ 608	PCBs ◦ 8082 ◦ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	REMARKS/ ALTERNATE DESCRIPTION
Drum # 1		8.19.14	1430	Solids	4	X							
Drum # 2		8.19.14	1400	Solids	4	X							
Trip Blank		8.11.14	1330	Liquid	3								

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 1 day _____ 2 day _____ 3 day
_____ 4 day _____ 5 day

REQUESTED REPORT DATE _____

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data

Edata _____ Yes _____ No

INVOICE INFORMATION
PO #
BILL TO:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature:	Signature:	Signature:	Signature:	
Printed Name: Paul LeDuc	Printed Name: J. Sewell	Printed Name:	Printed Name:	Printed Name:	
Firm: CBI	Firm: ALS	Firm:	Firm:	Firm:	
Date/Time: 8.19.14 1500	Date/Time: 8/20 0935	Date/Time:	Date/Time:	Date/Time:	Date/Time:

R1406468 7 Y
CB&I Environmental & Infrastructure
Varian Beverly - Soil

Distribution: White - Lab Copy; Yellow - Return to Originator

Cooler Receipt and Preservation Check Form

Project/Client CBTI Folder Number R1406468.

Cooler received on 8/20 by: JFS

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	(Y) N	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y (N) NA
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	~~ALS/ROC~~ CLIENT
4	Circle: ~~Wet Ice~~ **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore	~~5035set~~ NA

8. Temperature Readings Date: 8/20 Time: 1005 ID: IR#3 ~~IR#4~~ From: Temp Blank ~~Sample Bottle~~

Observed Temp (°C)	3.9						
Correction Factor (°C)	—						
Corrected Temp (°C)	3.9						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: Rack by JFS on 8/20 at 1005
5035 samples placed in storage location: F-05 by JFS on 8/20 at 1005

PC Secondary Review: JMS 8/20/14

Cooler Breakdown: Date: 8/20/14 Time: 13:00 by: AV

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
2. Did all bottle labels and tags agree with custody papers? (YES) NO
3. Were correct containers used for the tests indicated? (YES) NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated (N/A)

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**	4113070	07/15				

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 031714-1BNS, 4-086-003
Other Comments:

PC Secondary Review: JMS 8/22/14 *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter