STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
ENVIRONMENTAL LABORATORY

P.O. Box 30270
Lansing, MI 48909
TEL: (517) 335-9800
FAX: (517) 335-9600

24 October 2018

Work Order: 1809212

Price: $2,685.00

Dan Hamel
MDEQ-RRD-JACKSON
301 E. Louis Glick Highway
Jackson, MI 49201-1556

RE: GELMAN SCIENCES, INC

I certify that the analyses performed by the MDEQ Environmental Laboratory were conducted by methods approved by the U.S. Environmental Protection Agency and other appropriate regulatory agencies.

Sincerely,

Kirby Shane
Laboratory Director

STATE OF MICHIGAN
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MDEQ-RRD-JACKSON
301 E. Louis Glick Highway
Jackson MI, 49201-1556

Project: GELMAN SCIENCES, INC
Site Code: 81000018
Project Manager: Dan Hamel

Reported:
10/24/2018

Analytical Report for Samples

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Qualifier
UNNAMED TRIBUTARY-OUTFALL	1809212-01	Water	09/18/2018	09/20/2018	
UNNAMED TRIBUTARY-OUTFALL UP	1809212-02	Water	09/18/2018	09/20/2018	
UNNAMED TRIBUTARY-MARSHY AREA	1809212-03	Water	09/18/2018	09/20/2018	
HC/HR	1809212-04	Water	09/18/2018	09/20/2018	
LITTLE LAKE	1809212-05	Water	09/18/2018	09/20/2018	
THIRD SISTER LAKE	1809212-06	Water	09/18/2018	09/20/2018	
UNNAMED TRIBUTARY-PARK	1809212-07	Water	09/18/2018	09/20/2018	
UNNAMED TRIBUTARY-JACKSON	1809212-08	Water	09/18/2018	09/20/2018	
HONEY CREEK-DEXTER	1809212-09	Water	09/18/2018	09/20/2018	
SECOND SISTER LAKE	1809212-10	Water	09/18/2018	09/20/2018	
FIRST SISTER LAKE	1809212-11	Water	09/19/2018	09/20/2018	
ALLEN CREEK-GLENDALE	1809212-12	Water	09/19/2018	09/20/2018	
HANNA NATURE AREA	1809212-13	Water	09/19/2018	09/20/2018	
SMITH POND-WEST	1809212-14	Water	09/19/2018	09/20/2018	
SMITH POND-EAST	1809212-15	Water	09/19/2018	09/20/2018	
ARBOR LANDING POND	1809212-16	Water	09/19/2018	09/20/2018	
WEST PARK POND	1809212-17	Water	09/19/2018	09/20/2018	
ALLEN CREEK-WEST PARK SW	1809212-18	Water	09/19/2018	09/20/2018	

Notes and Definitions

Y28	1,4-dioxane analysis is performed using selective ion monitoring (SIM). Results reported below 5 ug/L (aqueous) or 1000 ug/Kg (solids) are estimated.
X	Methods 8260 & 624 are used to analyze volatile organics that have boiling points below 200 ºC. 2-Methylnaphthalene & naphthalene have boiling points above 200 ºC and are better suited to analysis by methods 8270 & 625 as semivolatile organics.
A09	Result is estimated due to high recovery of batch quality control.
A06	Result is estimated due to high continuing calibration standard criteria failure.
A04	Result is estimated due to high matrix spike recovery.
A03	Result(s) and reporting limit(s) are estimated due to low matrix spike recovery.
ND	Indicates compound analyzed for but not detected
RL	Reporting Limit
NA	Not Applicable

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Client ID: UNNAMED TRIBUTARY-OUTFALL

Lab ID: 1809212-01

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	**1,4-dioxane**	**4.9**	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	Y28

Lab Work Order # 1809212

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Client ID: UNNAMED TRIBUTARY-OUTFALL UP

Lab ID: 1809212-02

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	**1,4-dioxane**	**5.2**	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	

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Client ID: UNNAMED TRIBUTARY-MARSHY AREA

Lab ID: 1809212-03

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	Y28

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Client ID: HC/HR

Lab ID: 1809212-04

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	Y28

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Client ID: LITTLE LAKE

Lab ID: 1809212-05

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	**1,4-dioxane**	**4.1**	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	Y28

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TEL: (517) 335-9800
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Client ID: THIRD SISTER LAKE

Lab ID: 1809212-06

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	**1,4-dioxane**	**2.9**	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	Y28

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Client ID: UNNAMED TRIBUTARY-PARK

Lab ID: 1809212-07

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	**1,4-dioxane**	**3.8**	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	Y28

Lab Work Order # 1809212

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Client ID: UNNAMED TRIBUTARY-JACKSON

Lab ID: 1809212-08

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	**1,4-dioxane**	**3.9**	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	Y28

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Client ID: HONEY CREEK-DEXTER

Lab ID: 1809212-09

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	**1,4-dioxane**	**2.1**	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	Y28

Lab Work Order # 1809212

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Client ID: SECOND SISTER LAKE

Lab ID: 1809212-10

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	Y28

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Client ID: FIRST SISTER LAKE

Lab ID: 1809212-11

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	Y28

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Client ID: ALLEN CREEK-GLENDALE

Lab ID: 1809212-12

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
540-84-1	2,2,4-Trimethylpentane	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	09/26/18	B8I2604	8260	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
74-95-3	Dibromomethane	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	

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Client ID: ALLEN CREEK-GLENDALE

Lab ID: 1809212-12

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
110-54-3	Hexane	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	09/26/18	B8I2604	8260	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	09/26/18	B8I2604	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	09/26/18	B8I2604	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	09/26/18	B8I2604	8260	
Surrogate: Bromofluorobenzene			*106 %*	*85-115*		*09/26/18*	B8I2604	*8260*	
Surrogate: Dibromofluoromethane			*99.9 %*	*82.7-115*		*09/26/18*	B8I2604	*8260*	
Surrogate: Toluene-d8			*98.4 %*	*85-115*		*09/26/18*	B8I2604	*8260*	

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Client ID: ALLEN CREEK-GLENDALE

Lab ID: 1809212-12

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	Y28

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Client ID: HANNA NATURE AREA

Lab ID: 1809212-13

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
540-84-1	2,2,4-Trimethylpentane	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	09/27/18	B8I2708	8260	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
74-95-3	Dibromomethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	

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TEL: (517) 335-9800
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Client ID: HANNA NATURE AREA

Lab ID: 1809212-13

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
110-54-3	Hexane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	09/27/18	B8I2708	8260	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	09/27/18	B8I2708	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
Surrogate: Bromofluorobenzene			*106 %*	*85-115*		*09/27/18*	B8I2708	*8260*	
Surrogate: Dibromofluoromethane			*100 %*	*82.7-115*		*09/27/18*	B8I2708	*8260*	
Surrogate: Toluene-d8			*98.1 %*	*85-115*		*09/27/18*	B8I2708	*8260*	

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Client ID: HANNA NATURE AREA

Lab ID: 1809212-13

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	Y28

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TEL: (517) 335-9800
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Client ID: SMITH POND-WEST

Lab ID: 1809212-14

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	Y28

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: SMITH POND-EAST

Lab ID: 1809212-15

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	Y28

Lab Work Order # 1809212

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: ARBOR LANDING POND

Lab ID: 1809212-16

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	Y28

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TEL: (517) 335-9800
FAX: (517) 335-9600

Client ID: WEST PARK POND

Lab ID: 1809212-17

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	1,4-dioxane	ND	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	Y28

Lab Work Order # 1809212

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Client ID: ALLEN CREEK-WEST PARK SW

Lab ID: 1809212-18

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
630-20-6	1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
75-35-4	1,1-Dichloroethylene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
96-18-4	1,2,3-Trichloropropane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
526-73-8	1,2,3-Trimethylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
106-93-4	1,2-Dibromoethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
78-87-5	1,2-Dichloropropane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
540-84-1	2,2,4-Trimethylpentane	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
91-57-6	2-Methylnaphthalene	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	X
67-64-1	2-Propanone (acetone)	ND	20	ug/L	1	09/27/18	B8I2708	8260	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
107-13-1	Acrylonitrile	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
71-43-2	Benzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
74-97-5	Bromochloromethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
75-27-4	Bromodichloromethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
75-25-2	Bromoform	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
74-83-9	Bromomethane	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
75-15-0	Carbon disulfide	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
56-23-5	Carbon tetrachloride	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
108-90-7	Chlorobenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
75-00-3	Chloroethane	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
67-66-3	Chloroform	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
74-87-3	Chloromethane	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
156-59-2	cis-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
10061-01-5	cis-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
110-82-7	Cyclohexane	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
124-48-1	Dibromochloromethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
74-95-3	Dibromomethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	

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Client ID: ALLEN CREEK-WEST PARK SW

Lab ID: 1809212-18

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Volatiles									
75-71-8	Dichlorodifluoromethane	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
60-29-7	Diethyl ether	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
108-20-3	Diisopropyl Ether	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
100-41-4	Ethylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
637-92-3	Ethyltertiarybutylether	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
67-72-1	Hexachloroethane	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
110-54-3	Hexane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
98-82-8	Isopropylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
1330-20-7	m & p - Xylene	ND	2.0	ug/L	1	09/27/18	B8I2708	8260	
75-09-2	Methylene chloride	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
1634-04-4	Methyltertiarybutylether	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
91-20-3	Naphthalene	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	X
104-51-8	n-Butylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
103-65-1	n-Propylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
95-47-6	o-Xylene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
135-98-8	sec-Butylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
100-42-5	Styrene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
98-06-6	tert-Butylbenzene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
75-65-0	tertiary Butyl Alcohol	ND	50	ug/L	1	09/27/18	B8I2708	8260	
994-05-8	tertiaryAmylmethylether	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
127-18-4	Tetrachloroethylene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
109-99-9	Tetrahydrofuran	ND	5.0	ug/L	1	09/27/18	B8I2708	8260	
108-88-3	Toluene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
156-60-5	trans-1,2-Dichloroethylene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
10061-02-6	trans-1,3-Dichloropropylene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
79-01-6	Trichloroethylene	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
75-01-4	Vinyl chloride	ND	1.0	ug/L	1	09/27/18	B8I2708	8260	
Surrogate: Bromofluorobenzene			*104 %*	*85-115*		*09/27/18*	B8I2708	*8260*	
Surrogate: Dibromofluoromethane			*97.2 %*	*82.7-115*		*09/27/18*	B8I2708	*8260*	
Surrogate: Toluene-d8			*99.2 %*	*85-115*		*09/27/18*	B8I2708	*8260*	

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Client ID: ALLEN CREEK-WEST PARK SW

Lab ID: 1809212-18

CAS #	Analyte	Result	RL	Units	Dilution	Analyzed Date	QC Batch	Method	Qualifier
Organics-Dioxane									
123-91-1	**1,4-dioxane**	**19**	1.0	ug/L	1	09/25/18	B8I2603	8260 Modified	

Lab Work Order # 1809212

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B8I2604 - Method: 5030				**Prepared: 09/26/2018**							
Blank (B8I2604-BLK1)											
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L							09/26/2018	
1,1,1-Trichloroethane	ND	1.0	ug/L							09/26/2018	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L							09/26/2018	
1,1,2-Trichloroethane	ND	1.0	ug/L							09/26/2018	
1,1-Dichloroethane	ND	1.0	ug/L							09/26/2018	
1,1-Dichloroethylene	ND	1.0	ug/L							09/26/2018	
1,2,3-Trichlorobenzene	ND	5.0	ug/L							09/26/2018	
1,2,3-Trichloropropane	ND	1.0	ug/L							09/26/2018	
1,2,3-Trimethylbenzene	ND	1.0	ug/L							09/26/2018	
1,2,4-Trichlorobenzene	ND	5.0	ug/L							09/26/2018	
1,2,4-Trimethylbenzene	ND	1.0	ug/L							09/26/2018	
1,2-Dibromoethane	ND	1.0	ug/L							09/26/2018	
1,2-Dichlorobenzene	ND	1.0	ug/L							09/26/2018	
1,2-Dichloroethane	ND	1.0	ug/L							09/26/2018	
1,2-Dichloropropane	ND	1.0	ug/L							09/26/2018	
1,3,5-Trimethylbenzene	ND	1.0	ug/L							09/26/2018	
1,3-Dichlorobenzene	ND	1.0	ug/L							09/26/2018	
1,4-Dichlorobenzene	ND	1.0	ug/L							09/26/2018	
2,2,4-Trimethylpentane	ND	5.0	ug/L							09/26/2018	
2-Butanone (MEK)	ND	5.0	ug/L							09/26/2018	
2-Methylnaphthalene	ND	5.0	ug/L							09/26/2018	X
2-Propanone (acetone)	ND	20	ug/L							09/26/2018	
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L							09/26/2018	
Acrylonitrile	ND	5.0	ug/L							09/26/2018	
Benzene	ND	1.0	ug/L							09/26/2018	
Bromochloromethane	ND	1.0	ug/L							09/26/2018	
Bromodichloromethane	ND	1.0	ug/L							09/26/2018	
Bromoform	ND	1.0	ug/L							09/26/2018	
Bromomethane	ND	5.0	ug/L							09/26/2018	
Carbon disulfide	ND	1.0	ug/L							09/26/2018	
Carbon tetrachloride	ND	1.0	ug/L							09/26/2018	
Chlorobenzene	ND	1.0	ug/L							09/26/2018	
Chloroethane	ND	5.0	ug/L							09/26/2018	
Chloroform	ND	1.0	ug/L							09/26/2018	
Chloromethane	ND	5.0	ug/L							09/26/2018	
cis-1,2-Dichloroethylene	ND	1.0	ug/L							09/26/2018	
cis-1,3-Dichloropropylene	ND	1.0	ug/L							09/26/2018	
Cyclohexane	ND	5.0	ug/L							09/26/2018	
Dibromochloromethane	ND	1.0	ug/L							09/26/2018	
Dibromomethane	ND	1.0	ug/L							09/26/2018	
Dichlorodifluoromethane	ND	5.0	ug/L							09/26/2018	
Diethyl ether	ND	5.0	ug/L							09/26/2018	
Diisopropyl Ether	ND	5.0	ug/L							09/26/2018	
Ethylbenzene	ND	1.0	ug/L							09/26/2018	
Ethyltertiarybutylether	ND	5.0	ug/L							09/26/2018	
Hexachloroethane	ND	5.0	ug/L							09/26/2018	
Hexane	ND	1.0	ug/L							09/26/2018	

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STATE OF MICHIGAN
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ENVIRONMENTAL LABORATORY

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B8I2604 - Method: 5030				**Prepared: 09/26/2018**							
Blank (B8I2604-BLK1)											
Isopropylbenzene	ND	1.0	ug/L							09/26/2018	
m & p - Xylene	ND	2.0	ug/L							09/26/2018	
Methylene chloride	ND	5.0	ug/L							09/26/2018	
Methyltertiarybutylether	ND	1.0	ug/L							09/26/2018	
Naphthalene	ND	5.0	ug/L							09/26/2018	X
n-Butylbenzene	ND	1.0	ug/L							09/26/2018	
n-Propylbenzene	ND	1.0	ug/L							09/26/2018	
o-Xylene	ND	1.0	ug/L							09/26/2018	
sec-Butylbenzene	ND	1.0	ug/L							09/26/2018	
Styrene	ND	1.0	ug/L							09/26/2018	
tert-Butylbenzene	ND	1.0	ug/L							09/26/2018	
tertiary Butyl Alcohol	ND	50	ug/L							09/26/2018	
tertiaryAmylmethylether	ND	5.0	ug/L							09/26/2018	
Tetrachloroethylene	ND	1.0	ug/L							09/26/2018	
Tetrahydrofuran	ND	5.0	ug/L							09/26/2018	
Toluene	ND	1.0	ug/L							09/26/2018	
trans-1,2-Dichloroethylene	ND	1.0	ug/L							09/26/2018	
trans-1,3-Dichloropropylene	ND	1.0	ug/L							09/26/2018	
Trichloroethylene	ND	1.0	ug/L							09/26/2018	
Trichlorofluoromethane	ND	1.0	ug/L							09/26/2018	
Vinyl chloride	ND	1.0	ug/L							09/26/2018	
Surrogate: Bromofluorobenzene	*51.9*		ug/L	*50.00*		*104*	*85-115*			09/26/2018	
Surrogate: Dibromofluoromethane	*49.7*		ug/L	*50.00*		*99.5*	*82.7-115*			09/26/2018	
Surrogate: Toluene-d8	*50.5*		ug/L	*50.00*		*101*	*85-115*			09/26/2018	
LCS (B8I2604-BS1)											
1,1,1,2-Tetrachloroethane	52.0	1.0	ug/L	50.00		104	70-130			09/26/2018	
1,1,1-Trichloroethane	55.5	1.0	ug/L	50.00		111	70-130			09/26/2018	
1,1,2,2-Tetrachloroethane	57.6	1.0	ug/L	50.00		115	70-130			09/26/2018	
1,1,2-Trichloroethane	59.1	1.0	ug/L	50.00		118	70-130			09/26/2018	
1,1-Dichloroethane	53.9	1.0	ug/L	50.00		108	70-130			09/26/2018	
1,1-Dichloroethylene	56.3	1.0	ug/L	50.00		113	70-130			09/26/2018	
1,2,3-Trichlorobenzene	57.0	5.0	ug/L	50.00		114	70-130			09/26/2018	
1,2,3-Trichloropropane	47.3	1.0	ug/L	50.00		94.7	70-130			09/26/2018	
1,2,3-Trimethylbenzene	57.6	1.0	ug/L	50.00		115	70-130			09/26/2018	
1,2,4-Trichlorobenzene	57.2	5.0	ug/L	50.00		114	70-130			09/26/2018	
1,2,4-Trimethylbenzene	58.8	1.0	ug/L	50.00		118	70-130			09/26/2018	
1,2-Dibromoethane	53.3	1.0	ug/L	50.00		107	70-130			09/26/2018	
1,2-Dichlorobenzene	59.2	1.0	ug/L	50.00		118	70-130			09/26/2018	
1,2-Dichloroethane	53.0	1.0	ug/L	50.00		106	70-130			09/26/2018	
1,2-Dichloropropane	60.1	1.0	ug/L	50.00		120	70-130			09/26/2018	
1,3,5-Trimethylbenzene	59.3	1.0	ug/L	50.00		119	70-130			09/26/2018	
1,3-Dichlorobenzene	58.7	1.0	ug/L	50.00		117	70-130			09/26/2018	
1,4-Dichlorobenzene	57.0	1.0	ug/L	50.00		114	70-130			09/26/2018	
2,2,4-Trimethylpentane	55.6	5.0	ug/L	50.00		111	70-130			09/26/2018	
2-Butanone (MEK)	50.6	5.0	ug/L	50.00		101	70-130			09/26/2018	A06
2-Methylnaphthalene	46.6	5.0	ug/L	50.00		93.2	70-130			09/26/2018	X

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B8I2604 - Method: 5030				**Prepared: 09/26/2018**							
LCS (B8I2604-BS1)											
2-Propanone (acetone)	57.1	20	ug/L	50.00		114	70-130			09/26/2018	A06
4-Methyl-2-pentanone (MIBK)	52.4	5.0	ug/L	50.00		105	70-130			09/26/2018	A06
Acrylonitrile	53.3	5.0	ug/L	50.00		107	70-130			09/26/2018	
Benzene	57.9	1.0	ug/L	50.00		116	70-130			09/26/2018	
Bromochloromethane	55.3	1.0	ug/L	50.00		111	70-130			09/26/2018	
Bromodichloromethane	60.7	1.0	ug/L	50.00		121	70-130			09/26/2018	
Bromoform	51.7	1.0	ug/L	50.00		103	70-130			09/26/2018	
Bromomethane	51.2	5.0	ug/L	50.00		102	70-130			09/26/2018	
Carbon disulfide	60.6	1.0	ug/L	50.00		121	70-130			09/26/2018	
Carbon tetrachloride	56.2	1.0	ug/L	50.00		112	70-130			09/26/2018	
Chlorobenzene	57.3	1.0	ug/L	50.00		115	70-130			09/26/2018	
Chloroethane	61.4	5.0	ug/L	50.00		123	70-130			09/26/2018	
Chloroform	53.4	1.0	ug/L	50.00		107	70-130			09/26/2018	
Chloromethane	62.5	5.0	ug/L	50.00		125	70-130			09/26/2018	
cis-1,2-Dichloroethylene	53.9	1.0	ug/L	50.00		108	70-130			09/26/2018	
cis-1,3-Dichloropropylene	53.6	1.0	ug/L	50.00		107	70-130			09/26/2018	
Cyclohexane	56.7	5.0	ug/L	50.00		113	70-130			09/26/2018	
Dibromochloromethane	54.6	1.0	ug/L	50.00		109	70-130			09/26/2018	
Dibromomethane	54.5	1.0	ug/L	50.00		109	70-130			09/26/2018	
Dichlorodifluoromethane	73.8	5.0	ug/L	50.00		148	70-130			09/26/2018	A09
Diethyl ether	61.0	5.0	ug/L	50.00		122	70-130			09/26/2018	A06
Diisopropyl Ether	55.0	5.0	ug/L	50.00		110	70-130			09/26/2018	
Ethylbenzene	58.0	1.0	ug/L	50.00		116	70-130			09/26/2018	
Ethyltertiarybutylether	48.4	5.0	ug/L	50.00		96.8	70-130			09/26/2018	
Hexachloroethane	52.8	5.0	ug/L	50.00		106	70-130			09/26/2018	
Hexane	54.6	1.0	ug/L	50.00		109	70-130			09/26/2018	
Isopropylbenzene	62.8	1.0	ug/L	50.00		126	70-130			09/26/2018	
m & p - Xylene	118	2.0	ug/L	100.0		118	70-130			09/26/2018	
Methylene chloride	54.0	5.0	ug/L	50.00		108	70-130			09/26/2018	
Methyltertiarybutylether	54.2	1.0	ug/L	50.00		108	70-130			09/26/2018	
Naphthalene	59.1	5.0	ug/L	50.00		118	70-130			09/26/2018	X
n-Butylbenzene	57.4	1.0	ug/L	50.00		115	70-130			09/26/2018	
n-Propylbenzene	59.1	1.0	ug/L	50.00		118	70-130			09/26/2018	
o-Xylene	60.1	1.0	ug/L	50.00		120	70-130			09/26/2018	
sec-Butylbenzene	58.8	1.0	ug/L	50.00		118	70-130			09/26/2018	
Styrene	62.5	1.0	ug/L	50.00		125	70-130			09/26/2018	A06
tert-Butylbenzene	58.4	1.0	ug/L	50.00		117	70-130			09/26/2018	
tertiary Butyl Alcohol	238	50	ug/L	250.0		95.1	70-130			09/26/2018	
tertiaryAmylmethylether	45.8	5.0	ug/L	50.00		91.7	70-130			09/26/2018	
Tetrachloroethylene	56.5	1.0	ug/L	50.00		113	70-130			09/26/2018	
Tetrahydrofuran	50.2	5.0	ug/L	50.00		100	70-130			09/26/2018	
Toluene	56.2	1.0	ug/L	50.00		112	70-130			09/26/2018	
trans-1,2-Dichloroethylene	54.9	1.0	ug/L	50.00		110	70-130			09/26/2018	
trans-1,3-Dichloropropylene	54.8	1.0	ug/L	50.00		110	70-130			09/26/2018	
Trichloroethylene	55.8	1.0	ug/L	50.00		112	70-130			09/26/2018	
Trichlorofluoromethane	53.3	1.0	ug/L	50.00		107	70-130			09/26/2018	
Vinyl chloride	62.1	1.0	ug/L	50.00		124	70-130			09/26/2018	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B8I2604 - Method: 5030				**Prepared: 09/26/2018**							
LCS (B8I2604-BS1)											
Surrogate: Bromofluorobenzene	*50.7*		ug/L	*50.00*		*101*	*85-115*			09/26/2018	
Surrogate: Dibromofluoromethane	*50.9*		ug/L	*50.00*		*102*	*82.7-115*			09/26/2018	
Surrogate: Toluene-d8	*50.7*		ug/L	*50.00*		*101*	*85-115*			09/26/2018	
Matrix Spike (B8I2604-MS1)	**Source: 1809207-09**										
1,1,1,2-Tetrachloroethane	52.4	1.0	ug/L	50.00	ND	105	70-130			09/26/2018	
1,1,1-Trichloroethane	53.2	1.0	ug/L	50.00	ND	106	70-130			09/26/2018	
1,1,2,2-Tetrachloroethane	58.0	1.0	ug/L	50.00	ND	116	70-130			09/26/2018	
1,1,2-Trichloroethane	63.7	1.0	ug/L	50.00	ND	127	70-130			09/26/2018	
1,1-Dichloroethane	55.6	1.0	ug/L	50.00	ND	111	70-130			09/26/2018	
1,1-Dichloroethylene	54.0	1.0	ug/L	50.00	ND	108	70-130			09/26/2018	
1,2,3-Trichlorobenzene	56.1	5.0	ug/L	50.00	ND	112	70-130			09/26/2018	
1,2,3-Trichloropropane	47.9	1.0	ug/L	50.00	ND	95.9	70-130			09/26/2018	
1,2,3-Trimethylbenzene	57.5	1.0	ug/L	50.00	ND	115	70-130			09/26/2018	
1,2,4-Trichlorobenzene	55.3	5.0	ug/L	50.00	ND	111	70-130			09/26/2018	
1,2,4-Trimethylbenzene	59.9	1.0	ug/L	50.00	ND	120	70-130			09/26/2018	
1,2-Dibromoethane	53.9	1.0	ug/L	50.00	ND	108	70-130			09/26/2018	
1,2-Dichlorobenzene	57.8	1.0	ug/L	50.00	ND	116	70-130			09/26/2018	
1,2-Dichloroethane	53.5	1.0	ug/L	50.00	ND	107	70-130			09/26/2018	
1,2-Dichloropropane	59.7	1.0	ug/L	50.00	ND	119	70-130			09/26/2018	
1,3,5-Trimethylbenzene	59.9	1.0	ug/L	50.00	ND	120	70-130			09/26/2018	
1,3-Dichlorobenzene	58.6	1.0	ug/L	50.00	ND	117	70-130			09/26/2018	
1,4-Dichlorobenzene	56.7	1.0	ug/L	50.00	ND	113	70-130			09/26/2018	
2,2,4-Trimethylpentane	50.0	5.0	ug/L	50.00	ND	100	70-130			09/26/2018	
2-Butanone (MEK)	34.1	5.0	ug/L	50.00	ND	68.3	70-130			09/26/2018	A03, A06
2-Methylnaphthalene	44.3	5.0	ug/L	50.00	ND	88.7	70-130			09/26/2018	X
2-Propanone (acetone)	25.7	20	ug/L	50.00	ND	51.4	70-130			09/26/2018	A03, A06
4-Methyl-2-pentanone (MIBK)	50.1	5.0	ug/L	50.00	ND	100	70-130			09/26/2018	A06
Acrylonitrile	53.1	5.0	ug/L	50.00	ND	106	70-130			09/26/2018	
Benzene	57.7	1.0	ug/L	50.00	ND	115	70-130			09/26/2018	
Bromochloromethane	55.3	1.0	ug/L	50.00	ND	111	70-130			09/26/2018	
Bromodichloromethane	59.5	1.0	ug/L	50.00	ND	119	70-130			09/26/2018	
Bromoform	51.0	1.0	ug/L	50.00	ND	102	70-130			09/26/2018	
Bromomethane	52.2	5.0	ug/L	50.00	ND	104	70-130			09/26/2018	
Carbon disulfide	62.5	1.0	ug/L	50.00	ND	125	70-130			09/26/2018	
Carbon tetrachloride	51.7	1.0	ug/L	50.00	ND	103	70-130			09/26/2018	
Chlorobenzene	58.1	1.0	ug/L	50.00	ND	116	70-130			09/26/2018	
Chloroethane	63.0	5.0	ug/L	50.00	ND	126	70-130			09/26/2018	
Chloroform	56.2	1.0	ug/L	50.00	ND	112	70-130			09/26/2018	
Chloromethane	59.4	5.0	ug/L	50.00	ND	119	70-130			09/26/2018	
cis-1,2-Dichloroethylene	57.6	1.0	ug/L	50.00	ND	115	70-130			09/26/2018	
cis-1,3-Dichloropropylene	51.7	1.0	ug/L	50.00	ND	103	70-130			09/26/2018	
Cyclohexane	55.1	5.0	ug/L	50.00	ND	110	70-130			09/26/2018	
Dibromochloromethane	53.5	1.0	ug/L	50.00	ND	107	70-130			09/26/2018	
Dibromomethane	53.4	1.0	ug/L	50.00	ND	107	70-130			09/26/2018	
Dichlorodifluoromethane	66.9	5.0	ug/L	50.00	ND	134	70-130			09/26/2018	A04
Diethyl ether	64.6	5.0	ug/L	50.00	ND	129	70-130			09/26/2018	A06

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B8I2604 - Method: 5030				**Prepared: 09/26/2018**							
Matrix Spike (B8I2604-MS1)	**Source: 1809207-09**										
Diisopropyl Ether	57.8	5.0	ug/L	50.00	ND	116	70-130			09/26/2018	
Ethylbenzene	59.0	1.0	ug/L	50.00	ND	118	70-130			09/26/2018	
Ethyltertiarybutylether	47.0	5.0	ug/L	50.00	ND	94.0	70-130			09/26/2018	
Hexachloroethane	50.0	5.0	ug/L	50.00	ND	100	70-130			09/26/2018	
Hexane	55.6	1.0	ug/L	50.00	ND	111	70-130			09/26/2018	
Isopropylbenzene	62.9	1.0	ug/L	50.00	ND	126	70-130			09/26/2018	
m & p - Xylene	120	2.0	ug/L	100.0	ND	120	70-130			09/26/2018	
Methylene chloride	57.2	5.0	ug/L	50.00	ND	114	70-130			09/26/2018	
Methyltertiarybutylether	56.2	1.0	ug/L	50.00	ND	112	70-130			09/26/2018	
Naphthalene	58.9	5.0	ug/L	50.00	ND	118	70-130			09/26/2018	X
n-Butylbenzene	57.9	1.0	ug/L	50.00	ND	116	70-130			09/26/2018	
n-Propylbenzene	59.2	1.0	ug/L	50.00	ND	118	70-130			09/26/2018	
o-Xylene	61.1	1.0	ug/L	50.00	ND	122	70-130			09/26/2018	
sec-Butylbenzene	58.4	1.0	ug/L	50.00	ND	117	70-130			09/26/2018	
Styrene	63.6	1.0	ug/L	50.00	ND	127	70-130			09/26/2018	A06
tert-Butylbenzene	57.8	1.0	ug/L	50.00	ND	116	70-130			09/26/2018	
tertiary Butyl Alcohol	256	50	ug/L	250.0	ND	102	70-130			09/26/2018	
tertiaryAmylmethylether	44.6	5.0	ug/L	50.00	ND	89.3	70-130			09/26/2018	
Tetrachloroethylene	56.6	1.0	ug/L	50.00	ND	113	70-130			09/26/2018	
Tetrahydrofuran	52.6	5.0	ug/L	50.00	ND	105	70-130			09/26/2018	
Toluene	57.3	1.0	ug/L	50.00	ND	115	70-130			09/26/2018	
trans-1,2-Dichloroethylene	58.6	1.0	ug/L	50.00	ND	117	70-130			09/26/2018	
trans-1,3-Dichloropropylene	53.7	1.0	ug/L	50.00	ND	107	70-130			09/26/2018	
Trichloroethylene	56.7	1.0	ug/L	50.00	ND	113	70-130			09/26/2018	
Trichlorofluoromethane	57.8	1.0	ug/L	50.00	ND	116	70-130			09/26/2018	
Vinyl chloride	59.9	1.0	ug/L	50.00	ND	120	70-130			09/26/2018	
Surrogate: Bromofluorobenzene	*51.9*		ug/L	*50.00*		*104*	*85-115*			09/26/2018	
Surrogate: Dibromofluoromethane	*48.9*		ug/L	*50.00*		*97.9*	*82.7-115*			09/26/2018	
Surrogate: Toluene-d8	*50.7*		ug/L	*50.00*		*101*	*85-115*			09/26/2018	
Matrix Spike Dup (B8I2604-MSD1)	**Source: 1809207-09**										
1,1,1,2-Tetrachloroethane	49.5	1.0	ug/L	50.00	ND	99.0	70-130	5.71	30	09/26/2018	
1,1,1-Trichloroethane	51.8	1.0	ug/L	50.00	ND	104	70-130	2.50	30	09/26/2018	
1,1,2,2-Tetrachloroethane	56.9	1.0	ug/L	50.00	ND	114	70-130	1.90	30	09/26/2018	
1,1,2-Trichloroethane	58.3	1.0	ug/L	50.00	ND	117	70-130	8.91	30	09/26/2018	
1,1-Dichloroethane	55.2	1.0	ug/L	50.00	ND	110	70-130	0.865	30	09/26/2018	
1,1-Dichloroethylene	52.0	1.0	ug/L	50.00	ND	104	70-130	3.86	30	09/26/2018	
1,2,3-Trichlorobenzene	53.4	5.0	ug/L	50.00	ND	107	70-130	4.99	30	09/26/2018	
1,2,3-Trichloropropane	45.9	1.0	ug/L	50.00	ND	91.8	70-130	4.34	30	09/26/2018	
1,2,3-Trimethylbenzene	56.2	1.0	ug/L	50.00	ND	112	70-130	2.28	30	09/26/2018	
1,2,4-Trichlorobenzene	53.3	5.0	ug/L	50.00	ND	107	70-130	3.66	30	09/26/2018	
1,2,4-Trimethylbenzene	56.0	1.0	ug/L	50.00	ND	112	70-130	6.71	30	09/26/2018	
1,2-Dibromoethane	51.3	1.0	ug/L	50.00	ND	103	70-130	4.90	30	09/26/2018	
1,2-Dichlorobenzene	56.0	1.0	ug/L	50.00	ND	112	70-130	3.22	30	09/26/2018	
1,2-Dichloroethane	50.2	1.0	ug/L	50.00	ND	100	70-130	6.39	30	09/26/2018	
1,2-Dichloropropane	57.6	1.0	ug/L	50.00	ND	115	70-130	3.53	30	09/26/2018	
1,3,5-Trimethylbenzene	58.3	1.0	ug/L	50.00	ND	117	70-130	2.64	30	09/26/2018	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B8I2604 - Method: 5030				**Prepared: 09/26/2018**							
Matrix Spike Dup (B8I2604-MSD1)	**Source: 1809207-09**										
1,3-Dichlorobenzene	56.9	1.0	ug/L	50.00	ND	114	70-130	2.98	30	09/26/2018	
1,4-Dichlorobenzene	55.3	1.0	ug/L	50.00	ND	111	70-130	2.47	30	09/26/2018	
2,2,4-Trimethylpentane	49.3	5.0	ug/L	50.00	ND	98.5	70-130	1.46	30	09/26/2018	
2-Butanone (MEK)	34.3	5.0	ug/L	50.00	ND	68.5	70-130	0.348	30	09/26/2018	A03, A06
2-Methylnaphthalene	43.4	5.0	ug/L	50.00	ND	86.8	70-130	2.18	30	09/26/2018	X
2-Propanone (acetone)	23.1	20	ug/L	50.00	ND	46.2	70-130	10.7	30	09/26/2018	A03, A06
4-Methyl-2-pentanone (MIBK)	47.1	5.0	ug/L	50.00	ND	94.3	70-130	6.17	30	09/26/2018	A06
Acrylonitrile	53.2	5.0	ug/L	50.00	ND	106	70-130	0.180	30	09/26/2018	
Benzene	55.1	1.0	ug/L	50.00	ND	110	70-130	4.53	30	09/26/2018	
Bromochloromethane	52.2	1.0	ug/L	50.00	ND	104	70-130	5.76	30	09/26/2018	
Bromodichloromethane	56.0	1.0	ug/L	50.00	ND	112	70-130	6.04	30	09/26/2018	
Bromoform	47.7	1.0	ug/L	50.00	ND	95.3	70-130	6.85	30	09/26/2018	
Bromomethane	51.8	5.0	ug/L	50.00	ND	104	70-130	0.770	30	09/26/2018	
Carbon disulfide	57.9	1.0	ug/L	50.00	ND	116	70-130	7.76	30	09/26/2018	
Carbon tetrachloride	50.5	1.0	ug/L	50.00	ND	101	70-130	2.32	30	09/26/2018	
Chlorobenzene	54.4	1.0	ug/L	50.00	ND	109	70-130	6.60	30	09/26/2018	
Chloroethane	60.6	5.0	ug/L	50.00	ND	121	70-130	3.90	30	09/26/2018	
Chloroform	54.3	1.0	ug/L	50.00	ND	109	70-130	3.53	30	09/26/2018	
Chloromethane	61.5	5.0	ug/L	50.00	ND	123	70-130	3.44	30	09/26/2018	
cis-1,2-Dichloroethylene	55.9	1.0	ug/L	50.00	ND	112	70-130	2.90	30	09/26/2018	
cis-1,3-Dichloropropylene	50.6	1.0	ug/L	50.00	ND	101	70-130	2.10	30	09/26/2018	
Cyclohexane	52.4	5.0	ug/L	50.00	ND	105	70-130	5.05	30	09/26/2018	
Dibromochloromethane	50.5	1.0	ug/L	50.00	ND	101	70-130	5.69	30	09/26/2018	
Dibromomethane	51.1	1.0	ug/L	50.00	ND	102	70-130	4.37	30	09/26/2018	
Dichlorodifluoromethane	65.0	5.0	ug/L	50.00	ND	130	70-130	2.88	30	09/26/2018	A04
Diethyl ether	61.9	5.0	ug/L	50.00	ND	124	70-130	4.27	30	09/26/2018	A06
Diisopropyl Ether	56.0	5.0	ug/L	50.00	ND	112	70-130	3.20	30	09/26/2018	
Ethylbenzene	55.1	1.0	ug/L	50.00	ND	110	70-130	6.86	30	09/26/2018	
Ethyltertiarybutylether	45.7	5.0	ug/L	50.00	ND	91.4	70-130	2.86	30	09/26/2018	
Hexachloroethane	48.9	5.0	ug/L	50.00	ND	97.8	70-130	2.26	30	09/26/2018	
Hexane	54.6	1.0	ug/L	50.00	ND	109	70-130	1.82	30	09/26/2018	
Isopropylbenzene	61.8	1.0	ug/L	50.00	ND	124	70-130	1.65	30	09/26/2018	
m & p - Xylene	112	2.0	ug/L	100.0	ND	112	70-130	7.32	30	09/26/2018	
Methylene chloride	56.0	5.0	ug/L	50.00	ND	112	70-130	2.09	30	09/26/2018	
Methyltertiarybutylether	54.7	1.0	ug/L	50.00	ND	109	70-130	2.74	30	09/26/2018	
Naphthalene	55.6	5.0	ug/L	50.00	ND	111	70-130	5.79	30	09/26/2018	X
n-Butylbenzene	55.0	1.0	ug/L	50.00	ND	110	70-130	5.06	30	09/26/2018	
n-Propylbenzene	57.9	1.0	ug/L	50.00	ND	116	70-130	2.16	30	09/26/2018	
o-Xylene	57.4	1.0	ug/L	50.00	ND	115	70-130	6.12	30	09/26/2018	
sec-Butylbenzene	57.2	1.0	ug/L	50.00	ND	114	70-130	2.16	30	09/26/2018	
Styrene	60.1	1.0	ug/L	50.00	ND	120	70-130	5.68	30	09/26/2018	A06
tert-Butylbenzene	56.7	1.0	ug/L	50.00	ND	113	70-130	1.85	30	09/26/2018	
tertiary Butyl Alcohol	252	50	ug/L	250.0	ND	101	70-130	1.58	30	09/26/2018	
tertiaryAmylmethylether	42.2	5.0	ug/L	50.00	ND	84.4	70-130	5.67	30	09/26/2018	
Tetrachloroethylene	51.8	1.0	ug/L	50.00	ND	104	70-130	8.82	30	09/26/2018	
Tetrahydrofuran	52.3	5.0	ug/L	50.00	ND	105	70-130	0.640	30	09/26/2018	
Toluene	54.4	1.0	ug/L	50.00	ND	109	70-130	5.24	30	09/26/2018	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B8I2604 - Method: 5030				**Prepared: 09/26/2018**							
Matrix Spike Dup (B8I2604-MSD1)	**Source: 1809207-09**										
trans-1,2-Dichloroethylene	55.6	1.0	ug/L	50.00	ND	111	70-130	5.32	30	09/26/2018	
trans-1,3-Dichloropropylene	50.6	1.0	ug/L	50.00	ND	101	70-130	5.84	30	09/26/2018	
Trichloroethylene	52.8	1.0	ug/L	50.00	ND	106	70-130	7.17	30	09/26/2018	
Trichlorofluoromethane	56.4	1.0	ug/L	50.00	ND	113	70-130	2.37	30	09/26/2018	
Vinyl chloride	58.8	1.0	ug/L	50.00	ND	118	70-130	1.86	30	09/26/2018	
Surrogate: Bromofluorobenzene	*51.5*		ug/L	*50.00*		*103*	*85-115*			09/26/2018	
Surrogate: Dibromofluoromethane	*48.6*		ug/L	*50.00*		*97.1*	*82.7-115*			09/26/2018	
Surrogate: Toluene-d8	*49.5*		ug/L	*50.00*		*99.0*	*85-115*			09/26/2018	
Batch B8I2708 - Method: 5030				**Prepared: 09/27/2018**							
Blank (B8I2708-BLK1)											
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L							09/27/2018	
1,1,1-Trichloroethane	ND	1.0	ug/L							09/27/2018	
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L							09/27/2018	
1,1,2-Trichloroethane	ND	1.0	ug/L							09/27/2018	
1,1-Dichloroethane	ND	1.0	ug/L							09/27/2018	
1,1-Dichloroethylene	ND	1.0	ug/L							09/27/2018	
1,2,3-Trichlorobenzene	ND	5.0	ug/L							09/27/2018	
1,2,3-Trichloropropane	ND	1.0	ug/L							09/27/2018	
1,2,3-Trimethylbenzene	ND	1.0	ug/L							09/27/2018	
1,2,4-Trichlorobenzene	ND	5.0	ug/L							09/27/2018	
1,2,4-Trimethylbenzene	ND	1.0	ug/L							09/27/2018	
1,2-Dibromoethane	ND	1.0	ug/L							09/27/2018	
1,2-Dichlorobenzene	ND	1.0	ug/L							09/27/2018	
1,2-Dichloroethane	ND	1.0	ug/L							09/27/2018	
1,2-Dichloropropane	ND	1.0	ug/L							09/27/2018	
1,3,5-Trimethylbenzene	ND	1.0	ug/L							09/27/2018	
1,3-Dichlorobenzene	ND	1.0	ug/L							09/27/2018	
1,4-Dichlorobenzene	ND	1.0	ug/L							09/27/2018	
2,2,4-Trimethylpentane	ND	5.0	ug/L							09/27/2018	
2-Butanone (MEK)	ND	5.0	ug/L							09/27/2018	
2-Methylnaphthalene	ND	5.0	ug/L							09/27/2018	X
2-Propanone (acetone)	ND	20	ug/L							09/27/2018	
4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/L							09/27/2018	
Acrylonitrile	ND	5.0	ug/L							09/27/2018	
Benzene	ND	1.0	ug/L							09/27/2018	
Bromochloromethane	ND	1.0	ug/L							09/27/2018	
Bromodichloromethane	ND	1.0	ug/L							09/27/2018	
Bromoform	ND	1.0	ug/L							09/27/2018	
Bromomethane	ND	5.0	ug/L							09/27/2018	
Carbon disulfide	ND	1.0	ug/L							09/27/2018	
Carbon tetrachloride	ND	1.0	ug/L							09/27/2018	
Chlorobenzene	ND	1.0	ug/L							09/27/2018	
Chloroethane	ND	5.0	ug/L							09/27/2018	
Chloroform	ND	1.0	ug/L							09/27/2018	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B8I2708 - Method: 5030				**Prepared: 09/27/2018**							
Blank (B8I2708-BLK1)											
Chloromethane	ND	5.0	ug/L							09/27/2018	
cis-1,2-Dichloroethylene	ND	1.0	ug/L							09/27/2018	
cis-1,3-Dichloropropylene	ND	1.0	ug/L							09/27/2018	
Cyclohexane	ND	5.0	ug/L							09/27/2018	
Dibromochloromethane	ND	1.0	ug/L							09/27/2018	
Dibromomethane	ND	1.0	ug/L							09/27/2018	
Dichlorodifluoromethane	ND	5.0	ug/L							09/27/2018	
Diethyl ether	ND	5.0	ug/L							09/27/2018	
Diisopropyl Ether	ND	5.0	ug/L							09/27/2018	
Ethylbenzene	ND	1.0	ug/L							09/27/2018	
Ethyltertiarybutylether	ND	5.0	ug/L							09/27/2018	
Hexachloroethane	ND	5.0	ug/L							09/27/2018	
Hexane	ND	1.0	ug/L							09/27/2018	
Isopropylbenzene	ND	1.0	ug/L							09/27/2018	
m & p - Xylene	ND	2.0	ug/L							09/27/2018	
Methylene chloride	ND	5.0	ug/L							09/27/2018	
Methyltertiarybutylether	ND	1.0	ug/L							09/27/2018	
Naphthalene	ND	5.0	ug/L							09/27/2018	X
n-Butylbenzene	ND	1.0	ug/L							09/27/2018	
n-Propylbenzene	ND	1.0	ug/L							09/27/2018	
o-Xylene	ND	1.0	ug/L							09/27/2018	
sec-Butylbenzene	ND	1.0	ug/L							09/27/2018	
Styrene	ND	1.0	ug/L							09/27/2018	
tert-Butylbenzene	ND	1.0	ug/L							09/27/2018	
tertiary Butyl Alcohol	ND	50	ug/L							09/27/2018	
tertiaryAmylmethylether	ND	5.0	ug/L							09/27/2018	
Tetrachloroethylene	ND	1.0	ug/L							09/27/2018	
Tetrahydrofuran	ND	5.0	ug/L							09/27/2018	
Toluene	ND	1.0	ug/L							09/27/2018	
trans-1,2-Dichloroethylene	ND	1.0	ug/L							09/27/2018	
trans-1,3-Dichloropropylene	ND	1.0	ug/L							09/27/2018	
Trichloroethylene	ND	1.0	ug/L							09/27/2018	
Trichlorofluoromethane	ND	1.0	ug/L							09/27/2018	
Vinyl chloride	ND	1.0	ug/L							09/27/2018	
Surrogate: Bromofluorobenzene	*51.4*		ug/L	*50.00*		*103*	*85-115*			09/27/2018	
Surrogate: Dibromofluoromethane	*48.5*		ug/L	*50.00*		*96.9*	*82.7-115*			09/27/2018	
Surrogate: Toluene-d8	*50.1*		ug/L	*50.00*		*100*	*85-115*			09/27/2018	
LCS (B8I2708-BS1)											
1,1,1,2-Tetrachloroethane	51.8	1.0	ug/L	50.00		104	70-130			09/27/2018	
1,1,1-Trichloroethane	52.6	1.0	ug/L	50.00		105	70-130			09/27/2018	
1,1,2,2-Tetrachloroethane	55.5	1.0	ug/L	50.00		111	70-130			09/27/2018	
1,1,2-Trichloroethane	57.0	1.0	ug/L	50.00		114	70-130			09/27/2018	
1,1-Dichloroethane	52.7	1.0	ug/L	50.00		105	70-130			09/27/2018	
1,1-Dichloroethylene	51.1	1.0	ug/L	50.00		102	70-130			09/27/2018	
1,2,3-Trichlorobenzene	53.9	5.0	ug/L	50.00		108	70-130			09/27/2018	
1,2,3-Trichloropropane	45.5	1.0	ug/L	50.00		90.9	70-130			09/27/2018	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B8I2708 - Method: 5030				**Prepared: 09/27/2018**							
LCS (B8I2708-BS1)											
1,2,3-Trimethylbenzene	55.0	1.0	ug/L	50.00		110	70-130			09/27/2018	
1,2,4-Trichlorobenzene	55.0	5.0	ug/L	50.00		110	70-130			09/27/2018	
1,2,4-Trimethylbenzene	55.3	1.0	ug/L	50.00		111	70-130			09/27/2018	
1,2-Dibromoethane	51.7	1.0	ug/L	50.00		103	70-130			09/27/2018	
1,2-Dichlorobenzene	56.1	1.0	ug/L	50.00		112	70-130			09/27/2018	
1,2-Dichloroethane	49.6	1.0	ug/L	50.00		99.1	70-130			09/27/2018	
1,2-Dichloropropane	57.3	1.0	ug/L	50.00		115	70-130			09/27/2018	
1,3,5-Trimethylbenzene	56.0	1.0	ug/L	50.00		112	70-130			09/27/2018	
1,3-Dichlorobenzene	55.7	1.0	ug/L	50.00		111	70-130			09/27/2018	
1,4-Dichlorobenzene	54.6	1.0	ug/L	50.00		109	70-130			09/27/2018	
2,2,4-Trimethylpentane	49.2	5.0	ug/L	50.00		98.5	70-130			09/27/2018	
2-Butanone (MEK)	70.2	5.0	ug/L	50.00		140	70-130			09/27/2018	A09
2-Methylnaphthalene	43.2	5.0	ug/L	50.00		86.5	70-130			09/27/2018	X
2-Propanone (acetone)	67.2	20	ug/L	50.00		134	70-130			09/27/2018	A09
4-Methyl-2-pentanone (MIBK)	67.2	5.0	ug/L	50.00		134	70-130			09/27/2018	A09
Acrylonitrile	52.8	5.0	ug/L	50.00		106	70-130			09/27/2018	
Benzene	54.8	1.0	ug/L	50.00		110	70-130			09/27/2018	
Bromochloromethane	53.2	1.0	ug/L	50.00		106	70-130			09/27/2018	
Bromodichloromethane	57.0	1.0	ug/L	50.00		114	70-130			09/27/2018	
Bromoform	50.6	1.0	ug/L	50.00		101	70-130			09/27/2018	
Bromomethane	49.3	5.0	ug/L	50.00		98.6	70-130			09/27/2018	
Carbon disulfide	54.0	1.0	ug/L	50.00		108	70-130			09/27/2018	
Carbon tetrachloride	53.0	1.0	ug/L	50.00		106	70-130			09/27/2018	
Chlorobenzene	55.6	1.0	ug/L	50.00		111	70-130			09/27/2018	
Chloroethane	57.8	5.0	ug/L	50.00		116	70-130			09/27/2018	
Chloroform	53.4	1.0	ug/L	50.00		107	70-130			09/27/2018	
Chloromethane	53.6	5.0	ug/L	50.00		107	70-130			09/27/2018	
cis-1,2-Dichloroethylene	54.9	1.0	ug/L	50.00		110	70-130			09/27/2018	
cis-1,3-Dichloropropylene	53.2	1.0	ug/L	50.00		106	70-130			09/27/2018	
Cyclohexane	53.0	5.0	ug/L	50.00		106	70-130			09/27/2018	
Dibromochloromethane	52.3	1.0	ug/L	50.00		105	70-130			09/27/2018	
Dibromomethane	53.4	1.0	ug/L	50.00		107	70-130			09/27/2018	
Dichlorodifluoromethane	51.7	5.0	ug/L	50.00		103	70-130			09/27/2018	A06
Diethyl ether	58.6	5.0	ug/L	50.00		117	70-130			09/27/2018	
Diisopropyl Ether	55.2	5.0	ug/L	50.00		110	70-130			09/27/2018	
Ethylbenzene	56.5	1.0	ug/L	50.00		113	70-130			09/27/2018	
Ethyltertiarybutylether	47.0	5.0	ug/L	50.00		94.0	70-130			09/27/2018	
Hexachloroethane	47.8	5.0	ug/L	50.00		95.7	70-130			09/27/2018	
Hexane	53.1	1.0	ug/L	50.00		106	70-130			09/27/2018	
Isopropylbenzene	59.6	1.0	ug/L	50.00		119	70-130			09/27/2018	
m & p - Xylene	114	2.0	ug/L	100.0		114	70-130			09/27/2018	
Methylene chloride	54.3	5.0	ug/L	50.00		109	70-130			09/27/2018	
Methyltertiarybutylether	53.3	1.0	ug/L	50.00		107	70-130			09/27/2018	
Naphthalene	57.3	5.0	ug/L	50.00		115	70-130			09/27/2018	X
n-Butylbenzene	55.3	1.0	ug/L	50.00		111	70-130			09/27/2018	
n-Propylbenzene	56.0	1.0	ug/L	50.00		112	70-130			09/27/2018	
o-Xylene	57.5	1.0	ug/L	50.00		115	70-130			09/27/2018	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B8I2708 - Method: 5030				**Prepared: 09/27/2018**							
LCS (B8I2708-BS1)											
sec-Butylbenzene	55.4	1.0	ug/L	50.00		111	70-130			09/27/2018	
Styrene	61.4	1.0	ug/L	50.00		123	70-130			09/27/2018	A06
tert-Butylbenzene	54.8	1.0	ug/L	50.00		110	70-130			09/27/2018	
tertiary Butyl Alcohol	255	50	ug/L	250.0		102	70-130			09/27/2018	
tertiaryAmylmethylether	44.4	5.0	ug/L	50.00		88.9	70-130			09/27/2018	
Tetrachloroethylene	53.5	1.0	ug/L	50.00		107	70-130			09/27/2018	
Tetrahydrofuran	51.8	5.0	ug/L	50.00		104	70-130			09/27/2018	
Toluene	53.8	1.0	ug/L	50.00		108	70-130			09/27/2018	
trans-1,2-Dichloroethylene	54.1	1.0	ug/L	50.00		108	70-130			09/27/2018	
trans-1,3-Dichloropropylene	53.4	1.0	ug/L	50.00		107	70-130			09/27/2018	
Trichloroethylene	53.9	1.0	ug/L	50.00		108	70-130			09/27/2018	
Trichlorofluoromethane	52.5	1.0	ug/L	50.00		105	70-130			09/27/2018	
Vinyl chloride	54.5	1.0	ug/L	50.00		109	70-130			09/27/2018	
Surrogate: Bromofluorobenzene	*49.3*		ug/L	*50.00*		*98.6*	*85-115*			09/27/2018	
Surrogate: Dibromofluoromethane	*48.6*		ug/L	*50.00*		*97.3*	*82.7-115*			09/27/2018	
Surrogate: Toluene-d8	*50.5*		ug/L	*50.00*		*101*	*85-115*			09/27/2018	
Matrix Spike (B8I2708-MS1)	**Source: 1809238-04**										
1,1,1,2-Tetrachloroethane	45.8	1.0	ug/L	50.00	ND	91.7	70-130			09/27/2018	
1,1,1-Trichloroethane	46.8	1.0	ug/L	50.00	ND	93.5	70-130			09/27/2018	
1,1,2,2-Tetrachloroethane	56.2	1.0	ug/L	50.00	ND	112	70-130			09/27/2018	
1,1,2-Trichloroethane	55.0	1.0	ug/L	50.00	ND	110	70-130			09/27/2018	
1,1-Dichloroethane	51.0	1.0	ug/L	50.00	ND	102	70-130			09/27/2018	
1,1-Dichloroethylene	46.4	1.0	ug/L	50.00	ND	92.7	70-130			09/27/2018	
1,2,3-Trichlorobenzene	48.2	5.0	ug/L	50.00	ND	96.5	70-130			09/27/2018	
1,2,3-Trichloropropane	44.1	1.0	ug/L	50.00	ND	88.2	70-130			09/27/2018	
1,2,3-Trimethylbenzene	52.5	1.0	ug/L	50.00	ND	105	70-130			09/27/2018	
1,2,4-Trichlorobenzene	49.2	5.0	ug/L	50.00	ND	98.3	70-130			09/27/2018	
1,2,4-Trimethylbenzene	53.2	1.0	ug/L	50.00	ND	106	70-130			09/27/2018	
1,2-Dibromoethane	48.0	1.0	ug/L	50.00	ND	96.0	70-130			09/27/2018	
1,2-Dichlorobenzene	51.9	1.0	ug/L	50.00	ND	104	70-130			09/27/2018	
1,2-Dichloroethane	45.4	1.0	ug/L	50.00	ND	90.8	70-130			09/27/2018	
1,2-Dichloropropane	56.3	1.0	ug/L	50.00	ND	113	70-130			09/27/2018	
1,3,5-Trimethylbenzene	54.7	1.0	ug/L	50.00	ND	109	70-130			09/27/2018	
1,3-Dichlorobenzene	53.5	1.0	ug/L	50.00	ND	107	70-130			09/27/2018	
1,4-Dichlorobenzene	51.7	1.0	ug/L	50.00	ND	103	70-130			09/27/2018	
2,2,4-Trimethylpentane	49.0	5.0	ug/L	50.00	ND	97.9	70-130			09/27/2018	
2-Butanone (MEK)	31.5	5.0	ug/L	50.00	ND	62.9	70-130			09/27/2018	A03
2-Methylnaphthalene	40.0	5.0	ug/L	50.00	ND	80.1	70-130			09/27/2018	X
2-Propanone (acetone)	23.1	20	ug/L	50.00	ND	46.2	70-130			09/27/2018	A03
4-Methyl-2-pentanone (MIBK)	45.5	5.0	ug/L	50.00	ND	90.9	70-130			09/27/2018	
Acrylonitrile	50.6	5.0	ug/L	50.00	ND	101	70-130			09/27/2018	
Benzene	53.2	1.0	ug/L	50.00	ND	106	70-130			09/27/2018	
Bromochloromethane	49.9	1.0	ug/L	50.00	ND	99.7	70-130			09/27/2018	
Bromodichloromethane	51.3	1.0	ug/L	50.00	ND	103	70-130			09/27/2018	
Bromoform	44.2	1.0	ug/L	50.00	ND	88.3	70-130			09/27/2018	
Bromomethane	40.1	5.0	ug/L	50.00	ND	80.3	70-130			09/27/2018	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B8I2708 - Method: 5030				**Prepared: 09/27/2018**							
Matrix Spike (B8I2708-MS1)	**Source: 1809238-04**										
Carbon disulfide	53.7	1.0	ug/L	50.00	ND	107	70-130			09/27/2018	
Carbon tetrachloride	45.1	1.0	ug/L	50.00	ND	90.2	70-130			09/27/2018	
Chlorobenzene	52.0	1.0	ug/L	50.00	ND	104	70-130			09/27/2018	
Chloroethane	50.4	5.0	ug/L	50.00	ND	101	70-130			09/27/2018	
Chloroform	51.4	1.0	ug/L	50.00	1.06	101	70-130			09/27/2018	
Chloromethane	48.0	5.0	ug/L	50.00	ND	96.1	70-130			09/27/2018	
cis-1,2-Dichloroethylene	52.4	1.0	ug/L	50.00	ND	105	70-130			09/27/2018	
cis-1,3-Dichloropropylene	47.9	1.0	ug/L	50.00	ND	95.8	70-130			09/27/2018	
Cyclohexane	50.8	5.0	ug/L	50.00	ND	102	70-130			09/27/2018	
Dibromochloromethane	46.9	1.0	ug/L	50.00	ND	93.8	70-130			09/27/2018	
Dibromomethane	47.4	1.0	ug/L	50.00	ND	94.8	70-130			09/27/2018	
Dichlorodifluoromethane	43.6	5.0	ug/L	50.00	ND	87.1	70-130			09/27/2018	A06
Diethyl ether	53.3	5.0	ug/L	50.00	ND	107	70-130			09/27/2018	
Diisopropyl Ether	54.1	5.0	ug/L	50.00	ND	108	70-130			09/27/2018	
Ethylbenzene	52.3	1.0	ug/L	50.00	ND	105	70-130			09/27/2018	
Ethyltertiarybutylether	46.3	5.0	ug/L	50.00	ND	92.6	70-130			09/27/2018	
Hexachloroethane	43.2	5.0	ug/L	50.00	ND	86.4	70-130			09/27/2018	
Hexane	48.0	1.0	ug/L	50.00	ND	96.0	70-130			09/27/2018	
Isopropylbenzene	58.5	1.0	ug/L	50.00	ND	117	70-130			09/27/2018	
m & p - Xylene	104	2.0	ug/L	100.0	ND	104	70-130			09/27/2018	
Methylene chloride	50.3	5.0	ug/L	50.00	ND	101	70-130			09/27/2018	
Methyltertiarybutylether	51.3	1.0	ug/L	50.00	ND	103	70-130			09/27/2018	
Naphthalene	52.8	5.0	ug/L	50.00	ND	106	70-130			09/27/2018	X
n-Butylbenzene	51.2	1.0	ug/L	50.00	ND	102	70-130			09/27/2018	
n-Propylbenzene	54.9	1.0	ug/L	50.00	ND	110	70-130			09/27/2018	
o-Xylene	52.4	1.0	ug/L	50.00	ND	105	70-130			09/27/2018	
sec-Butylbenzene	53.3	1.0	ug/L	50.00	ND	107	70-130			09/27/2018	
Styrene	55.4	1.0	ug/L	50.00	ND	111	70-130			09/27/2018	A06
tert-Butylbenzene	53.1	1.0	ug/L	50.00	ND	106	70-130			09/27/2018	
tertiary Butyl Alcohol	203	50	ug/L	250.0	ND	81.3	70-130			09/27/2018	
tertiaryAmylmethylether	44.9	5.0	ug/L	50.00	ND	89.9	70-130			09/27/2018	
Tetrachloroethylene	50.3	1.0	ug/L	50.00	1.16	98.2	70-130			09/27/2018	
Tetrahydrofuran	49.5	5.0	ug/L	50.00	ND	99.1	70-130			09/27/2018	
Toluene	51.3	1.0	ug/L	50.00	ND	103	70-130			09/27/2018	
trans-1,2-Dichloroethylene	50.5	1.0	ug/L	50.00	ND	101	70-130			09/27/2018	
trans-1,3-Dichloropropylene	47.5	1.0	ug/L	50.00	ND	94.9	70-130			09/27/2018	
Trichloroethylene	49.9	1.0	ug/L	50.00	ND	99.7	70-130			09/27/2018	
Trichlorofluoromethane	46.2	1.0	ug/L	50.00	ND	92.4	70-130			09/27/2018	
Vinyl chloride	48.4	1.0	ug/L	50.00	ND	96.8	70-130			09/27/2018	
Surrogate: Bromofluorobenzene	*51.3*		ug/L	*50.00*		*103*	*85-115*			09/27/2018	
Surrogate: Dibromofluoromethane	*47.7*		ug/L	*50.00*		*95.4*	*82.7-115*			09/27/2018	
Surrogate: Toluene-d8	*49.4*		ug/L	*50.00*		*98.8*	*85-115*			09/27/2018	
Matrix Spike Dup (B8I2708-MSD1)	**Source: 1809238-04**										
1,1,1,2-Tetrachloroethane	45.4	1.0	ug/L	50.00	ND	90.8	70-130	0.953	30	09/27/2018	
1,1,1-Trichloroethane	47.4	1.0	ug/L	50.00	ND	94.9	70-130	1.39	30	09/27/2018	
1,1,2,2-Tetrachloroethane	55.0	1.0	ug/L	50.00	ND	110	70-130	2.03	30	09/27/2018	

Lab Work Order # 1809212

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B8I2708 - Method: 5030				**Prepared: 09/27/2018**							
Matrix Spike Dup (B8I2708-MSD1)	**Source: 1809238-04**										
1,1,2-Trichloroethane	54.6	1.0	ug/L	50.00	ND	109	70-130	0.558	30	09/27/2018	
1,1-Dichloroethane	51.8	1.0	ug/L	50.00	ND	104	70-130	1.70	30	09/27/2018	
1,1-Dichloroethylene	45.4	1.0	ug/L	50.00	ND	90.8	70-130	2.10	30	09/27/2018	
1,2,3-Trichlorobenzene	50.0	5.0	ug/L	50.00	ND	100	70-130	3.65	30	09/27/2018	
1,2,3-Trichloropropane	43.8	1.0	ug/L	50.00	ND	87.6	70-130	0.717	30	09/27/2018	
1,2,3-Trimethylbenzene	52.1	1.0	ug/L	50.00	ND	104	70-130	0.633	30	09/27/2018	
1,2,4-Trichlorobenzene	49.6	5.0	ug/L	50.00	ND	99.1	70-130	0.797	30	09/27/2018	
1,2,4-Trimethylbenzene	52.2	1.0	ug/L	50.00	ND	104	70-130	1.88	30	09/27/2018	
1,2-Dibromoethane	47.8	1.0	ug/L	50.00	ND	95.7	70-130	0.341	30	09/27/2018	
1,2-Dichlorobenzene	53.2	1.0	ug/L	50.00	ND	106	70-130	2.39	30	09/27/2018	
1,2-Dichloroethane	45.3	1.0	ug/L	50.00	ND	90.6	70-130	0.268	30	09/27/2018	
1,2-Dichloropropane	55.8	1.0	ug/L	50.00	ND	112	70-130	0.997	30	09/27/2018	
1,3,5-Trimethylbenzene	53.5	1.0	ug/L	50.00	ND	107	70-130	2.19	30	09/27/2018	
1,3-Dichlorobenzene	53.3	1.0	ug/L	50.00	ND	107	70-130	0.262	30	09/27/2018	
1,4-Dichlorobenzene	51.3	1.0	ug/L	50.00	ND	103	70-130	0.694	30	09/27/2018	
2,2,4-Trimethylpentane	46.6	5.0	ug/L	50.00	ND	93.2	70-130	4.97	30	09/27/2018	
2-Butanone (MEK)	32.3	5.0	ug/L	50.00	ND	64.5	70-130	2.49	30	09/27/2018	A03
2-Methylnaphthalene	42.4	5.0	ug/L	50.00	ND	84.7	70-130	5.61	30	09/27/2018	X
2-Propanone (acetone)	20.7	20	ug/L	50.00	ND	41.5	70-130	10.7	30	09/27/2018	A03
4-Methyl-2-pentanone (MIBK)	47.0	5.0	ug/L	50.00	ND	94.0	70-130	3.33	30	09/27/2018	
Acrylonitrile	49.5	5.0	ug/L	50.00	ND	99.0	70-130	2.17	30	09/27/2018	
Benzene	52.8	1.0	ug/L	50.00	ND	106	70-130	0.728	30	09/27/2018	
Bromochloromethane	50.3	1.0	ug/L	50.00	ND	101	70-130	0.833	30	09/27/2018	
Bromodichloromethane	52.7	1.0	ug/L	50.00	ND	105	70-130	2.68	30	09/27/2018	
Bromoform	45.0	1.0	ug/L	50.00	ND	90.0	70-130	1.89	30	09/27/2018	
Bromomethane	43.6	5.0	ug/L	50.00	ND	87.3	70-130	8.33	30	09/27/2018	
Carbon disulfide	50.3	1.0	ug/L	50.00	ND	101	70-130	6.45	30	09/27/2018	
Carbon tetrachloride	46.2	1.0	ug/L	50.00	ND	92.3	70-130	2.30	30	09/27/2018	
Chlorobenzene	52.1	1.0	ug/L	50.00	ND	104	70-130	0.218	30	09/27/2018	
Chloroethane	57.0	5.0	ug/L	50.00	ND	114	70-130	12.4	30	09/27/2018	
Chloroform	51.5	1.0	ug/L	50.00	1.06	101	70-130	0.222	30	09/27/2018	
Chloromethane	52.5	5.0	ug/L	50.00	ND	105	70-130	8.92	30	09/27/2018	
cis-1,2-Dichloroethylene	51.9	1.0	ug/L	50.00	ND	104	70-130	0.887	30	09/27/2018	
cis-1,3-Dichloropropylene	49.1	1.0	ug/L	50.00	ND	98.3	70-130	2.58	30	09/27/2018	
Cyclohexane	49.9	5.0	ug/L	50.00	ND	99.8	70-130	1.90	30	09/27/2018	
Dibromochloromethane	47.5	1.0	ug/L	50.00	ND	95.0	70-130	1.27	30	09/27/2018	
Dibromomethane	49.0	1.0	ug/L	50.00	ND	98.0	70-130	3.26	30	09/27/2018	
Dichlorodifluoromethane	46.7	5.0	ug/L	50.00	ND	93.5	70-130	7.01	30	09/27/2018	A06
Diethyl ether	58.2	5.0	ug/L	50.00	ND	116	70-130	8.73	30	09/27/2018	
Diisopropyl Ether	54.7	5.0	ug/L	50.00	ND	109	70-130	1.02	30	09/27/2018	
Ethylbenzene	52.3	1.0	ug/L	50.00	ND	105	70-130	0.0687	30	09/27/2018	
Ethyltertiarybutylether	49.2	5.0	ug/L	50.00	ND	98.5	70-130	6.18	30	09/27/2018	
Hexachloroethane	42.2	5.0	ug/L	50.00	ND	84.4	70-130	2.38	30	09/27/2018	
Hexane	46.7	1.0	ug/L	50.00	ND	93.4	70-130	2.74	30	09/27/2018	
Isopropylbenzene	57.3	1.0	ug/L	50.00	ND	115	70-130	2.07	30	09/27/2018	
m & p - Xylene	105	2.0	ug/L	100.0	ND	105	70-130	1.21	30	09/27/2018	
Methylene chloride	47.9	5.0	ug/L	50.00	ND	95.7	70-130	4.90	30	09/27/2018	

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Organics-Volatiles - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B8I2708 - Method: 5030				**Prepared: 09/27/2018**							
Matrix Spike Dup (B8I2708-MSD1)	**Source: 1809238-04**										
Methyltertiarybutylether	51.6	1.0	ug/L	50.00	ND	103	70-130	0.424	30	09/27/2018	
Naphthalene	54.2	5.0	ug/L	50.00	ND	108	70-130	2.68	30	09/27/2018	X
n-Butylbenzene	50.7	1.0	ug/L	50.00	ND	101	70-130	1.10	30	09/27/2018	
n-Propylbenzene	54.0	1.0	ug/L	50.00	ND	108	70-130	1.64	30	09/27/2018	
o-Xylene	53.5	1.0	ug/L	50.00	ND	107	70-130	2.17	30	09/27/2018	
sec-Butylbenzene	52.4	1.0	ug/L	50.00	ND	105	70-130	1.74	30	09/27/2018	
Styrene	56.9	1.0	ug/L	50.00	ND	114	70-130	2.55	30	09/27/2018	A06
tert-Butylbenzene	52.6	1.0	ug/L	50.00	ND	105	70-130	0.848	30	09/27/2018	
tertiary Butyl Alcohol	209	50	ug/L	250.0	ND	83.8	70-130	3.06	30	09/27/2018	
tertiaryAmylmethylether	45.3	5.0	ug/L	50.00	ND	90.7	70-130	0.881	30	09/27/2018	
Tetrachloroethylene	49.0	1.0	ug/L	50.00	1.16	95.7	70-130	2.54	30	09/27/2018	
Tetrahydrofuran	49.4	5.0	ug/L	50.00	ND	98.9	70-130	0.227	30	09/27/2018	
Toluene	51.8	1.0	ug/L	50.00	ND	104	70-130	1.03	30	09/27/2018	
trans-1,2-Dichloroethylene	50.1	1.0	ug/L	50.00	ND	100	70-130	0.755	30	09/27/2018	
trans-1,3-Dichloropropylene	49.6	1.0	ug/L	50.00	ND	99.2	70-130	4.34	30	09/27/2018	
Trichloroethylene	50.6	1.0	ug/L	50.00	ND	101	70-130	1.47	30	09/27/2018	
Trichlorofluoromethane	47.9	1.0	ug/L	50.00	ND	95.9	70-130	3.69	30	09/27/2018	
Vinyl chloride	52.5	1.0	ug/L	50.00	ND	105	70-130	8.11	30	09/27/2018	
Surrogate: Bromofluorobenzene	*49.4*		ug/L	*50.00*		*98.8*	*85-115*			09/27/2018	
Surrogate: Dibromofluoromethane	*48.9*		ug/L	*50.00*		*97.9*	*82.7-115*			09/27/2018	
Surrogate: Toluene-d8	*49.9*		ug/L	*50.00*		*99.8*	*85-115*			09/27/2018	

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Organics-Dioxane - Quality Control

Analyte	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Analyzed	Qualifier
Batch B8I2603 - Method: 5030				**Prepared: 09/25/2018**							
Blank (B8I2603-BLK1)											
1,4-dioxane	ND	1.0	ug/L							09/25/2018	
LCS (B8I2603-BS1)											
1,4-dioxane	10.6	1.0	ug/L	10.00		106	70-130			09/25/2018	
Matrix Spike (B8I2603-MS1)	**Source: 1809212-01**										
1,4-dioxane	15.4	1.0	ug/L	10.00	4.93	105	70-130			09/25/2018	
Matrix Spike Dup (B8I2603-MSD1)	**Source: 1809212-01**										
1,4-dioxane	15.5	1.0	ug/L	10.00	4.93	105	70-130	0.389	30	09/25/2018	

Michigan Department of Environmental Quality
Laboratory Services Section

Analysis Request Sheet

Lab Work Order Number	Project Name	Matrix
1809212	Gelman Sciences	WATER

Site Code/Project Number: 81000018	AY: 18	CC Email 1: lundk@michigan.gov	Project TAT Days:	Sample Collector: DAN HAMEL	
Dept-Division-District: DEQ-RRD-Jackson	Index: 44410(C200)	CC Email 2:	Project Due Date:	Sample Collector Phone: 517-745-6595	
State Project Manager: Dan Hamel	PCA: 30740(JK201)	CC Email 3:		Contract Firm:	
State Project Manager Email: hameld@michigan.gov	Project: 451586(6130)	Overflow Lab Choice 1:	Accept Analysis hold time codes:	Contract Firm Primary Contact:	
State Project Manager Phone: (517)745-6595	Phase: 00	Overflow Lab Choice 2:		Primary Contact Phone:	

	Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Container Count	Comments
1	01	UNNAMED TRIBUTARY - OUTFALL	9/18/18	1329	3	Please include QA/QC with Lab Data Report(s)
2	02	UNAMED TRIBUTARY - OUTFALL UP	9/18/18	1332	3	
3	03	UNNAMED TRIBUTARY - MARSHY AREA	9/18/18	1334	3	
4	04	HC/HR	9/18/18	1402	3	
5	05	LITTLE LAKE	9/18/18	1452	3	
6	06	THIRD SISTER LAKE	9/18/18	1422	3	
7	07	UNNAMED TRIBUTARY - PARK	9/18/18	1508	3	
8	08	UNNAMED TRIBUTARY - JACKSON	9/18/18	1521	3	
9	09	HONEY CREEK - DEXTER	9/18/18	1545	3	
10	10	SECOND SISTER LAKE	9/18/18	1611	3	

ORGANIC CHEMISTRY

VOA - Volatile Organic Acidic	
Volatiles - Full List	1 2 3 4 5 6 7 8 9 10
BTEX/MTBE/TMB only	1 2 3 4 5 6 7 8 9 10
Chlorinated only	1 2 3 4 5 6 7 8 9 10
GRO	1 2 3 4 5 6 7 8 9 10
1,4 Dioxane	1 2 3 4 5 6 7 8 9 10
METH - Methane, Ethane, Ethene	
Methane, Ethane, Ethene	1 2 3 4 5 6 7 8 9 10
ON - Pesticides, PCBs	
Pesticides & PCBs	1 2 3 4 5 6 7 8 9 10
Pesticides only	1 2 3 4 5 6 7 8 9 10
PCBs only	1 2 3 4 5 6 7 8 9 10
Toxaphene	1 2 3 4 5 6 7 8 9 10
Chlordane	1 2 3 4 5 6 7 8 9 10
BNA - Base Neutral Acids	
BNAs	1 2 3 4 5 6 7 8 9 10
Benzidines	1 2 3 4 5 6 7 8 9 10
PNAs only	1 2 3 4 5 6 7 8 9 10
BNs only	1 2 3 4 5 6 7 8 9 10
Acids only	1 2 3 4 5 6 7 8 9 10
Organic Specialty Requests	
Library search - Volatiles	1 2 3 4 5 6 7 8 9 10
Library search - SemiVols	1 2 3 4 5 6 7 8 9 10
Finger Print	1 2 3 4 5 6 7 8 9 10
DRO / ORO	1 2 3 4 5 6 7 8 9 10

METALS CHEMISTRY PACKAGES

OpMemo2 - Total	1 2 3 4 5 6 7 8 9 10
OpMemo2 - Dissolved	1 2 3 4 5 6 7 8 9 10
(Sb,As,Ba,Be,Cd,Cr,Cu,Co,Fe,Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,V,Zn)	
Michigan10 - Total	1 2 3 4 5 6 7 8 9 10
Michigan10 - Dissolved	1 2 3 4 5 6 7 8 9 10
(As,Ba,Cd,Cr,Cu,Pb,Hg,Se,Ag,Zn)	

MAD - DISSOLVED METALS

Diss - Silver - Ag	1 2 3 4 5 6 7 8 9 10
Diss - Aluminum - Al	1 2 3 4 5 6 7 8 9 10
Diss - Arsenic - As	1 2 3 4 5 6 7 8 9 10
Diss - Boron - B	1 2 3 4 5 6 7 8 9 10
Diss - Barium - Ba	1 2 3 4 5 6 7 8 9 10
Diss - Beryllium - Be	1 2 3 4 5 6 7 8 9 10
Diss - Cadmium - Cd	1 2 3 4 5 6 7 8 9 10
Diss - Cobalt - Co	1 2 3 4 5 6 7 8 9 10
Diss - Chromium - Cr	1 2 3 4 5 6 7 8 9 10
Diss - Copper - Cu	1 2 3 4 5 6 7 8 9 10
Diss - Iron - Fe	1 2 3 4 5 6 7 8 9 10
Diss - Mercury - Hg	1 2 3 4 5 6 7 8 9 10
Diss - Lithium - Li	1 2 3 4 5 6 7 8 9 10
Diss - Manganese - Mn	1 2 3 4 5 6 7 8 9 10
Diss - Molybdenum - Mo	1 2 3 4 5 6 7 8 9 10
Diss - Nickel - Ni	1 2 3 4 5 6 7 8 9 10
Diss - Lead - Pb	1 2 3 4 5 6 7 8 9 10
Diss - Antimony - Sb	1 2 3 4 5 6 7 8 9 10
Diss - Selenium - Se	1 2 3 4 5 6 7 8 9 10
Diss - Strontium - Sr	1 2 3 4 5 6 7 8 9 10
Diss - Titanium - Ti	1 2 3 4 5 6 7 8 9 10
Diss - Thallium - Tl	1 2 3 4 5 6 7 8 9 10
Diss - Uranium - U	1 2 3 4 5 6 7 8 9 10
Diss - Vanadium - V	1 2 3 4 5 6 7 8 9 10
Diss - Zinc - Zn	1 2 3 4 5 6 7 8 9 10
Diss - Calcium - Ca	1 2 3 4 5 6 7 8 9 10
Diss - Potassium - K	1 2 3 4 5 6 7 8 9 10
Diss - Magnesium - Mg	1 2 3 4 5 6 7 8 9 10
Diss - Sodium - Na	1 2 3 4 5 6 7 8 9 10
Diss - Hardness - Ca, Mg	1 2 3 4 5 6 7 8 9 10
MD - Metals Dissolved	
Lab Filtration	1 2 3 4 5 6 7 8 9 10

MA - TOTAL METALS

Silver - Ag	1 2 3 4 5 6 7 8 9 10
Aluminum - Al	1 2 3 4 5 6 7 8 9 10
Arsenic - As	1 2 3 4 5 6 7 8 9 10
Boron - B	1 2 3 4 5 6 7 8 9 10
Barium - Ba	1 2 3 4 5 6 7 8 9 10
Beryllium - Be	1 2 3 4 5 6 7 8 9 10
Cadmium - Cd	1 2 3 4 5 6 7 8 9 10
Cobalt - Co	1 2 3 4 5 6 7 8 9 10
Chromium - Cr	1 2 3 4 5 6 7 8 9 10
Copper - Cu	1 2 3 4 5 6 7 8 9 10
Iron - Fe	1 2 3 4 5 6 7 8 9 10
Mercury - Hg	1 2 3 4 5 6 7 8 9 10
Lithium - Li	1 2 3 4 5 6 7 8 9 10
Manganese - Mn	1 2 3 4 5 6 7 8 9 10
Molybdenum - Mo	1 2 3 4 5 6 7 8 9 10
Nickel - Ni	1 2 3 4 5 6 7 8 9 10
Lead - Pb	1 2 3 4 5 6 7 8 9 10
Antimony - Sb	1 2 3 4 5 6 7 8 9 10
Selenium - Se	1 2 3 4 5 6 7 8 9 10
Strontium - Sr	1 2 3 4 5 6 7 8 9 10
Titanium - Ti	1 2 3 4 5 6 7 8 9 10
Thallium - Tl	1 2 3 4 5 6 7 8 9 10
Uranium - U	1 2 3 4 5 6 7 8 9 10
Vanadium - V	1 2 3 4 5 6 7 8 9 10
Zinc - Zn	1 2 3 4 5 6 7 8 9 10
Calcium - Ca	1 2 3 4 5 6 7 8 9 10
Potassium - K	1 2 3 4 5 6 7 8 9 10
Magnesium - Mg	1 2 3 4 5 6 7 8 9 10
Sodium - Na	1 2 3 4 5 6 7 8 9 10
Hardness - Ca, Mg	1 2 3 4 5 6 7 8 9 10
LHG - Low Level Mercury	
Mercury Low Level - Hg	1 2 3 4 5 6 7 8 9 10

GENERAL CHEMISTRY

GB	Total Cyanide - CN	1 2 3 4 5 6 7 8 9 10
GCN	Available Cyanide - CN (Amenable / Weak Acid Dissociable)	1 2 3 4 5 6 7 8 9 10
CA	Chlorophyll	1 2 3 4 5 6 7 8 9 10
GN	Ortho Phosphate - OP	1 2 3 4 5 6 7 8 9 10
GN	Nitrite - NO_2	1 2 3 4 5 6 7 8 9 10
GN	Nitrate - NO_3 (Calc.)	1 2 3 4 5 6 7 8 9 10
GN	Suspended Solids - SS	1 2 3 4 5 6 7 8 9 10
GN	Dissolved Solids - TDS	1 2 3 4 5 6 7 8 9 10
MN	Diss Solids - TDS (Calc.)	1 2 3 4 5 6 7 8 9 10
GN	Turbidity	1 2 3 4 5 6 7 8 9 10
MN	Total Alkalinity	1 2 3 4 5 6 7 8 9 10
MN	Bicarb/Carb Alkalinity (includes Total Alkalinity)	1 2 3 4 5 6 7 8 9 10
MN	Chloride - Cl	1 2 3 4 5 6 7 8 9 10
MN	Fluoride - F	1 2 3 4 5 6 7 8 9 10
MN	Sulfate - SO4	1 2 3 4 5 6 7 8 9 10
MN	Chromium 6 - Cr+6	1 2 3 4 5 6 7 8 9 10
MN	Conductivity	1 2 3 4 5 6 7 8 9 10
MN	pH	1 2 3 4 5 6 7 8 9 10
GA	Chem Oxyg Dem - COD	1 2 3 4 5 6 7 8 9 10
GA	Diss Org Carbon - DOC (FF) (Field - Filtered & Preserved)	1 2 3 4 5 6 7 8 9 10
GN	Diss Org Carbon - DOC (LF) (Lab - Filtered & Preserved)	1 2 3 4 5 6 7 8 9 10
GA	Total Org Carbon - TOC	1 2 3 4 5 6 7 8 9 10
GA	Ammonia - NH3	1 2 3 4 5 6 7 8 9 10
GA	Nitrate+Nitrite - NO3+NO2	1 2 3 4 5 6 7 8 9 10
GA	Kjeldahl Nitrogen - KN	1 2 3 4 5 6 7 8 9 10
GA	Total Phosphorus - TP	1 2 3 4 5 6 7 8 9 10

Chain of Custody

	Relinquished by	Received By	Date / Time
Print Name & Org.	DAN HAMEL DEQ-RRD JACKSON	Melissa Smith	
Signature:	Dan Hamel		9/20/18 1645
Print Name & Org.			
Signature:			
Print Name & Org.			
Signature:			

DEQ

Michigan Department of Environmental Quality
Laboratory Services Section

Analysis Request Sheet

Lab Work Order Number	Project Name	Matrix
186212	Gelman Sciences	WATER

Site Code/Project Number	AY	CC Email 1	Project TAT Days	Sample Collector
81000018	18	lundk@michigan.gov		DAN HAMEL
Dept-Division-District	**Index**	**CC Email 2**	**Project Due Date**	**Sample Collector Phone**
DEQ-RRD-Jackson	44410(C200)			517-745-6595
State Project Manager	**PCA**	**CC Email 3**		**Contract Firm**
Dan Hamel	30740(JK201)		**Accept Analysis hold time codes**	
State Project Manager Email	**Project**	**Overflow Lab Choice 1**		**Contract Firm Primary Contact**
hameld@michigan.gov	451586(6130)			
State Project Manager Phone	**Phase**	**Overflow Lab Choice 2**		**Primary Contact Phone**
(517)745-6595	00			

	Lab Use Only	Field Sample Identification	Collection Date	Collection Time	Container Count	Comments
1	11	FIRST SISTER LAKE	9/19/18	0958	3	Please include QA/QC with Lab Data Report(s)
2	12	ALLEN CREEK - GLENDALE	9/19/18	1024	5	
3	13	HANNA NATURE AREA	9/19/18	1046	5	
4	14	SMITH POND - WEST	9/19/18	1115	3	
5	15	SMITH POND - EAST	9/19/18	1117	3	
6	16	ARBOR LANDING POND	9/19/18	1145	3	
7	17	WEST PARK POND	9/19/18	1300	3	
8	18	ALLEN CREEK - WEST PARK SW	9/19/18	1323	5	
9						
10						

ORGANIC CHEMISTRY

VOA - Volatile Organic Acidic	
Volatiles - Full List	1 (2) (3) 4 5 6 7 (8) 9 10
BTEX/MTBE/TMB only	1 2 3 4 5 6 7 8 9 10
Chlorinated only	1 2 3 4 5 6 7 8 9 10
GRO	1 2 3 4 5 6 7 8 9 10
1,4 Dioxane	(1) (2) (3) (4) (5) (6) (7) (8) 9 10
METH - Methane, Ethane, Ethene	
Methane, Ethane, Ethene	1 2 3 4 5 6 7 8 9 10
ON - Pesticides, PCBs	
Pesticides & PCBs	1 2 3 4 5 6 7 8 9 10
Pesticides only	1 2 3 4 5 6 7 8 9 10
PCBs only	1 2 3 4 5 6 7 8 9 10
Toxaphene	1 2 3 4 5 6 7 8 9 10
Chlordane	1 2 3 4 5 6 7 8 9 10
BNA - Base Neutral Acids	
BNAs	1 2 3 4 5 6 7 8 9 10
Benzidines	1 2 3 4 5 6 7 8 9 10
PNAs only	1 2 3 4 5 6 7 8 9 10
BNs only	1 2 3 4 5 6 7 8 9 10
Acids only	1 2 3 4 5 6 7 8 9 10
Organic Specialty Requests	
Library search - Volatiles	1 2 3 4 5 6 7 8 9 10
Library search - SemiVols	1 2 3 4 5 6 7 8 9 10
Finger Print	1 2 3 4 5 6 7 8 9 10
DRO / ORO	1 2 3 4 5 6 7 8 9 10

METALS CHEMISTRY PACKAGES

OpMemo2 - Total	1 2 3 4 5 6 7 8 9 10
OpMemo2 - Dissolved	1 2 3 4 5 6 7 8 9 10
(Sb,As,Ba,Be,Cd,Cr,Cu,Co,Fe,Pb,Mn,Hg,Mo,Ni,Se,Ag,Tl,V,Zn)	
Michigan10 - Total	1 2 3 4 5 6 7 8 9 10
Michigan10 - Dissolved	1 2 3 4 5 6 7 8 9 10
(As,Ba,Cd,Cr,Cu,Pb,Hg,Se,Ag,Zn)	

MAD - DISSOLVED METALS

Diss - Silver - Ag	1 2 3 4 5 6 7 8 9 10
Diss - Aluminum - Al	1 2 3 4 5 6 7 8 9 10
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Diss - Cadmium - Cd	1 2 3 4 5 6 7 8 9 10
Diss - Cobalt - Co	1 2 3 4 5 6 7 8 9 10
Diss - Chromium - Cr	1 2 3 4 5 6 7 8 9 10
Diss - Copper - Cu	1 2 3 4 5 6 7 8 9 10
Diss - Iron - Fe	1 2 3 4 5 6 7 8 9 10
Diss - Mercury - Hg	1 2 3 4 5 6 7 8 9 10
Diss - Lithium - Li	1 2 3 4 5 6 7 8 9 10
Diss - Manganese - Mn	1 2 3 4 5 6 7 8 9 10
Diss - Molybdenum - Mo	1 2 3 4 5 6 7 8 9 10
Diss - Nickel - Ni	1 2 3 4 5 6 7 8 9 10
Diss - Lead - Pb	1 2 3 4 5 6 7 8 9 10
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Diss - Magnesium - Mg	1 2 3 4 5 6 7 8 9 10
Diss - Sodium - Na	1 2 3 4 5 6 7 8 9 10
Diss - Hardness - Ca, Mg	1 2 3 4 5 6 7 8 9 10
MD - Metals Dissolved	
Lab Filtration	1 2 3 4 5 6 7 8 9 10

MA - TOTAL METALS

Silver - Ag	1 2 3 4 5 6 7 8 9 10
Aluminum - Al	1 2 3 4 5 6 7 8 9 10
Arsenic - As	1 2 3 4 5 6 7 8 9 10
Boron - B	1 2 3 4 5 6 7 8 9 10
Barium - Ba	1 2 3 4 5 6 7 8 9 10
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Cadmium - Cd	1 2 3 4 5 6 7 8 9 10
Cobalt - Co	1 2 3 4 5 6 7 8 9 10
Chromium - Cr	1 2 3 4 5 6 7 8 9 10
Copper - Cu	1 2 3 4 5 6 7 8 9 10
Iron - Fe	1 2 3 4 5 6 7 8 9 10
Mercury - Hg	1 2 3 4 5 6 7 8 9 10
Lithium - Li	1 2 3 4 5 6 7 8 9 10
Manganese - Mn	1 2 3 4 5 6 7 8 9 10
Molybdenum - Mo	1 2 3 4 5 6 7 8 9 10
Nickel - Ni	1 2 3 4 5 6 7 8 9 10
Lead - Pb	1 2 3 4 5 6 7 8 9 10
Antimony - Sb	1 2 3 4 5 6 7 8 9 10
Selenium - Se	1 2 3 4 5 6 7 8 9 10
Strontium - Sr	1 2 3 4 5 6 7 8 9 10
Titanium - Ti	1 2 3 4 5 6 7 8 9 10
Thallium - Tl	1 2 3 4 5 6 7 8 9 10
Uranium - U	1 2 3 4 5 6 7 8 9 10
Vanadium - V	1 2 3 4 5 6 7 8 9 10
Zinc - Zn	1 2 3 4 5 6 7 8 9 10
Calcium - Ca	1 2 3 4 5 6 7 8 9 10
Potassium - K	1 2 3 4 5 6 7 8 9 10
Magnesium - Mg	1 2 3 4 5 6 7 8 9 10
Sodium - Na	1 2 3 4 5 6 7 8 9 10
Hardness - Ca, Mg	1 2 3 4 5 6 7 8 9 10
LHG - Low Level Mercury	
Mercury Low Level - Hg	1 2 3 4 5 6 7 8 9 10

GENERAL CHEMISTRY

GB	Total Cyanide - CN	1 2 3 4 5 6 7 8 9 10
GCN	Available Cyanide - CN (Amenable / Weak Acid Dissociable)	1 2 3 4 5 6 7 8 9 10
CA	Chlorophyll	1 2 3 4 5 6 7 8 9 10
GN	Ortho Phosphate - OP	1 2 3 4 5 6 7 8 9 10
GN	Nitrite - NO_2	1 2 3 4 5 6 7 8 9 10
GN	Nitrate - NO_3 (Calc.)	1 2 3 4 5 6 7 8 9 10
GN	Dissolved Solids - TDS	1 2 3 4 5 6 7 8 9 10
MN	Diss Solids - TDS (Calc.)	1 2 3 4 5 6 7 8 9 10
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MN	Total Alkalinity	1 2 3 4 5 6 7 8 9 10
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MN	Fluoride - F	1 2 3 4 5 6 7 8 9 10
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MN	Chromium 6 - Cr+6	1 2 3 4 5 6 7 8 9 10
MN	Conductivity	1 2 3 4 5 6 7 8 9 10
MN	pH	1 2 3 4 5 6 7 8 9 10
GA	Chem Oxyg Dem - COD	1 2 3 4 5 6 7 8 9 10
GA	Diss Org Carbon - DOC (FF) (Field - Filtered & Preserved)	1 2 3 4 5 6 7 8 9 10
GN	Diss Org Carbon - DOC (LF) (Lab - Filtered & Preserved)	1 2 3 4 5 6 7 8 9 10
GA	Total Org Carbon - TOC	1 2 3 4 5 6 7 8 9 10
GA	Ammonia - NH3	1 2 3 4 5 6 7 8 9 10
GA	Nitrate+Nitrite - NO3+NO2	1 2 3 4 5 6 7 8 9 10
GA	Kjeldahl Nitrogen - KN	1 2 3 4 5 6 7 8 9 10
GA	Total Phosphorus - TP	1 2 3 4 5 6 7 8 9 10

Chain of Custody

	Relinquished by	Received By	Date / Time
Print Name & Org.	DAN HAMEL DEQ-RRD JACKSON	Melissa Smith	
Signature:	Dan Hamel		9/20/18 1645
Print Name & Org.			
Signature:			
Print Name & Org.			
Signature:			